Papua New Guinea

Demographic and Health Survey

2016-18

Papua New Guinea Demographic and Health Survey 2016-18

National Statistical Office
Port Moresby, Papua New Guinea

The DHS Program
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Rockville, Maryland, USA

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FOREWORD

The Papua New Guinea Demographic and Health Survey (PNG DHS) is a nationally representative survey conducted as a periodic update of the demographic and health situation in Papua New Guinea (PNG). The 2016-18 PNG DHS is the first DHS conducted in PNG in collaboration with the worldwide Demographic and Health Surveys Program, which is a global programme coordinated by ICF, based in Rockville, Maryland, USA. The survey was implemented by the PNG National Statistical Office (PNG NSO).

The 2016-18 PNG DHS final report provides information on basic indicators of fertility, fertility preferences, family planning practices, childhood mortality, maternal and child health, knowledge and awareness of HIV/AIDS, domestic violence, and other related health issues. These important indicators are crucial in policy development, programme planning, and monitoring and evaluation of population and health programmes in the country. In addition to national estimates, the report provides estimates of key indicators for both urban and rural areas, the 4 regions, and the 22 provinces of PNG.

The successful completion of the 2016-18 PNG DHS was made possible through contributions from a number of organisations and individuals. The PNG NSO deeply appreciates the financial support from the Government of PNG (GOPNG), the Australian Government Department of Foreign Affairs and Trade (DFAT), the United Nations Population Fund (UNFPA), and the United Nations Children's Fund (UNICEF). Appreciation is also extended to ICF for expert advice in the implementation of the 2016-18 PNG DHS.

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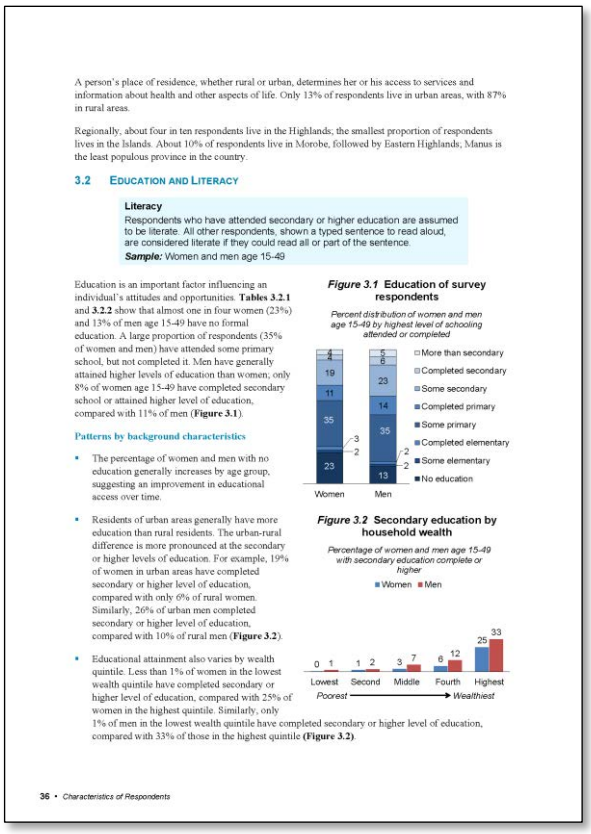
ACRONYMS AND ABBREVIATIONS

ACT	artemisinin-based combination therapy
AIDS	acquired immunodeficiency syndrome
ANC	antenatal care
ARI	acute respiratory infection
ART	antiretroviral therapy
ASFR	age-specific fertility rate
BCG	bacille Calmette-Guerin vaccine against tuberculosis
BMI	body mass index
BMS	basic medical sciences
CAFE	computer-assisted field editing
CBR	crude birth rate
CEB	children ever born
CI	confidence interval
CPR	contraceptive prevalence rate
CSPro	Census and Survey Processing System
CU	census unit
DFAT	Department of Foreign Affairs and Trade
DHS	Demographic and Health Survey
DPT	diphtheria, pertussis, and tetanus vaccine
FAO	Food and Agriculture Organisation
GAR	gross attendance ratio
GBV	gender-based violence
GFR	general fertility rate
GOPNG	Government of Papua New Guinea
GPI	gender parity index
HepB	hepatitis B
Hib	*Haemophilus influenzae* type B
HIV	human immunodeficiency virus
IFSS	internet file streaming system
IPV	inactivated polio vaccine
IPTp	intermittent preventive treatment during pregnancy
ITN	insecticide-treated net
IUD	intrauterine contraceptive device
IYCF	infant and young child feeding
LAM	lactational amenorrhea method
LLIN	long-lasting insecticide-treated net
LPG	liquid petroleum gas

MAD	minimum acceptable diet
MR	measles and rubella
MRL	Micronutrient Research Laboratory
MTCT	mother-to-child transmission
MUAC	mid-upper-arm circumference
NDOH	National Department of Health
NAR	net attendance ratio
NN	neonatal mortality
NPHC	National Population and Housing Census
NSO	National Statistical Office
OPV	oral polio vaccine
ORS	oral rehydration salts
ORT	oral rehydration therapy
PCV	pneumococcal conjugate vaccine
PMTCT	prevention of mother-to-child transmission
PNC	postnatal care
PNG	Papua New Guinea
PNN	postneonatal mortality
PPS	probability proportional to size
PRMR	pregnancy-related mortality ratio
PSU	primary sampling unit
RHF	recommended homemade fluids
SD	standard deviation
SDGs	Sustainable Development Goals
SMHS	School of Medicine and Health Sciences
SP	sulfadoxine-pyrimethamine
STI	sexually-transmitted infection
TFR	total fertility rate
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USI	universal salt iodisation
VAD	vitamin A deficiency
VIP	ventilated improved pit
VMMC	voluntary medical male circumcision
WHO	World Health Organization

READING AND UNDERSTANDING TABLES FROM THE 2016-18 PNG DHS

The 2016-18 Papua New Guinea DHS final report is based on approximately 200 tables of data. For quick reference, they are located at the end of each chapter and can be accessed through links in the pertinent text (electronic version). Additionally, this report features about 65 figures that clearly highlight subnational patterns and background characteristics. The text highlights key points in bullets and clearly identifies indicator definitions in boxes.



A person's place of residence, whether rural or urban, determines her or his access to services and information about health and other aspects of life. Only 13% of respondents live in urban areas, with 87% in rural areas.

Regionally, about four in ten respondents live in the Highlands; the smallest proportion of respondents lives in the Islands. About 10% of respondents live in Morobe, followed by Eastern Highlands; Manus is the least populous province in the country.

3.2 EDUCATION AND LITERACY

Literacy

Respondents who have attended secondary or higher education are assumed to be literate. All other respondents, shown a typed sentence to read aloud, are considered literate if they could read all or part of the sentence.

Sample: Women and men age 15-49

Education is an important factor influencing an individual's attitudes and opportunities. **Tables 3.2.1** and **3.2.2** show that almost one in four women (23%) and 13% of men age 15-49 have no formal education. A large proportion of respondents (35% of women and men) have attended some primary school, but not completed it. Men have generally attained higher levels of education than women; only 8% of women age 15-49 have completed secondary school or attained higher level of education, compared with 11% of men (**Figure 3.1**).

***Figure 3.1* Education of survey respondents**

Percent distribution of women and men age 15-49 by highest level of schooling attended or completed

Patterns by background characteristics

- The percentage of women and men with no education generally increases by age group, suggesting an improvement in educational access over time.
- Residents of urban areas generally have more education than rural residents. The urban-rural difference is more pronounced at the secondary or higher levels of education. For example, 19% of women in urban areas have completed secondary or higher level of education, compared with only 6% of rural women. Similarly, 26% of urban men completed secondary or higher level of education, compared with 10% of rural men (**Figure 3.2**).
- Educational attainment also varies by wealth quintile. Less than 1% of women in the lowest wealth quintile have completed secondary or higher level of education, compared with 25% of women in the highest quintile. Similarly, only 1% of men in the lowest wealth quintile have completed secondary or higher level of education, compared with 33% of those in the highest quintile (**Figure 3.2**).

***Figure 3.2* Secondary education by household wealth**

Percentage of women and men age 15-49 with secondary education complete or higher

36 • *Characteristics of Respondents*

While the text and figures featured in each chapter highlight some of the most important findings from the tables, not every finding can be discussed or displayed graphically. For this reason, PNG DHS data users should be comfortable reading and interpreting tables.

The following pages provide an introduction to the organization of PNG DHS tables, the presentation of background characteristics, and a brief summary of sampling and understanding denominators. In addition, this section provides some exercises for users as they practice their new skills in interpreting PNG DHS tables.

Example 1- Exposure to Mass Media: Women
Questions Asked of All Survey Respondents

Table 3.4.1 Exposure to mass media: Women 1

Percentage of women age 15-49 who are exposed to specific media on a weekly basis, according to background characteristics, PNG DHS 2016-18

Background characteristic 3	Reads a newspaper at least once a week	Watches television at least once a week	Listens to the radio at least once a week	Accesses all three media at least once a week	Accesses none of the three media at least once a week	Number of women 2
Age						
15-19	20.9	17.5	21.9	8.5	67.2	2,945
20-24	21.8	19.4	23.2	8.3	64.4	2,759
25-29	18.0	13.8	19.1	5.8	71.3	2,543
30-34	15.9	13.6	17.1	4.6	72.8	2,180
35-39	13.4	12.6	14.4	4.1	75.9	2,059
40-44	14.1	13.7	14.4	4.2	73.8	1,484
45-49	13.9	12.3	13.4	4.0	75.3	1,228
Residence						
Urban	41.1	46.1	41.5	20.1	34.6	2,018
Rural	14.0	10.5	15.0	3.9	76.2	13,180
Region						
Southern	22.9	21.9	24.3	9.7	62.3	2,899
Highlands	14.0	15.5	16.8	5.6	74.1	6,213
Momase	18.3	12.9	18.0	5.0	70.2	3,919
Islands	19.5	9.7	16.6	4.5	72.7	2,167
Province						
Western	9.0	5.6	12.6	1.4	80.9	352
Gulf	13.3	17.2	18.2	5.2	70.9	277
Central	28.8	25.3	31.0	12.8	54.2	557
National Capital District	54.8	65.3	54.0	30.5	17.6	526
Milne Bay	10.6	5.8	10.9	1.6	81.0	767
Northern	15.8	9.5	16.3	4.2	73.8	421
Southern Highlands	7.6	4.2	5.6	1.4	87.4	1,089
Enga	13.8	19.6	18.5	6.0	72.8	563
Western Highlands	18.4	20.4	25.5	10.3	66.8	746
Chimbu	18.3	18.0	17.3	8.2	70.5	1,038
Eastern Highlands	15.2	28.3	28.5	7.5	61.6	1,310
Morobe	28.2	20.5	20.0	7.7	60.7	1,514
Madang	16.7	9.5	19.7	4.2	71.5	987
East Sepik	11.6	9.7	21.0	4.1	72.6	872
West Sepik	4.5	3.3	4.9	0.6	90.6	545
Manus	37.4	13.3	35.7	7.5	49.4	135
New Ireland	25.0	5.2	15.1	3.3	71.0	385
East New Britain	14.6	13.1	14.8	4.9	76.3	572
West New Britain	16.9	8.1	15.9	4.8	77.2	532
Autonomous Region of Bougainville	18.6	10.1	15.6	4.1	71.4	544
Hela	11.7	4.1	7.3	2.4	85.5	874
Jiwaka	13.7	10.1	12.1	2.7	77.0	594
Education						
No education	0.3	3.3	5.7	0.2	93.2	3,488
Elementary	0.9	10.9	15.5	0.3	81.3	676
Primary	12.9	11.3	16.8	3.8	74.5	6,969
Secondary	41.4	28.9	30.8	13.9	45.8	3,460
Higher	53.9	55.5	45.0	27.2	27.3	605
Wealth quintile						
Lowest	3.2	1.8	3.8	0.6	93.7	2,783
Second	6.1	2.9	8.5	1.0	88.0	2,831
Middle	11.3	6.4	14.8	1.7	77.8	2,897
Fourth	17.5	10.7	18.9	3.8	70.2	3,118
Highest	43.2	46.6	40.7	19.9	33.5	3,569
Total 4	17.6	15.2	18.5	6.1	70.6	15,198

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Step 1: Read the title and subtitle, highlighted in orange in the table above. They tell you the topic and the specific population group being described. In this case, the table is about women age 15-49 and their exposure to different types of media. All eligible female respondents age 15-49 were asked these questions.

Step 2: Scan the column headings—highlighted in green in Example 1. They describe how the information is categorized. In this table, the first three columns of data show different types of media that women

access at least once a week. The fourth column shows women who access all three types of media, while the fifth column shows women who do not access any of the three types of media on a weekly basis. The last column lists the number of women age 15-49 interviewed in the survey.

Step 3: Scan the row headings—the first vertical column highlighted in blue in Example 1. These show the different ways the data are divided into categories based on population characteristics. In this case, the table presents women's exposure to media by age, urban-rural residence, region, province, level of education, and wealth quintile. Most of the tables in the 2016-18 PNG DHS report will be divided into these same categories.

Step 4: Look at the row at the bottom of the table highlighted in pink. These percentages represent the totals of all women age 15-49 and their weekly access to different types of media. In this case, 17.6%* of women age 15-49 read a newspaper at least once a week, 15.2% watch television at least weekly, and 18.5% listen to the radio on a weekly basis.

Step 5: To find out what percentage of women with higher education access all three media at least once a week, draw two imaginary lines, as shown on the table. This shows that 27.2% of women age 15-49 with higher education access all three media at least once a week.

By looking at patterns by background characteristics, we can see how exposure to mass media varies across Papua New Guinea. Mass media are often used to communicate health messages. Knowing how mass media exposure varies among different groups can help program planners and policy makers determine how to most effectively reach their target populations.

*For the purpose of this document data are presented exactly as they appear in the table including decimal places. However, the text in the remainder of this report rounds data to the nearest whole percentage point.

Practice: Use the table in Example 1 to answer the following questions:

a) What percentage of women age 15-49 in Papua New Guinea do not access any of the three media at least once a week?
b) Which age group of women are most likely to listen to the radio at least once a week?
c) Compare women in urban areas to women in rural areas – which group is most likely to watch television weekly?
d) What are the lowest and highest percentages (range) women who read a newspaper at least once a week by region?
e) Is there a clear relationship in exposure to the radio on a weekly basis by education level?
f) Is there a clear relationship in exposure to television on a weekly basis by wealth quintile?

Answers:

a) 70.6%

b) Women age 20-24: 23.2% of women in this age group listen to the radio at least once a week.

c) Women in urban areas, 46.1% of women in urban areas watch television weekly, compared to 10.5% of women in rural areas.

d) Women's weekly exposure to newspapers ranges from a low of 18.3% in Momase region to a high of 22.9% in Southern Region.

e) Exposure to radio on a weekly basis increases as a woman's level of education increases; 5.7% of women with no education listen to the radio on a weekly basis, compared to 45.0% of women with higher education.

f) Exposure to television on a weekly basis increases as household wealth increases; 1.8% of women from the lowest wealth quintile watch television on a weekly basis, compared to 46.6% of women in the highest wealth quintile.

Example 2: Prevalence and treatment of symptoms of ARI
A Question Asked of a Subgroup of Survey Respondents

Table 10.5 Prevalence and treatment of symptoms of ARI 1

Among children under age 5, percentage who had symptoms of acute respiratory infection (ARI) in the 2 weeks preceding the survey; and among children with symptoms of ARI in the 2 weeks preceding the survey, percentage for whom advice or treatment was sought, according to background characteristics, PNG DHS 2016-18

Background characteristic	Among children under age 5: Percentage with symptoms of ARI[1]	Among children under age 5: Number of children	Among children under age 5 with symptoms of ARI: Percentage for whom advice or treatment was sought[2]	Among children under age 5 with symptoms of ARI: Percentage for whom treatment was sought same or next day	Among children under age 5 with symptoms of ARI: Number of children
Age in months					
<6	3.0	919	(67.9)	(36.3)	27
6-11	5.0	996	(71.2)	(24.8)	49
12-23	3.9	1,763	54.7	22.3	69
24-35	2.3	1,843	63.1	42.4	43
36-47	2.3	1,984	59.5	38.6	46
48-59	1.3	1,865	(70.4)	(28.7)	25
Sex					
Male	2.5	4,916	67.8	39.2	122
Female	3.1	4,455	58.8	23.9	138
Mother's smoking status					
Smokes cigarettes/tobacco	3.1	2,609	52.3	26.9	82
Does not smoke	2.7	6,663	67.9	33.1	178
Residence					
Urban	2.8	984	85.7	43.1	27
Rural	2.8	8,387	60.3	29.7	232
Region					
Southern	2.9	1,850	63.0	39.7	54
Highlands	2.7	3,564	60.4	23.0	96
Momase	2.9	2,578	(69.0)	(34.2)	75
Islands	2.5	1,378	57.0	33.5	34
Mother's education					
No education	2.8	2,405	39.8	15.8	68
Elementary	4.2	476	*	*	20
Primary	2.8	4,206	70.1	34.6	119
Secondary	2.2	1,918	83.6	49.4	41
Higher	3.0	366	*	*	11
Wealth quintile					
Lowest	2.4	1,977	(47.7)	(13.1)	48
Second	2.8	1,918	(70.3)	(36.3)	53
Middle	3.3	1,931	49.0	26.0	65
Fourth	2.4	1,861	76.7	49.1	45
Highest	2.9	1,683	76.0	33.4	48
Total	2.8	9,371	63.0	31.1	260

Note: Total includes 99 cases with missing information on mother smoking status. Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Symptoms of ARI include short, rapid breathing which was chest-related and/or difficult breathing which was chest-related.
[2] Includes advice or treatment from the following sources: public sector, private medical sector, shop, and market. Excludes advice or treatment from a traditional practitioner.

Step 1: Read the title and subtitle. In this case, the table is about two separate groups of children: all children under age 5 (a) and children under age 5 with symptoms of ARI in the two weeks before the survey (b).

Step 2: Identify the two panels. First, identify the columns that refer to all children under age 5 (a), and then isolate the columns that refer only to children under age 5 with symptoms of ARI in the two weeks before the survey (b).

Step 3: Look at the first panel. What percentage of children under age 5 had symptoms of ARI in the two weeks before the survey? It's 2.8%. Now look at the second panel. How many children under age 5 had symptoms of ARI in the two weeks before the survey? It's 260 children or 2.8% of the 9,371 children under age 5 (with rounding). The second panel is a subset of the first panel.

Step 4: Only 2.8% of children under age 5 had symptoms of ARI in the two weeks before the survey. Once these children are further divided into the background characteristic categories, there may be too few cases for the percentages to be reliable.

- Among children age 48-59 months with symptoms of ARI in the two weeks before the survey, what percentage had advice or treatment sought? 70.4%. This percentage is in parentheses because there are between 25 and 49 children age 48-59 months with symptoms of ARI in the two weeks before the survey (unweighted) in this category. Readers should use this number with caution—it may not be reliable. (For more information on weighted and unweighted numbers, see Example 3.)

- Among children under age 5 with symptoms of ARI in the two weeks before the survey whose mothers have higher education, what percentage had advice or treatment sought? There is no number in this cell—only an asterisk. This is because fewer than 25 children under age 5 whose mothers have higher education had symptoms of ARI in the two weeks before the survey. Results for this group are not reported. The subgroup is too small, and therefore the data are not reliable.

Note: When parentheses or asterisks are used in a table, the explanation will be noted under the table. If there are no parentheses or asterisks in a table, you can proceed with confidence that enough cases were included in all categories that the data are reliable.

Example 3: Understanding Sampling Weights in 2016-18 PNG DHS Tables

A sample is a group of people who have been selected for a survey. In the 2016-18 PNG DHS, the sample is designed to represent the national population age 15-49. In addition to national data, most countries want to collect and report data on smaller geographical or administrative areas. However, doing so requires a large enough sample size in each area. For the 2016-18 PNG DHS, the survey sample is representative at the national and regional levels, and for urban and rural areas.

Table 3.1 Background characteristics of respondents

Percent distribution of women age 15-49 by selected background characteristics, PNG DHS 2016-18

	Women		
Background characteristic	Weighted percent	Weighted number	Unweighted number
Region			
Southern	19.1	2,899	4,380
Highlands	40.9	6,213	4,123
Momase	25.8	3,919	3,060
Islands	14.3	2,167	3,635
Total 15-49	3 100.0	2 15,198	1 15,198

To generate statistics that are representative of the country as a whole and the 4 regions, the number of women surveyed in each region should contribute to the size of the total (national) sample in proportion to size of the region. However, if some regions have small populations, then a sample allocated in proportion to each region's population may not include enough women from each region for analysis. To solve this problem, regions with small populations are oversampled. For example, let's say that you have enough money to interview 15,198 women and want to produce results that are representative of Papua New Guinea as a whole and its regions (as in Table 3.1). However, the total population of Papua New Guinea is not evenly distributed among the regions: some regions, such as Highlands region, are heavily populated while others, such as Islands region are not. Thus, Islands region must be oversampled.

A sampling statistician determines how many women should be interviewed in each region in order to get reliable statistics. The **blue column (1)** in the table at the right shows the actual number of women interviewed in each region. Within the regions, the number of women interviewed ranges from 3,060 in Momase region to 4,380 in Southern region. The number of interviews is sufficient to get reliable results in each region.

With this distribution of interviews, some regions are overrepresented, and some regions are underrepresented. For example, the population in Highlands region is about 41% of the population in Papua New Guinea, while Islands region's population contributes only 14% of the population in Papua New Guinea. But as the blue column shows, the number of women interviewed in Highlands accounts for only about 27% of the total sample of women interviewed (4,123 /15,198) and the number of women interviewed in Islands accounts for almost the same percentage of the total sample of women interviewed (24%, or 3,635 /15,198). This unweighted distribution of women does not accurately represent the population.

In order to get statistics that are representative of Papua New Guinea, the distribution of the women in the sample needs to be weighted (or mathematically adjusted) such that it resembles the true distribution in the country. Women from a small region, like Islands, should only contribute a small amount to the national total. Women from a large region, like Highlands, should contribute much more. Therefore, DHS statisticians mathematically calculate a "weight" which is used to adjust the number of women from each region so that each region's contribution to the total is proportional to the actual population of the region. The numbers in the **purple column (2)** represent the "weighted" values. The weighted values can be smaller or larger than the unweighted values at regional level. The total national sample size of 15,198 women has not changed after weighting, but the distribution of the women in the regions has been changed to represent their contribution to the total population size.

How do statisticians weight each category? They take into account the probability that a woman was selected in the sample. If you were to compare the **green column (3)** to the actual population distribution

of Papua New Guinea, you would see that women in each region are contributing to the total sample with the same weight that they contribute to the population of the country. The weighted number of women in the survey now accurately represents the proportion of women who live in Highlands region and the proportion of women who live in Islands region.

With sampling and weighting, it is possible to interview enough women to provide reliable statistics at national and regional levels. In general, only the weighted numbers are shown in each of the PNG DHS tables, so don't be surprised if these numbers seem low: they may actually represent a larger number of women interviewed.

SUSTAINABLE DEVELOPMENT GOALS INDICATORS

Sustainable Development Goals Indicators-Papua New Guinea DHS 2016-18

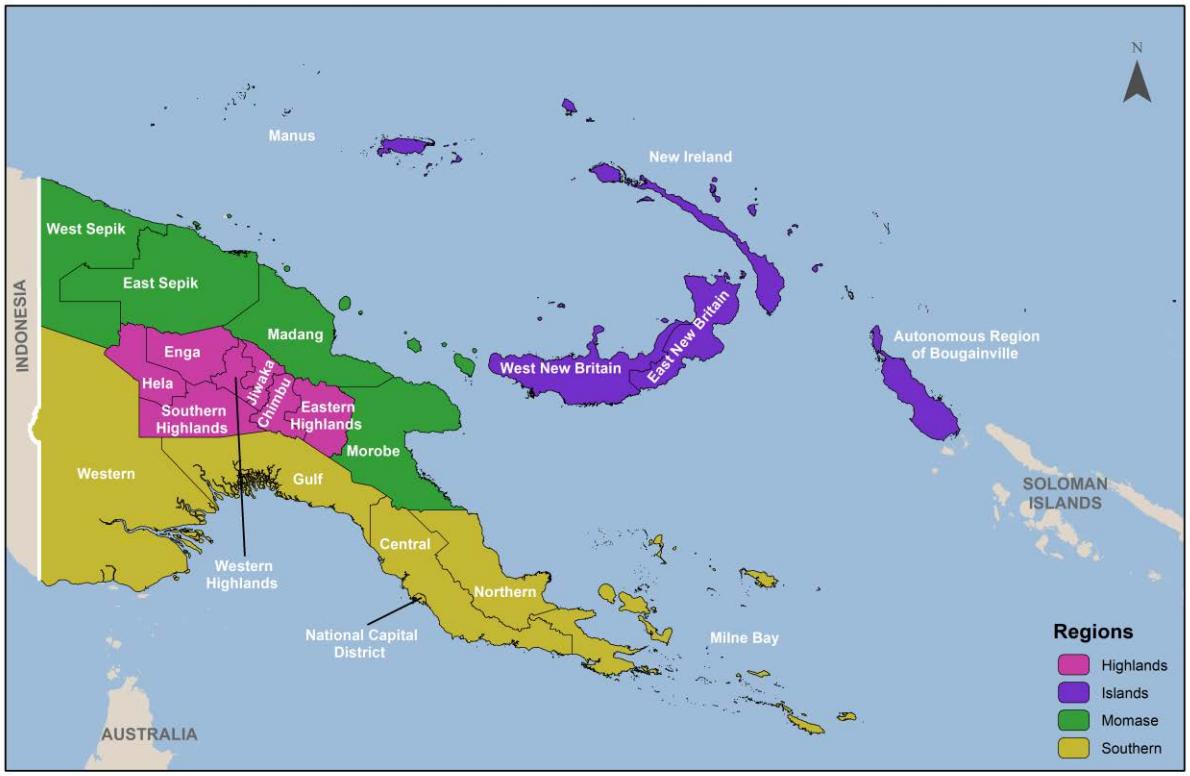
Indicator	Sex			DHS table number
	Male	Female	Total	
3. Good health and well-being				
3.1.1 Maternal mortality ratio[1]	na	na	171	14.4
3.1.2 Proportion of births attended by skilled health personnel	na	na	56.4	9.6
3.2.1 Under-5 mortality rate[2]	48.0	49.0	49.0	8.2
3.2.2 Neonatal mortality rate[2]	21.0	20.0	20.0	8.2
3.7.1 Proportion of women of reproductive age (aged 15-49 years) who have their need for family planning satisfied with modern methods	na	49.2	na	7.12.2
3.7.2 Adolescent birth rates per 1,000 women				
a) Girls aged 10-14 years[3]	na	1.0	na	5.1
b) Women aged 15-19 years[4]	na	68.0	na	5.1
3.a.1 Age-standardized prevalence of current tobacco use among persons aged 15 years and older[5]	60.3	26.0	43.2[a]	3.11.1, 3.11.2
3.b.1 Proportion of the target population covered by all vaccines included in their national programme				
a) Coverage of DPT containing vaccine (3rd dose)[6]	39.2	44.6	41.7	10.3
b) Coverage of pneumococcal conjugate vaccine (last dose in schedule)[7]	34.3	36.7	35.4	10.3
5. Gender equality				
5.2.1 Proportion of ever-partnered women and girls aged 15 years and older subjected to physical, sexual or psychological violence by a current or former intimate partner in the previous 12 months[8,9]	na	54.3	na	16.12
a) Physical violence	na	44.4	na	16.12
b) Sexual violence	na	24.2	na	16.12
c) Psychological violence	na	43.7	na	16.12
5.3.1 Proportion of women aged 20-24 years who were married or in a union before age 15 and before age 18				
a) before age 15	na	8.0	na	4.3
b) before age 18	na	27.3	na	4.3
5.6.1 Proportion of women aged 15-49 years who make their own informed decisions regarding sexual relations, contraceptive use and reproductive health care[10]	na	47.7	na	na
5.b.1 Proportion of individuals who own a mobile telephone[11]	50.3	34.1	42.2[a]	15.7.1, 15.7.2

	Residence			DHS table number
	Urban	Rural	Total	
7. Affordable clean energy				
7.1.1 Proportion of population with access to electricity	57.0	11.4	16.6	2.4
7.1.2 Proportion of population with primary reliance on clean fuels and technology[12]	39.2	4.7	8.6	2.4

	Sex			DHS table number
	Male	Female	Total	
8. Decent work and economic growth				
8.10.2 Proportion of adults (15 years and older) with an account at a bank or other financial institution or with a mobile-money-service provider[13]	27.5	18.4	22.9[a]	15.7.1, 15.7.2
16. Peace, justice, and strong institutions				
16.9.1 Proportion of children under 5 years of age whose births have been registered with a civil authority	13.3	13.6	13.4[a]	2.13
17. Partnerships for the goals				
17.8.1 Proportion of individuals using the Internet[14]	18.1	11.2	14.6[a]	3.5.1, 3.5.2

na = Not applicable
[1] Expressed in terms of maternal deaths per 100,000 live births in the 7-year period preceding the survey
[2] Expressed in terms of deaths per 1,000 live births for the 5-year period preceding the survey
[3] Equivalent to the age-specific fertility rate for girls age 10-14 for the 3-year period preceding the survey, expressed in terms of births per 1,000 girls age 10-14
[4] Equivalent to the age-specific fertility rate for women age 15-19 for the 3-year period preceding the survey, expressed in terms of births per 1,000 women age 15-19
[5] Data are not age-standardized and are available for women and men age 15-49 only.
[6] The percentage of children age 12-23 months who received three doses of pentavalent vaccine (DPT-HepB-Hib)
[7] The percentage of children age 12-23 months who received three doses of pneumococcal conjugate vaccine
[8] Data are available for women age 15-49 who have ever been in union only.
[9] In the DHS, psychological violence is termed emotional violence.
[10] Data are available for currently married women who are not pregnant only.
[11] Data are available for women and men age 15-49 only.
[12] Measured as the percentage of the population using clean fuel for cooking.
[13] Data are available for women and men age 15-49 who have and use an account at a bank or other financial institution; information on use of a mobile-money-service provider is not available.
[14] Data are available for women and men age 15-49 who have used the internet in the past 12 months.
[a] The total is calculated as the simple arithmetic mean of the percentages in the columns for males and females.

PAPUA NEW GUINEA



INTRODUCTION AND SURVEY METHODOLOGY 1

The National Statistical Office (NSO) implemented the 2016-18 Papua New Guinea Demographic and Health Survey (2016-18 PNG DHS), which is the third in a series of DHS surveys conducted in the country but the first to be conducted under The DHS Program. Data collection commenced in October 2016 and concluded 2 years later in December 2018. The NSO provided all necessary technical and advisory support in the implementation. ICF provided technical assistance through The DHS Program, which offers support and technical assistance for the implementation of population and health surveys in countries worldwide. Financial support came from the Government of Papua New Guinea (GOPNG), the Australian Government Department of Foreign Affairs and Trade (DFAT), the United Nations Population Fund (UNFPA), and the United Nations Children's Fund (UNICEF). In addition, UNFPA served as the manager of donor funding, while UNICEF provided in-kind equipment for anthropometric measurements of children under age 5.

1.1 SURVEY OBJECTIVES

The primary objective of the 2016-18 PNG DHS is to provide up-to-date estimates of basic demographic and health indicators. Specifically, the 2016-18 PNG DHS collected information on fertility, awareness, and use of family planning methods, breastfeeding practices, nutritional status of children, maternal and child health, childhood immunisation, adult and childhood mortality, women's empowerment, domestic violence, malaria, awareness and behaviour regarding HIV/AIDS and other sexually transmitted infections (STIs), and other health-related issues. The survey also collected information on household agricultural activities and household food security.

The information collected through the survey is intended to assist policymakers and programme managers as they design and evaluate programmes and strategies to improve the health of the country's population. The 2016-18 PNG DHS also provides health indicators relevant to meeting the Sustainable Development Goals (SDGs) for the country.

1.2 SAMPLE DESIGN

The sample for the 2016-18 PNG DHS was nationally representative and covered the entire population that lived in private dwelling units in the country. The survey used the list of census units (CUs) from the 2011 PNG National Population and Housing Census (NPHC) as the sampling frame. Administratively, the country is divided into 22 provinces, and each province is sub-divided into urban and rural areas. Each province is also divided into districts, and each district is divided into local-level governments, which are in turn divided into wards. Each ward is composed of CUs. The average CU size is 50 households, with urban CUs having 70 households on average and rural CUs having 48. The sampling frame contains information on CU location, type of residence (urban or rural), estimated number of residential households, and population by sex.

The 2016-18 PNG DHS sample was stratified and selected in two stages. Each province was stratified into urban and rural areas, yielding 43 sampling strata, with the exception of National Capital District, which has no rural areas. Samples of CUs were selected independently in each stratum in two stages. Implicit stratification and proportional allocation were achieved at each of the lower administrative levels by sorting the sampling frame within each sampling stratum before sample selection, according to administrative units at different levels, and by using a probability proportional-to-size selection at the first stage of sampling.

In the first stage, 800 CUs were selected with probability proportional to CU size, which is the number of residential households found in the CU during the 2011 NPHC. A household listing operation, conducted prior to data collection, was carried out in all selected clusters, and the resulting lists of households served as the sampling frame to select households in the next stage. Some of the selected clusters were large, with more than 200 households. To minimise the task of the listing team, these selected clusters were segmented. Only one segment was selected for the survey, with probability proportional to segment size. Household listing was conducted only in the selected segment. This means that a cluster is either a CU or a segment of a CU.

In the second stage of selection, a fixed number of 24 households per cluster were selected with an equal-probability systematic selection from the newly created household listing, resulting in a total sample size of approximately 19,200 households. To prevent bias, no replacements and no changes of the pre-selected households were allowed in the implementing stages. In cases in which a CU had fewer than 24 households, all households were included in the sample. All women age 15-49 who were usual members of the selected households or who spent the night before the survey in the selected households were eligible for individual interview. In half of the selected households (every second household), all men age 15-49 who were usual members of the households or who spent the night before the survey in the households were eligible for individual interview. In households selected for men's interviews, all children under age 6 were eligible for height/length, weight, and mid-upper-arm circumference (MUAC) measurements. Similarly, one woman age 15-49 was selected from each household in this subsample for the domestic violence module.

Due to the non-proportional allocation of the sample to the different provinces and to urban and rural areas, and due to the possible differences in response rates, sampling weights were calculated, added to the data file, and applied so that results would be representative at the national as well as the domain level. Because the 2016-18 PNG DHS sample was a two-stage stratified cluster sample selected from the sampling frame, the sampling weights were calculated separately, based on sampling probabilities, for each sampling stage and for each cluster.

1.3 QUESTIONNAIRES

Three questionnaires were used for the 2016-18 PNG DHS: the Household Questionnaire, the Woman's Questionnaire, and the Man's Questionnaire. These questionnaires, based on The DHS Program's standard Demographic and Health Survey (DHS-7) questionnaires, were adapted to reflect the population and health issues relevant to Papua New Guinea. Suggestions were solicited from members of the Users Advisory Committee, representing government departments and agencies, nongovernment organisations, and international donors.

The Household Questionnaire was used to list all usual members and visitors who slept in the household the night before the survey. Basic demographic information was collected on the characteristics of each person listed, including his or her age, sex, marital status, education, and relationship to the head of household; data on their parents' survival status were also collected. The data on age and sex of household members were used to identify women and men eligible for individual interviews. The Household Questionnaire also collected information on characteristics of the household's dwelling unit, such as source of water, type of toilet facilities, materials used for the floor, wall, and roof, ownership of various durable goods, ownership and use of mosquito nets, and availability of handwashing facilities. An additional module, developed by the Food and Agriculture Organization (FAO), to measure food insecurity and household activities in agriculture was included. To identify country-specific needs, data on fortified rice, flour, and iodised salt were also collected. The Household Questionnaire also included a section that recorded anthropometric measurements for children in the subsample of households selected for the men's survey.

The Woman's Questionnaire was used to collect information from all eligible women age 15-49. These women were asked questions on the following topics:

- Background characteristics (including age, education, and media exposure)
- Birth history and child mortality
- Knowledge, use, and source of family planning methods
- Antenatal, delivery, and postnatal care
- Vaccinations and childhood illnesses
- Breastfeeding and infant feeding practices
- Marriage and sexual activity
- Fertility preferences (including desire for more children and ideal number of children)
- Women's work and husbands' background characteristics
- Knowledge, awareness, and behaviour regarding HIV/AIDS and other sexually transmitted infections (STIs)
- Knowledge, attitudes, and behaviour related to other health issues (e.g., smoking)
- Adult and maternal mortality
- Domestic violence

The Man's Questionnaire was administered to all men age 15-49 in the subsample of households selected for the men's survey. The Man's Questionnaire collected much of the same information as the Woman's Questionnaire but was shorter because it did not contain a detailed reproductive history, questions on maternal and child health, or questions on maternal mortality and domestic violence.

1.4 PRETEST

A pretest was conducted in National Capital District and Central Province in July 2016. Pretest preparations consisted of in-class training, demonstration of interviews in front of the class, role playing, tests, quizzes, a visit to a children's ward in Port Moresby General Hospital to practice collecting weight and height data for children, a visit to a medical laboratory at the University of Papua New Guinea School of Medical and Health Science to practice salt and rice testing, and field practice days.

The field practice was conducted over a period of 5 days in two urban and two rural clusters that were not included in the 2016-18 PNG DHS sample. A total of 24 trainees (8 men and 16 women) participated. All trainees had some experience with household surveys, either through involvement in previous PNG DHS surveys or involvement in other similar surveys. Following field practice, a debriefing session was held with the pretest field staff, and the questionnaires were modified based on lessons drawn from the exercise.

1.5 TRAINING OF FIELD STAFF

Training for the field staff was conducted in two stages. In the first stage, 44 persons (28 women and 16 men) were trained as master trainers. Master trainers consisted of 22 staff from the NSO and the National Department of Health (NDOH), while 22 assistant trainers were recruited from the provinces. This training took place outside of Port Moresby (Central Province) at the Kokoda Trail Motel in August 2016. Four core project staff participated in the master trainers training as facilitators. ICF staff provided technical support during the training sessions. To provide a better understanding of the importance of the 2016-18 PNG DHS in the context of PNG's health and population policies and programmes, the training also included presentations given by NDOH staff on specific programmes such as those addressing malaria, HIV/AIDS, child immunisations, child nutrition, childhood diseases, and gender-based violence. A 1-day field practice session for the master trainers was conducted in nearby CUs to allow the trainers to familiarize themselves with the three questionnaires to be used in the survey.

In the second stage, the master trainers were sent to the 22 training centres in the provinces. Trainers were paired; one was from the NSO/NDOH and one from the respective province. In total, the NSO recruited and trained 427 persons for the main fieldwork to serve as team leaders, field editors, interviewers, and

reserve interviewers. The training took place simultaneously from September 12 to 26, 2016, in all 22 provinces of the country.

The training course consisted of instruction regarding interviewing techniques and field procedures, a detailed review of questionnaire content, instruction on how to administer the paper questionnaires, and mock interviews between participants in the classroom. Practice interviews with real respondents were arranged in census units that were close to the training venues but were not included in the survey sample. A two- to three-day field practice was organised, according to provincial requirements, to provide trainees with additional hands-on practice before the actual fieldwork. Because the households in these practice census units had not been listed, the teams carried out manual listing to select the 24 households for the three questionnaires to be administered. Ultimately, 106 males and 212 females (318 in total) were selected to serve as interviewers, with an additional 53 selected as supervisors. The selection of supervisors was based on their experience in leading survey teams and their performance during the training. Team leaders/field editors received additional instructions and practice to perform supervisory activities, including assigning households and receiving and reviewing completed questionnaires from interviewers.

1.6 FIELDWORK

Data collection took place over 27 months from October 2016 to December 2018. Field operations were carried out by 53 teams, each consisting of one field editor/team leader, four female interviewers, and two male interviewers. A total of 371 personnel were initially involved in the data collection for the 2016-18 PNG DHS.

Data collection occurred in four phases over the 27-month period. Phase 1 was from October 1 to December 9, 2016; phase 2 was from March to June 2017; phase 3 was from October 22 to December 22, 2017; and the last phase was from April 20 to December 14, 2018. The number of teams decreased from 53 in October 2016 to 11 in December 2018, with team composition maintained throughout the survey period.

Fieldwork required more time than expected due to various challenges: inaccessibility because of the geography of the country and severe weather patterns, refusal by respondents to participate in the survey, need for security due to law and order situations, outstanding payments owed to service providers, absence of reliable communication services, and late disbursement of funds to support teams in the field. As a result, fieldwork could be completed only for 767 of the 800 clusters initially selected.

Despite these challenges, the survey teams managed to travel throughout the country and collect data under sometimes difficult circumstances without compromising the data quality. Senior staff from the NSO coordinated and supervised fieldwork activities in the provinces.

1.7 DATA PROCESSING

All completed questionnaires were delivered to the NSO central office in Port Moresby, where they were registered and stored. The data processing operation in office included editing and coding, data entry and verification, and secondary editing, which required resolution of computer-identified inconsistencies and coding of open-ended questions. Data processing commenced on January 10, 2017, and finished on January 31, 2019.

During the course of the data processing operation (2017-19), a total of 63 personnel were engaged. The composition of engaged personnel changed in order to meet the urgency and needs of the project during different time periods. However, the standard composition of personnel in different sections of data processing was always as follows: registration (1 staff); editing (6 staff); data entry and verification (20 staff); secondary editing (4 staff); and final editing (3 staff). There were occasions when multiple shifts were introduced to fast track the operation (January through April 2017). In these scenarios, the number of personnel, particularly in data entry and verification, more than doubled to 40-45.

The initial plan was to introduce the computer-assisted field editing (CAFE) procedure to ensure that data digitisation and quality verification were done in the field before the questionnaires (and digitised data) were returned to NSO headquarters for further processing. However, this did not happen, so centralised data processing was done at NSO headquarters when all completed questionnaires from the clusters were brought back from the field. Final cleaning of data by the ICF data processing specialist was completed on March 16, 2019.

Throughout this report, numbers in the tables reflect weighted numbers. Percentages based on 25 to 49 unweighted cases are shown in parentheses, and percentages based on fewer than 25 unweighted cases are suppressed and replaced with an asterisk, to caution readers when interpreting data that a percentage based on fewer than 50 cases may not be statistically reliable.

1.8 RESPONSE RATES

Table 1 shows response rates for the 2016-18 PNG DHS. A total of 17,505 households were selected for the sample, of which 16,754 were occupied. Of the occupied households, 16,021 were successfully interviewed, yielding a response rate of 96%. In the interviewed households, 18,175 women age 15-49 were identified for individual interviews; interviews were completed with 15,198 women, yielding a response rate of 84%. In the subsample of households selected for the male survey, 9,141 men age 15-49 were identified and 7,333 were successfully interviewed, yielding a response rate of 80%.

Table 1.1 Results of the household and individual interviews

Number of households, number of interviews, and response rates, according to residence (unweighted), Papua New Guinea DHS 2016-18

	Residence		
Result	Urban	Rural	Total
Household interviews			
Households selected	3,652	13,853	17,505
Households occupied	3,486	13,268	16,754
Households interviewed	3,295	12,726	16,021
Household response rate[1]	94.5	95.9	95.6
Interviews with women age 15-49			
Number of eligible women	4,981	13,194	18,175
Number of eligible women interviewed	4,045	11,153	15,198
Eligible women response rate[2]	81.2	84.5	83.6
Household interviews in subsample			
Households selected	1,820	6,864	8,684
Households occupied	1,733	6,575	8,308
Households interviewed	1,638	6,344	7,982
Household response rate in subsample[1]	94.5	96.5	96.1
Interviews with men age 15-49			
Number of eligible men	2,442	6,699	9,141
Number of eligible men interviewed	1,826	5,507	7,333
Eligible men response rate[2]	74.8	82.2	80.2

[1] Households interviewed/households occupied
[2] Respondents interviewed/eligible respondents

HOUSING CHARACTERISTICS AND HOUSEHOLD POPULATION 2

Key Findings

- **Drinking water:** In Papua New Guinea, less than half of households have access to an improved source of drinking water; the most common source is an unprotected spring (29% of households).
- **Toilet facilities:** Only 29% of households use improved sanitation facilities; about one in five households has no facility and uses open defecation).
- **Electricity:** Nationally, 15% of households have electricity.
- **Household possessions:** Mobile phones are common; in 56% of households, someone owns one. One-quarter of households have radios.
- **Hand washing:** One-third of the population lives in households with a place to wash hands that has both soap and water.
- **Household population and composition:** More than 4 in 10 people in Papua New Guinea are under age 15 (42%), while only 3% are age 65 and older.
- **Children's living arrangements:** 6% of children under age 18 have lost at least one of their biological parents. Fourteen percent of children do not live with either of their biological parents.
- **Education:** Almost one-third of women and one-quarter of men age 6 and older have never attended school.

Information on the socioeconomic characteristics of the household population in the 2016-18 PNG DHS provides a context to interpret demographic and health indicators and can furnish an approximate indication of the representativeness of the survey. In addition, this information sheds light on the living conditions of the population.

This chapter presents information on sources of drinking water, sanitation, exposure to smoke inside the home, wealth, hand washing, household population and composition, educational attainment, school attendance, birth registration, children's living arrangements, and parental survivorship.

2.1 DRINKING WATER SOURCES AND TREATMENT

Improved sources of drinking water

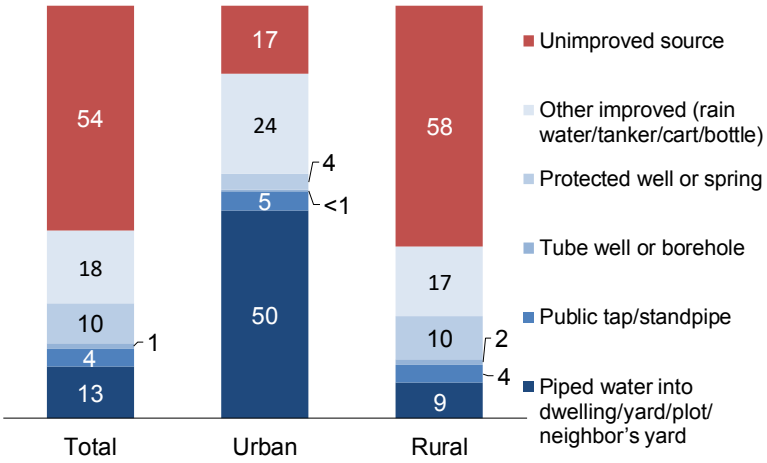
Include piped water, public taps, standpipes, tube wells, boreholes, protected dug wells and springs, rainwater, water delivered via tanker truck or a cart with a small tank, and bottled water.

Sample: Households

In Papua New Guinea, less than half of households (46%) have access to an improved source of drinking water, with strong differences between households in urban (83%) and rural (42%) areas (**Table 2.1.1**). The most common source of drinking water is unprotected springs (29% of all households), followed by rainwater (15%), surface water (15%), and water piped to the dwelling or to a neighbour (13%) (**Figure 2.1**).

Figure 2.1 **Household drinking water by residence**

Percent distribution of households by source of drinking water



Patterns by background characteristics

There are large differences in access to drinking water sources within the country. For example, the proportion of households with an improved source of drinking water ranges from only 19% in Southern Highlands to 99% in the National Capital District (**Table 2.1.2**). Households in wealthier quintiles are much more likely to have improved sources of drinking water than those in lower quintiles.

Basic drinking water service

Is from an improved source, provided either water is on the premises or round-trip collection time is 30 minutes or less.

Sample: De jure population

Limited drinking water service

Is from an improved source, provided round-trip collection time is more than 30 minutes

Sample: De jure population

In Papua New Guinea, 43% of households have basic drinking water service, while 2% have limited drinking water service (**Table 2.1.1**).

Overall, 10% of households in Papua New Guinea are using an appropriate method to treat their drinking water to make it safer. Appropriate treatment methods include boiling, adding bleach/chlorine, filtering, and solar disinfecting. Urban households are much more likely to use an appropriate method to treat their water than rural households (26% and 9%, respectively) (**Table 2.1.3**).

Table 2.2 presents information on the availability of water in the 2 weeks before the survey for households using piped water or water from a tube well or borehole. It is important to note that this represents fewer than one in five households in the country. Among these households, over half reported having water with no interruption of at least 1 day in the last 2 weeks.

2.2 SANITATION

Improved toilet facility

Is a flush/pour flush toilet that flushes the water and waste to a piped sewer system, septic tank, pit latrine, or unknown destination; a ventilated improved pit (VIP) latrine; a pit latrine with a slab; or a composting toilet

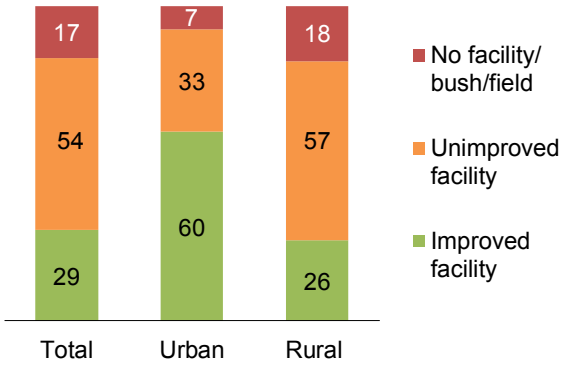
Sample: Households

Only 29% of households in Papua New Guinea use improved toilet facilities (60% in urban areas and 26% in rural areas). The most common type of toilet is an open pit or a pit latrine without a slab (used by 52% of households). Almost one in five households (17%) does not have any toilet facility (open defecation) (**Table 2.3.1** and **Figure 2.2**).

Trends: The proportion of households with no toilet facility has remained steady over the past decade, changing from 16% of households in 2006 to 17% of households in 2016-18.

***Figure 2.2* Household toilet facilities by residence**

Percent distribution of households by type of toilet facilities



Patterns by background characteristics

Households in the National Capital District are far more likely to have an improved sanitation facility (86%) than those in other provinces, especially Hela (10%) (**Table 2.3.2**). Wealth quintile is strongly related to whether a household has an improved facility and increases ten times, from 7% of households in the lowest quintile to 73% of those in the highest quintile. It is notable that almost three in four households (73%) in New Ireland province practice open defecation.

Basic sanitation service
Use of improved facilities not shared with other households
Sample: De jure population

Limited sanitation service
Use of improved facilities shared by two or more households
Sample: De jure population

Twenty-two percent of households in Papua New Guinea have basic sanitation service, while 7% have limited sanitation service.

2.3 Exposure to Smoke Inside the Home

Exposure to smoke inside the home, either from cooking with solid fuels or from smoking tobacco, has potentially harmful health effects. Almost all households in Papua New Guinea (92%) use some type of solid fuel like wood for cooking (**Table 2.4**). Exposure to cooking smoke is greatest when cooking takes place inside the house rather than in a separate building or outdoors. In Papua New Guinea, 46% of households cook inside the house. Another important source of smoke inside the home in Papua New Guinea is smoking. In over half of households (56%), someone smokes inside the house on a daily basis.

Other Housing Characteristics

The 2016-18 PNG DHS also collected data on access to electricity, type of flooring material, number of rooms used for sleeping, and source of lighting. Only 15% of households in Papua New Guinea have access to electricity. The most common type of flooring material is palm or bamboo (43%). Over one-third of households (37%) have three or more rooms that are used for sleeping. Over one-third of households (36%) use battery-operated lanterns for light, while another one-third (32%) use solar lamps (**Table 2.4**).

2.4 HOUSEHOLD WEALTH

Household Durable Goods

The 2016-18 PNG DHS collected information on household effects, means of transportation, and ownership of agricultural land and farm animals. Mobile phones are common; in 56% of households, someone reports ownership. Slightly less than one-quarter of households own a radio (24%), while 13% own a television, and 11% own a computer. One in 10 households owns a refrigerator. (**Table 2.5**).

To get around, 1 in 10 households in Papua New Guinea owns a bicycle, while only 5% own a car or truck. Almost three-quarters of households own agricultural land (73%), and almost half have farm animals (46%).

Households in urban areas are much more likely than those in rural areas to possess household effects and means of transportation. As expected, urban households are less likely than rural households to own agricultural land (30% versus 77%) or have farm animals (12% versus 50%) (**Table 2.5**).

Trends: By far the greatest change among households owing durable goods has been in telephone coverage. In 2006, only 4% of households had a telephone, while in 2016-18, 56% of households have a mobile phone and 2% have a non-mobile phone. The proportion of households with a radio has decreased slightly, from 33% in 2006 to 24% in 2016-18. However, the proportion owning a refrigerator has increased slightly, from 7% to 10%, and the proportion owning a television has increased from 9% to 13% over the same time period.

Livestock, Crops, and Consumption of Rice, Flour, and Salt

In the 2016-18 PNG DHS, household respondents were asked if the household owned any livestock, herds, other farm animals, or poultry. They were also asked if they grew any food crops or cash crops, or were engaged in fish farming. Results show that just under half of households (46%) have livestock or poultry, while 87% grow food crops and 53% grow cash crops. Only 8% of households engage in fish farming (**Table 2.6**). As expected, all proportions are considerably lower for urban than for rural households.

Households were also asked questions about consumption of specific foods, that is, whether they had consumed rice or products made from flour in the previous 7 days, and whether they had salt that was bought or given to them in the previous 7 days. Rice was consumed by 66% of households in the week before the survey, while flour or flour products were consumed by 55% of households. Over three-quarters of households (77%) reported having salt (**Table 2.7**).

Wealth Index

Wealth index

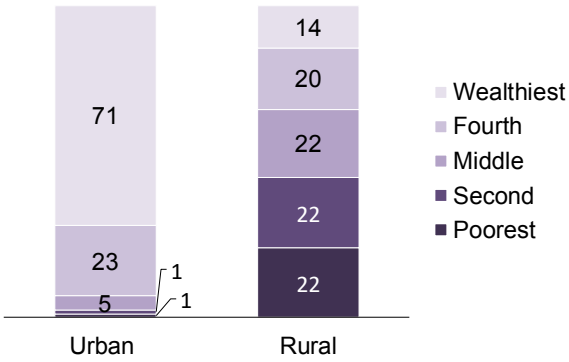
Households are given scores based on the number and kinds of consumer goods they own, ranging from a television to a bicycle or car, and housing characteristics, such as source of drinking water, toilet facilities, and flooring materials. These scores are derived using principal component analysis. National wealth quintiles are compiled by assigning the household score to each usual (de jure) household member, ranking each person in the household population by their score, and then dividing the distribution into five equal categories, each with 20% of the population.

Sample: Households

Table 2.8 presents data on wealth quintiles according to urban-rural residence and region. The wealthiest people are concentrated in urban areas (71%). In contrast, almost half of the rural population (45%) falls in the lowest two wealth quintiles (**Figure 2.3**).

***Figure 2.3* Household wealth by residence**

Percent distribution of de jure population by wealth quintiles



2.5 HAND WASHING

To obtain hand washing information, interviewers asked to see the place where members of the household most often wash their hands. Interviewers were able to see a place for hand washing for 57% of the household population. Soap and water, the essential hand washing agents, were available to 33% of people. The availability of a place to wash hands that has soap and water varies widely, being highest among the population in Manus (83%) and in National Capital District (73%), as well as among people in the highest wealth quintile (73%) (**Table 2.9**).

2.6 HOUSEHOLD POPULATION AND COMPOSITION

Household

A person or group of related or unrelated persons who live together in the same dwelling unit(s), who acknowledge one adult male or female as the head of the household, who share the same housekeeping arrangements, and who are considered a single unit.

De facto population

All persons who stayed in the selected households the night before the interview (whether usual residents or visitors).

De jure population

All persons who are usual residents of the selected households, whether or not they stayed in the household the night before the interview.

How data are calculated

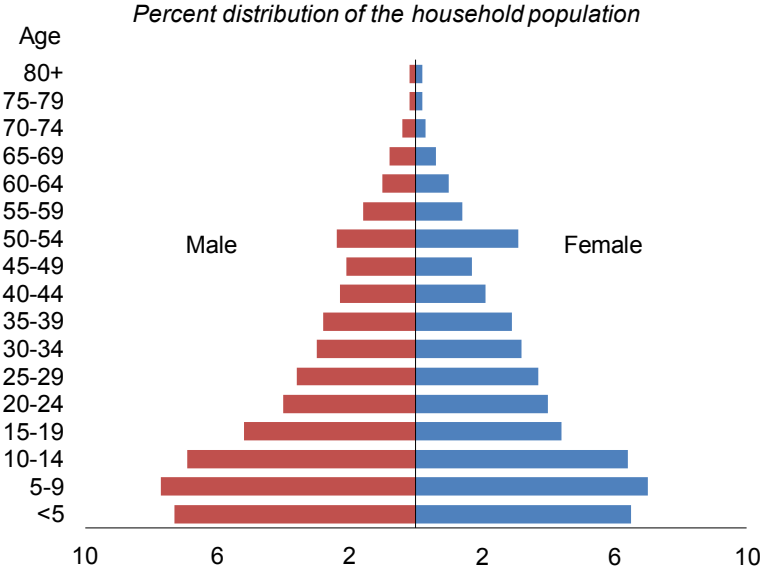
All tables are based on the de facto population unless otherwise specified.

Household composition and population data provide information on the socioeconomic characteristics of the households and respondents surveyed in terms of age, sex, and place of residence.

A total of 79,353 individuals stayed overnight in the households interviewed in the 2016-18 PNG DHS. Just over half (51%) were men, and 49% were women (**Table 2.10**). Children under age 15 represent 42% of the population, while individuals age 15-64 represent well over half of the population (55%). Only 3% of Papua New Guineans are age 65 or older. The population pyramid in **Figure 2.4** shows the population distribution by 5-year age groups, separately for males and females. The broad base of the pyramid reflects relatively high fertility, although the slightly narrower bar for children under 5 suggests a recent decline in fertility levels. The pyramid also shows a bulge for men and especially for women age 50-54, which is unlikely to be accurate. Such bulges are not uncommon in surveys and are likely due to deliberate transference by interviewers of respondents to an age that makes them ineligible for the individual interview and thus reduces the interviewers' workload.

***Figure 2.4* Population pyramid**

Percent distribution of the household population



The average household size in Papua New Guinea is 5.0 persons. Urban households are larger than rural households (6.0 persons versus 4.9 persons). Men head the vast majority of households (83%), with 18% of households headed by women (**Table 2.11**).

Trends: The age distribution of the household population has changed little since 2006, when children under age 15 accounted for 43% of the population and individuals age 65 and older accounted for 2%. Average household size has decreased only slightly, from 5.2 persons in 2006 to 5.0 in 2016-18. The percentage of female-headed households has not changed during that period (17% in 2006 versus 18% in 2016-18).

2.7 Children's Living Arrangements and Parental Survival

Orphan

A child with one or both parents who are dead.

Sample: Children under age 18

Six percent of children under age 18 are orphans, with one or both parents dead. The percentage of children who are orphans rises rapidly with age from 2% of children under age 5 to 11% of children age 15-17. With regard to living arrangements, 14% of children under age 18 are not living with either biological parent. Only two-thirds (66%) live with both their biological parents (**Table 2.12**).

2.8 Birth Registration

Registered birth

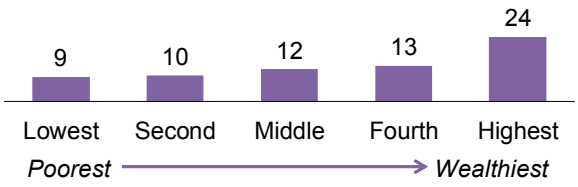
A child has a birth certificate or a child does not have a birth certificate, but his/her birth is registered with the civil authorities.

Sample: De jure children under age 5

Table 2.13 presents information on birth registration of children under age 5. At the time of the survey, 13% of children under age 5 were registered with the civil authorities. About half of these children have birth certificates (7%) and half do not (6%). The proportion of children whose births were registered is much higher in urban than rural areas (25% and 12%, respectively). It also ranges from only 3% of children in Madang to 41% of those in National Capital District. Birth registration increases substantially with wealth quintile (**Figure 2.5**).

***Figure 2.5* Birth registration by household wealth**

Percentage of de jure children under age 5 whose births are registered with the civil authorities



2.9 EDUCATION

Education is one of the most important aspects of social and economic development. Education improves capabilities and is strongly associated with various socioeconomic variables such as lifestyle, income, and fertility for both individuals and societies.

2.9.1 Educational Attainment

Median educational attainment

Half of the population has completed less than the median number of years of schooling, and half of the population has completed more than the median number of years of schooling.

Sample: De facto household population age 6 and older

Overall, 32% of females and 24% of males age 6 and over have never attended school. However, this statistic masks enormous differences by age group. For example, the proportion of women with no education decreases from 70% of those age 65 and over to 11% among those age 15-19. Similarly, among all females age 6 and over, only 15% have attended secondary school or more; however, among women age 20-24, 38% have some secondary schooling or have gone on to higher education. Educational attainment tends to be greater among those in urban areas, especially in the National Capital District, and among those in the higher wealth quintiles (**Tables 2.14.1** and **2.14.2**).

Trends: Educational attainment at the household level has increased since 2006. The percentage of women and men with no education has declined at almost all age groups. Overall, it fell from 35% to 24% for men and 45% to 32% for women.

2.9.2 School Attendance

In addition to educational attainment, it is useful to know the proportion of young people who are currently attending various levels of school. As shown in **Table 2.15.1** and **Table 2.15.2**, large proportions of children are not attending school. Almost half of girls and boys age 6-10 (46% each) are not attending school. Even among those age 10-15, almost one in five girls (19%) and boys (18%) are not attending school. As expected, higher proportions of older children are not attending school. Among the population age 6-24, school attendance increases with wealth quintile.

Net attendance ratio (NAR)

Percentage of the school-age population that attends primary or secondary school

Sample: Children age 6-8 for elementary school NAR, children age 9-14 for primary school NAR, and children age 15-18 for secondary school NAR

In Papua New Guinea, the elementary school net attendance ratio (NAR) for the population age 6-8 is 44%, whereas the primary school NAR is 50%. The secondary school NAR drops to 21% (**Table 2.16**).

Patterns by background characteristics

- All three NARs (elementary, primary and secondary school) are higher in urban areas than in rural areas.
- Among provinces, the primary school NAR is highest in Manus (69%) and National Capital District (69%) and lowest in Gulf (30%). The secondary school NAR is highest in Chimbu (51%) and lowest in Gulf (5%).
- Both the primary and secondary school NARs increase with increasing household wealth.

Gross attendance ratio (GAR)

The total number of children attending primary school divided by the official primary school-age population and the total number of children attending secondary school divided by the official secondary school-age population.

Sample: Children age 6-8 for elementary school GAR, children age 9-14 for primary school GAR, and children age 15-18 for secondary school GAR

Gender parity index (GPI)

The ratio of female to male students attending primary school and the ratio of female to male children attending secondary school. The index reflects the magnitude of the gender gap.

Sample: Primary and secondary school students

The gross attendance ratio (GAR) provides an indicator of the extent to which children who are under or over the official school age are attending school. If there are significant numbers of overage and underage students at a given level of schooling, the GAR can exceed 100%. However, in Papua New Guinea, the GAR is 94% at the elementary school level, 80% at the primary school level, and 37% at the secondary school level. The figures indicate that not all of those who should be attending school are doing so (**Table 2.16**).

A gender parity index (GPI) of 1 indicates parity or equality between male and female school participation ratios. A GPI lower than 1 indicates a gender disparity in favour of males, with a higher proportion of males than females attending that level of schooling. A GPI higher than 1 indicates a gender disparity in favour of females.

The GPI for the NAR is 0.99 at the elementary school level, 1.04 at the primary school level, and 1.06 at the secondary school level, which indicates that there is a slight preference in school attendance by girls (**Table 2.16**).

2.10 HOUSEHOLD FOOD INSECURITY

The 2016-18 PNG DHS included eight questions on the level of food insecurity at the household level. Based on the responses to these questions, the severity of food insecurity experienced by the household population was calculated. The estimates were derived using the food insecurity experience scale (FIES) developed by the Food and Agriculture Organisation of the United Nations (Ballard et al. 2013).

More than half of the population of Papua New Guinea (57%) experiences moderate to severe food insecurity. About a quarter of the population (25%) experiences severe food insecurity (**Table 2.17**).

Patterns by background characteristics

- Rural residents are more likely to experience moderate to severe food insecurity than urban residents (58% versus 52%).
- The population experiencing moderate to severe food insecurity ranges from a high of 73% in Western province to a low of 35% in Madang province.
- The proportion of the population experiencing moderate to severe food insecurity decreases as household wealth increases. For instance, 68% of the population in the lowest wealth quintile experienced moderate to severe food insecurity compared with only 42% of the population in the highest wealth quintile.

LIST OF TABLES

For more information on the household population and housing characteristics, see the following tables:

- **Table 2.1.1 Household drinking water**
- **Table 2.1.2 Drinking water according to region, province, and wealth**
- **Table 2.1.3 Treatment of household drinking water**
- **Table 2.2 Availability of water**
- **Table 2.3.1 Household sanitation facilities**
- **Table 2.3.2 Sanitation facility type according to region, province, and wealth**
- **Table 2.4 Household characteristics**
- **Table 2.5 Household possessions**
- **Table 2.6 Household possession of livestock, food and cash crops, and fish farming**
- **Table 2.7 Household consumption of rice, flour, and salt**
- **Table 2.8 Wealth quintiles**
- **Table 2.9 Handwashing**
- **Table 2.10 Household population by age, sex, and residence**
- **Table 2.11 Household composition**
- **Table 2.12 Children's living arrangements and orphanhood**
- **Table 2.13 Birth registration of children under age 5**
- **Table 2.14.1 Educational attainment of the female household population**
- **Table 2.14.2 Educational attainment of the male household population**
- **Table 2.15.1 Current school attendance: Female**
- **Table 2.15.2 Current school attendance: Male**
- **Table 2.16 School attendance ratios**
- **Table 2.17 Household food insecurity**

Table 2.1.1 Household drinking water

Percent distribution of households and de jure population by source of drinking water and by time to obtain drinking water; percentage of households and de jure population with basic drinking water service and percentage with limited drinking water service, according to residence, Papua New Guinea DHS 2016-18

	Households			Population		
Characteristic	Urban	Rural	Total	Urban	Rural	Total
Source of drinking water						
Improved source	83.2	41.5	45.5	83.5	42.1	46.9
Piped into dwelling/yard plot	46.2	6.9	10.6	48.6	7.0	11.8
Piped to neighbour	4.0	1.7	1.9	3.9	1.6	1.8
Public tap/standpipe	4.6	4.2	4.2	4.4	3.9	4.0
Tube well or borehole	0.4	1.5	1.4	0.4	1.6	1.4
Protected dug well	1.7	3.2	3.1	1.4	3.4	3.2
Protected spring	2.1	7.1	6.6	1.9	7.1	6.5
Rain water	22.4	14.5	15.3	21.3	15.1	15.8
Tanker truck/cart with small tank	1.6	2.4	2.3	1.4	2.4	2.3
Bottled water	0.2	0.0	0.0	0.1	0.0	0.0
Unimproved source	16.5	58.1	54.2	16.0	57.5	52.8
Unprotected dug well	2.9	10.3	9.6	2.5	10.7	9.7
Unprotected spring	9.1	31.4	29.3	9.1	30.8	28.3
Surface water	4.4	16.4	15.2	4.3	16.1	14.8
Other	0.2	0.1	0.2	0.4	0.1	0.2
Missing	0.1	0.2	0.2	0.1	0.2	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Time to obtain drinking water (round trip)						
Water on premises[1]	74.7	30.8	35.0	75.8	31.5	36.6
30 minutes or less	18.2	53.2	49.9	17.0	52.8	48.7
More than 30 minutes	5.4	14.0	13.2	6.0	13.6	12.8
Don't know/missing	1.8	1.9	1.9	1.3	2.0	1.9
Total	100.0	100.0	100.0	100.0	100.0	100.0
Percentage with basic drinking water service[2]	81.8	38.6	42.7	82.2	39.3	44.2
Percentage with limited drinking water service[3]	0.7	2.4	2.2	0.8	2.3	2.1
Number of households/population	1,521	14,500	16,021	9,162	71,207	80,369

[1] Includes water piped to a neighbour and those reporting a round trip collection time of zero minutes
[2] Defined as drinking water from an improved source, provided either water is on the premises or round-trip collection time is 30 minutes or less. Includes safely managed drinking water, which is not shown separately.
[3] Drinking water from an improved source, provided round-trip collection time is more than 30 minutes

Table 2.1.2 Drinking water according to region, province, and wealth

Percent distribution of de jure population by drinking water source, percentage of de jure population with basic drinking water service, and percentage with limited drinking water service, according to region, province, and wealth quintile, Papua New Guinea DHS 2016-18

Background characteristic	Improved source of drinking water[1]	Unimproved source of drinking water[2]	Other/ missing	Total	Percentage with basic drinking water service[3]	Percentage with limited drinking water service[4]	Number of persons
Region							
Southern	55.9	43.3	0.8	100.0	53.9	1.2	15,043
Highlands	39.0	60.8	0.2	100.0	35.1	3.3	32,442
Momase	43.3	56.5	0.2	100.0	41.9	1.2	21,258
Islands	63.6	36.0	0.4	100.0	60.8	1.6	11,626
Province							
Western	50.5	49.2	0.3	100.0	46.7	2.9	1,914
Gulf	41.8	58.2	0.0	100.0	40.0	0.8	1,453
Central	49.1	49.7	1.2	100.0	45.4	1.4	3,083
National Capital District	98.8	0.1	1.1	100.0	97.7	0.5	2,247
Milne Bay	59.5	39.8	0.8	100.0	58.5	0.9	4,124
Northern	29.3	69.8	0.9	100.0	28.3	0.9	2,221
Southern Highlands	19.4	80.5	0.2	100.0	14.8	4.5	5,894
Enga	29.6	69.9	0.5	100.0	27.7	1.8	2,994
Western Highlands	52.4	46.9	0.7	100.0	46.7	4.0	3,808
Chimbu	39.5	60.5	0.0	100.0	37.3	1.3	5,324
Eastern Highlands	54.5	45.4	0.1	100.0	52.3	1.7	6,641
Morobe	49.9	50.0	0.0	100.0	49.2	0.7	7,851
Madang	39.8	60.0	0.2	100.0	38.7	1.0	5,577
East Sepik	35.0	64.6	0.4	100.0	32.9	2.0	4,785
West Sepik	45.7	54.3	0.0	100.0	43.5	1.7	3,044
Manus	82.3	17.7	0.0	100.0	78.7	1.5	742
New Ireland	64.7	35.1	0.2	100.0	61.7	2.3	2,268
East New Britain	62.2	36.6	1.2	100.0	61.0	0.6	2,875
West New Britain	54.5	45.3	0.2	100.0	50.5	3.0	2,802
Autonomous Region of Bougainville	68.0	31.8	0.2	100.0	65.1	0.8	2,939
Hela	30.9	69.1	0.1	100.0	28.8	2.1	4,699
Jiwaka	47.2	52.7	0.1	100.0	35.9	10.4	3,083
Wealth quintile							
Lowest	12.7	87.2	0.0	100.0	11.0	1.6	16,073
Second	29.6	70.3	0.1	100.0	25.6	3.5	16,070
Middle	40.5	59.2	0.3	100.0	37.1	2.7	16,078
Fourth	59.3	40.1	0.7	100.0	56.7	1.8	16,072
Highest	92.2	7.3	0.6	100.0	90.4	0.9	16,075
Total	46.9	52.8	0.3	100.0	44.2	2.1	80,369

[1] See Table 2.1.1 for definition of an improved source.
[2] See Table 2.1.1 for definition of an unimproved source.
[3] Defined as drinking water from an improved source, provided either water is on the premises or round-trip collection time is 30 minutes or less. Includes safely managed drinking water, which is not shown separately.
[4] Drinking water from an improved source, provided round-trip collection time is more than 30 minutes

Table 2.1.3 Treatment of household drinking water

Percentage of households and de jure population using various methods to treat drinking water, and percentage using an appropriate treatment method, according to residence, Papua New Guinea DHS 2016-18

	Households			Population		
Water treatment method	Urban	Rural	Total	Urban	Rural	Total
Boil	24.4	8.0	9.6	25.3	8.3	10.2
Bleach/chlorine added	1.3	0.4	0.5	1.2	0.4	0.5
Strain through cloth	2.2	1.3	1.4	2.3	1.5	1.6
Ceramic, sand or other filter	0.3	0.2	0.2	0.2	0.2	0.2
Solar disinfection	0.1	0.0	0.1	0.2	0.0	0.1
Let it stand and settle	2.4	2.3	2.4	2.7	2.5	2.5
Other	0.8	0.2	0.3	0.8	0.3	0.3
No treatment	70.4	88.4	86.7	69.2	87.9	85.7
Percentage using an appropriate treatment method[1]	25.6	8.6	10.2	26.4	8.9	10.9
Number of households/population	1,521	14,500	16,021	9,162	71,207	80,369

Note: Respondents may report multiple treatment methods, so the sum of treatment methods may exceed 100%.
[1] Appropriate water treatment methods include boiling, bleaching, filtering, and solar disinfecting.

Table 2.2 Availability of water

Percent distribution of households and de jure population using piped water or water from a tube well or borehole, by availability of water in the last 2 weeks, according to residence, Papua New Guinea DHS 2016-18

	Households			Population		
Availability of water in last 2 weeks	Urban	Rural	Total	Urban	Rural	Total
Not available for at least 1 day	45.3	41.2	42.4	46.3	39.9	42.1
Available with no interruption of at least one day	53.4	55.6	55.0	52.1	56.8	55.2
Don't know/missing	1.4	3.2	2.7	1.5	3.3	2.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of households/population using piped water or water from a tube well[1]	843	2,078	2,921	5,265	10,034	15,299

[1] Includes households/population reporting piped water or water from a tube well or borehole as their main source of drinking water and households/population reporting bottled water as their main source of drinking water if their main source of water for cooking and handwashing is piped water or water from a tube well or borehole

Table 2.3.1 Household sanitation facilities

Percent distribution of households and de jure population by type of toilet/latrine facilities, percent distribution of households and de jure population with a toilet/latrine facility by location of the facility, percentage of households and de jure population with basic sanitation services, and percentage with limited sanitation services, according to residence, Papua New Guinea DHS 2016-18

	Households			Population		
Type and location of toilet/latrine facility	Urban	Rural	Total	Urban	Rural	Total
Improved sanitation facility	60.0	25.7	28.9	62.3	26.0	30.1
Flush/pour flush to piped sewer system	29.6	2.2	4.8	32.6	2.4	5.9
Flush/pour flush to septic tank	13.7	3.3	4.3	13.0	3.5	4.6
Flush/pour flush to pit latrine	1.1	0.9	0.9	1.1	0.8	0.9
Ventilated improved pit (VIP) latrine	2.4	2.9	2.8	2.6	2.9	2.8
Pit latrine with slab	12.9	14.6	14.4	12.6	14.8	14.6
Composting toilet	0.4	1.7	1.6	0.4	1.5	1.4
Unimproved facility						
Unimproved sanitation facility	32.6	56.7	54.4	30.5	55.8	52.9
Flush/pour flush not to sewer/septic tank/pit latrine	0.4	0.0	0.1	0.4	0.0	0.1
Pit latrine without slab/open pit	29.3	54.8	52.3	27.3	53.8	50.8
Bucket	0.7	0.0	0.1	0.6	0.0	0.1
Hanging toilet/hanging latrine	1.9	1.6	1.7	1.7	1.7	1.7
Other	0.2	0.1	0.1	0.1	0.1	0.1
Missing	0.2	0.2	0.2	0.3	0.2	0.2
Open defecation (no facility/bush/field)	7.4	17.6	16.7	7.2	18.2	16.9
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of households/population	1,521	14,500	16,021	9,162	71,207	80,369
Location of toilet facility						
In own dwelling	46.4	10.2	14.0	49.4	11.2	16.1
In own yard/plot	45.1	74.2	71.1	42.9	73.5	69.6
Elsewhere	7.9	15.0	14.3	7.2	14.7	13.7
Missing	0.7	0.6	0.6	0.5	0.6	0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of households/population with a toilet/latrine facility	1,409	11,943	13,352	8,502	58,244	66,747
Percentage with basic sanitation service[1]	48.3	19.3	22.1	52.2	20.4	24.0
Percentage with limited sanitation service[2]	11.0	6.0	6.5	9.5	5.3	5.8
Number of households/population	1,521	14,500	16,021	9,162	71,207	80,369

[1] Defined as use of improved facilities that are not shared with other households. Includes safely managed sanitation service, which is not shown separately.
[2] Defined as use of improved facilities shared by two or more households

Table 2.3.2 Sanitation facility type according to region, province, and wealth

Percent distribution of de jure population by type of sanitation, percentage of de jure population with basic sanitation service, and percentage with limited sanitation service, according to region, province, and wealth quintile, Papua New Guinea DHS 2016-18

Background characteristic	Type of sanitation			Total	Percentage with basic sanitation service[3]	Percentage with limited sanitation service[4]	Number of persons
	Improved sanitation facility[1]	Unimproved sanitation facility[2]	Open defecation				
Region							
Southern	38.5	37.1	24.4	100.0	28.7	9.2	15,043
Highlands	28.1	66.5	5.3	100.0	23.4	4.3	32,442
Momase	27.1	58.5	14.3	100.0	22.1	4.9	21,258
Islands	30.4	25.1	44.5	100.0	23.0	6.9	11,626
Province							
Western	36.4	53.0	10.6	100.0	27.8	8.6	1,914
Gulf	30.9	39.7	29.4	100.0	21.1	8.6	1,453
Central	33.0	37.2	29.8	100.0	21.3	11.2	3,083
National Capital District	86.0	9.9	4.1	100.0	70.6	14.3	2,247
Milne Bay	24.2	35.7	40.0	100.0	16.2	7.8	4,124
Northern	31.1	51.7	17.2	100.0	25.7	5.0	2,221
Southern Highlands	19.9	76.4	3.7	100.0	17.1	2.7	5,894
Enga	33.5	62.6	3.9	100.0	30.5	2.9	2,994
Western Highlands	31.0	68.5	0.5	100.0	27.1	3.1	3,808
Chimbu	41.3	53.0	5.8	100.0	36.3	4.5	5,324
Eastern Highlands	35.5	57.6	7.0	100.0	25.2	9.6	6,641
Morobe	39.0	53.0	8.0	100.0	35.5	3.5	7,851
Madang	27.2	55.9	16.9	100.0	17.5	9.6	5,577
East Sepik	16.7	71.5	11.9	100.0	13.0	3.6	4,785
West Sepik	12.7	57.4	29.8	100.0	10.5	2.1	3,044
Manus	29.2	54.8	15.9	100.0	21.7	7.2	742
New Ireland	21.0	5.6	73.3	100.0	16.7	4.1	2,268
East New Britain	48.8	34.4	16.8	100.0	36.8	11.8	2,875
West New Britain	35.1	20.9	44.0	100.0	26.0	7.9	2,802
Autonomous Region of Bougainville	15.5	27.6	57.0	100.0	11.8	3.2	2,939
Hela	10.2	79.0	10.9	100.0	9.3	0.9	4,699
Jiwaka	24.0	72.8	3.2	100.0	19.8	4.0	3,083
Wealth quintile							
Lowest	7.0	75.6	17.4	100.0	4.6	2.3	16,073
Second	19.1	64.3	16.6	100.0	14.7	4.2	16,070
Middle	23.4	54.9	21.6	100.0	16.9	6.2	16,078
Fourth	27.8	47.8	24.4	100.0	19.5	7.9	16,072
Highest	73.3	21.9	4.8	100.0	64.4	8.3	16,075
Total	30.1	52.9	16.9	100.0	24.0	5.8	80,369

[1] See Table 2.3.1 for definition of an improved facility.
[2] See Table 2.3.1 for definition of an unimproved facility.
[3] Defined as use of improved facilities that are not shared with other households. Included is safely managed sanitation service, which is not shown separately.
[4] Defined as use of improved facilities shared by two or more households

Table 2.4 Household characteristics

Percent distribution of households and de jure population by housing characteristics, percentage using solid fuel for cooking, percentage using clean fuel for cooking, and percent distribution by frequency of smoking in the home, according to residence, Papua New Guinea DHS 2016-18

	Households			Population		
Housing characteristic	Urban	Rural	Total	Urban	Rural	Total
Electricity						
Yes	54.6	10.4	14.6	57.0	11.4	16.6
No	44.8	89.2	84.9	42.5	88.1	82.9
Missing	0.6	0.4	0.4	0.5	0.5	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Flooring material						
Earth, sand	5.5	20.3	18.9	4.9	18.7	17.1
Wood/planks	38.1	20.2	21.9	39.4	20.7	22.8
Palm/bamboo	6.1	47.0	43.1	5.2	47.1	42.3
Polished wood	22.9	5.1	6.8	24.4	5.7	7.9
Vinyl or asphalt strips	0.2	0.2	0.2	0.1	0.2	0.2
Ceramic tiles	5.3	0.2	0.7	4.6	0.1	0.6
Cement	14.3	2.9	4.0	13.8	2.7	3.9
Carpet	0.4	0.1	0.1	0.3	0.1	0.1
Unpolished floor	6.8	2.9	3.3	6.8	3.6	3.9
Other	0.0	0.2	0.2	0.0	0.2	0.2
Missing	0.5	0.8	0.8	0.4	0.9	0.8
Total	100.0	100.0	100.0	100.0	100.0	100.0
Rooms used for sleeping						
One	17.0	22.8	22.3	11.1	19.4	18.5
Two	28.2	35.5	34.8	25.5	33.7	32.8
Three or more	53.3	35.7	37.4	62.0	41.6	43.9
Missing	1.5	5.9	5.5	1.3	5.3	4.8
Total	100.0	100.0	100.0	100.0	100.0	100.0
Lighting source						
Electricity	56.7	10.6	15.0	59.2	11.4	16.8
Pressure lamp	0.2	0.3	0.3	0.2	0.3	0.3
Kerosene	0.8	1.7	1.6	0.6	1.7	1.6
Solar	16.0	33.9	32.2	15.7	35.3	33.0
Candles	2.7	0.7	0.9	2.4	0.6	0.8
Open fire[1]	0.4	14.3	12.9	0.3	13.2	11.8
Lantern (battery operated)	22.2	37.7	36.2	20.4	36.7	34.8
Other	0.0	0.2	0.2	0.0	0.2	0.2
Missing	1.0	0.6	0.7	1.1	0.6	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
Place for cooking						
In the house	45.8	45.7	45.7	44.9	43.9	44.0
In a separate building	31.4	41.7	40.7	33.0	42.8	41.7
Outdoors	22.1	12.1	13.1	21.3	12.7	13.7
No food cooked in household	0.0	0.1	0.1	0.0	0.1	0.1
Missing	0.7	0.5	0.5	0.7	0.4	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Cooking fuel						
Electricity	24.2	3.2	5.2	25.0	3.4	5.9
LPG	14.0	1.2	2.4	14.1	1.2	2.7
Kerosene	4.4	0.2	0.6	3.7	0.2	0.6
Charcoal	0.4	0.1	0.1	0.4	0.1	0.1
Wood	56.7	95.0	91.4	56.5	94.7	90.4
Other	0.2	0.0	0.0	0.1	0.0	0.0
No food cooked in household	0.0	0.1	0.1	0.0	0.1	0.1
Missing	0.1	0.2	0.2	0.1	0.2	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Percentage using solid fuel for cooking[2]	57.1	95.1	91.5	56.9	94.8	90.5
Percentage using clean fuel for cooking[3]	38.2	4.4	7.6	39.2	4.7	8.6
Frequency of smoking in the home						
Daily	46.3	56.9	55.9	48.4	58.0	56.9
Weekly	4.7	3.3	3.5	5.4	3.3	3.6
Monthly	0.5	0.3	0.3	0.4	0.3	0.3
Less than once a month	2.9	1.5	1.6	3.1	1.6	1.8
Never	45.2	37.7	38.4	42.2	36.5	37.1
Missing	0.3	0.2	0.2	0.4	0.3	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of households/population	1,521	14,500	16,021	9,162	71,207	80,369

LPG = Liquefied petroleum gas
[1] Includes traditional means: torched bamboo, coconut fronds, etc.
[2] Includes charcoal and wood
[3] Includes electricity and LPG

Table 2.5 Household possessions

Percentage of households possessing various household effects, means of transportation, agricultural land, and farm animals by residence, Papua New Guinea DHS 2016-18

Possession	Residence		Total
	Urban	Rural	
Household effects			
Radio	49.4	21.0	23.7
Television	47.8	8.9	12.6
Mobile phone	87.8	53.0	56.3
Computer	42.7	7.3	10.6
Non-mobile telephone	8.3	1.6	2.2
Refrigerator	45.1	6.3	10.0
Means of transport			
Bicycle	24.7	8.8	10.3
Animal drawn cart	1.5	0.3	0.4
Motorcycle/scooter	2.3	0.4	0.6
Car/truck	22.6	3.2	5.1
Boat with a motor	5.1	1.8	2.2
Ownership of agricultural land	29.9	77.2	72.7
Ownership of farm animals[1]	12.0	49.5	45.9
Number	1,521	14,500	16,021

[1] Cows, bulls, buffalo, goats, sheep, pigs, cassowary, chickens, ducks, or other

Table 2.6 Household possession of livestock, food and cash crops, and fish farming

Percentage of households that own livestock, herds, poultry, or other farm animals; engage in food crop and cash crop production; and practice fish farming, by residence and background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Livestock ownership	Food crop production	Cash crop production	Fish farming	Number of households
Residence					
Urban	12.0	41.1	11.1	3.6	1,521
Rural	49.5	91.4	57.9	8.6	14,500
Region					
Southern	35.5	77.8	42.9	6.8	2,681
Highlands	60.1	91.5	46.5	8.3	6,916
Momase	34.7	83.6	67.5	9.7	4,075
Islands	35.5	87.8	61.5	6.6	2,349
Province					
Western	18.3	64.7	26.6	8.6	349
Gulf	32.0	84.3	47.5	8.0	263
Central	43.7	81.0	34.3	17.8	514
National Capital District	5.2	26.8	2.8	3.1	324
Milne Bay	56.8	92.9	65.0	0.9	833
Northern	22.4	90.4	51.8	5.3	399
Southern Highlands	63.8	94.5	24.7	7.5	1,277
Enga	65.1	95.8	22.4	13.5	567
Western Highlands	52.1	84.9	44.9	7.5	868
Chimbu	60.8	89.4	58.0	6.3	1,077
Eastern Highlands	48.3	89.7	78.7	5.0	1,584
Morobe	36.0	71.7	48.4	7.9	1,419
Madang	50.9	91.8	79.7	9.5	1,014
East Sepik	18.9	87.1	82.5	12.1	1,054
West Sepik	31.8	92.0	65.5	10.0	587
Manus	21.6	74.5	30.3	7.0	158
New Ireland	26.4	89.1	52.4	1.9	453
East New Britain	48.6	92.7	56.0	6.0	533
West New Britain	39.1	79.8	58.2	9.5	607
Autonomous Region of Bougainville	30.9	94.0	84.7	7.5	598
Hela	74.0	95.5	6.1	9.1	903
Jiwaka	67.9	92.7	71.2	16.4	641
Wealth quintile					
Lowest	59.9	95.9	55.5	10.3	3,421
Second	53.2	95.5	63.1	7.4	3,362
Middle	48.3	93.7	64.7	8.9	3,282
Fourth	40.8	85.4	54.0	8.0	3,129
Highest	23.3	58.1	25.6	5.5	2,826
Total	45.9	86.6	53.4	8.1	16,021

Table 2.7 Household consumption of rice, flour, and salt

Percentage of households that consumed rice, flour products, and salt in the 7 days preceding the survey, according to residence and background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Rice	Flour/flour products	Salt	Number of households
Residence				
Urban	94.1	86.5	92.8	1,521
Rural	63.0	51.3	75.7	14,500
Region				
Southern	62.8	50.8	68.8	2,681
Highlands	64.9	55.0	76.0	6,916
Momase	62.0	52.2	80.0	4,075
Islands	79.8	62.4	86.3	2,349
Province				
Western	39.4	35.6	56.2	349
Gulf	40.0	34.2	48.3	263
Central	71.7	59.3	70.6	514
National Capital District	97.4	92.7	92.2	324
Milne Bay	58.9	39.6	64.9	833
Northern	66.7	53.7	80.0	399
Southern Highlands	40.5	25.9	56.9	1,277
Enga	64.9	51.8	72.2	567
Western Highlands	84.0	65.7	90.3	868
Chimbu	65.9	60.8	82.6	1,077
Eastern Highlands	79.8	70.6	84.9	1,584
Morobe	73.6	70.2	85.7	1,419
Madang	71.1	54.2	84.8	1,014
East Sepik	49.9	38.6	79.3	1,054
West Sepik	39.9	29.5	58.7	587
Manus	76.7	60.2	85.6	158
New Ireland	83.0	74.6	92.2	453
East New Britain	86.2	77.8	92.1	533
West New Britain	73.7	53.9	80.5	607
Autonomous Region of Bougainville	78.5	48.5	82.8	598
Hela	53.5	42.5	70.6	903
Jiwaka	65.7	70.5	72.5	641
Wealth quintile				
Lowest	34.8	29.3	53.6	3,421
Second	54.1	41.5	72.9	3,362
Middle	69.3	54.1	80.3	3,282
Fourth	83.1	68.9	88.1	3,129
Highest	95.2	85.9	95.9	2,826
Total	66.0	54.7	77.3	16,021

Table 2.8 Wealth quintiles

Percent distribution of the de jure population by wealth quintiles and the Gini coefficient, according to residence and region, Papua New Guinea DHS 2016-18

	Wealth quintile							
Residence/region	Lowest	Second	Middle	Fourth	Highest	Total	Number of persons	Gini coefficient
Residence								
Urban	1.1	1.3	4.6	22.6	70.5	100.0	9,162	0.26
Rural	22.4	22.4	22.0	19.7	13.5	100.0	71,207	0.47
Region								
Southern	13.6	17.0	19.4	20.6	29.5	100.0	15,043	0.44
Highlands	27.9	24.9	19.5	13.1	14.7	100.0	32,442	0.51
Momase	21.6	21.1	20.5	16.5	20.3	100.0	21,258	0.47
Islands	3.4	8.3	21.3	44.9	22.1	100.0	11,626	0.40
Total	20.0	20.0	20.0	20.0	20.0	100.0	80,369	0.45

Table 2.9 Handwashing

Percentage of the de jure population for whom the place most often used for washing hands was observed, by whether the location was fixed or mobile, and total percentage of the de jure population for whom the place for handwashing was observed; and among the de jure population for whom the place for handwashing was observed, percentage with water available, percentage with soap available, and percentage with a cleansing agent other than soap available; percentage of the de jure population with a basic handwashing facility and percentage with a limited handwashing facility, according to background characteristics, Papua New Guinea DHS 2016-18

	Percentage of de jure population for whom place for washing hands was observed and:				Place for handwashing observed and:						
Background characteristic	Place for hand-washing was a fixed place	Place for hand-washing was mobile	Total	Number of persons	Water available	Soap available[1]	Cleansing agent other than soap available[2]	Number of persons for whom place for hand-washing was observed	Percentage of the de jure population with a basic hand-washing facility[3]	Percentage of the de jure population with a limited hand-washing facility[4]	Number of persons for whom a place for hand-washing was observed or with no place for hand-washing in the dwelling, yard, or plot
Residence											
Urban	75.1	12.4	87.5	9,162	88.9	72.9	2.4	8,014	64.9	27.2	8,644
Rural	36.6	16.4	52.9	71,207	79.5	49.1	4.5	37,698	28.6	34.5	59,287
Region											
Southern	55.8	20.4	76.2	15,043	86.4	55.1	6.1	11,457	44.0	39.4	13,722
Highlands	25.6	10.4	36.0	32,442	79.3	55.4	4.3	11,676	24.0	23.3	24,464
Momase	47.1	18.4	65.5	21,258	78.4	46.9	3.0	13,932	30.6	40.1	19,462
Islands	53.5	20.9	74.4	11,626	81.2	58.5	3.2	8,646	45.5	38.1	10,283
Province											
Western	35.3	27.5	62.8	1,914	60.9	34.3	6.2	1,202	24.0	49.9	1,617
Gulf	35.2	17.9	53.1	1,453	88.3	32.0	5.9	772	18.9	44.1	1,221
Central	63.0	15.0	78.0	3,083	89.8	69.6	3.6	2,405	59.8	29.1	2,706
National Capital District	81.4	9.7	91.1	2,247	92.1	77.7	1.6	2,047	72.8	24.1	2,110
Milne Bay	54.7	25.8	80.4	4,124	91.5	47.3	9.4	3,318	38.4	46.7	3,891
Northern	53.1	24.0	77.1	2,221	81.6	47.9	8.9	1,713	35.2	43.4	2,177
Southern Highlands	10.2	9.0	19.2	5,894	61.5	46.5	2.1	1,131	13.5	17.1	3,690
Enga	25.4	13.5	38.8	2,994	73.2	43.7	4.4	1,162	20.1	30.2	2,289
Western Highlands	27.7	10.2	37.9	3,808	90.0	59.2	6.1	1,445	27.2	22.8	2,854
Chimbu	34.3	5.9	40.2	5,324	87.5	73.5	1.4	2,142	34.0	13.2	4,500
Eastern Highlands	34.2	20.1	54.4	6,641	73.8	50.9	4.7	3,611	28.2	38.6	5,369
Morobe	52.2	17.7	69.8	7,851	82.8	56.3	2.9	5,483	41.7	31.6	7,290
Madang	46.8	20.7	67.5	5,577	79.1	46.9	2.1	3,763	31.3	44.4	4,974
East Sepik	43.9	16.6	60.4	4,785	70.5	37.4	4.0	2,891	18.1	45.6	4,523
West Sepik	40.0	19.0	59.0	3,044	76.4	33.2	3.5	1,795	20.6	46.4	2,675
Manus	88.6	4.1	92.7	742	96.2	86.9	0.3	687	83.4	12.8	709
New Ireland	43.4	32.4	75.8	2,268	77.4	55.8	9.0	1,720	42.4	43.9	1,984
East New Britain	51.0	29.3	80.3	2,875	74.6	46.6	0.7	2,310	37.4	49.1	2,651
West New Britain	48.8	18.3	67.2	2,802	79.8	46.4	2.6	1,882	30.8	45.1	2,469
Autonomous Region of Bougainville	59.2	10.4	69.6	2,939	88.2	75.7	2.7	2,046	60.4	22.0	2,469
Hela	18.4	3.5	21.9	4,699	88.3	51.0	3.9	1,030	16.3	15.4	3,160
Jiwaka	29.4	8.1	37.4	3,083	82.9	55.1	8.4	1,154	22.6	21.7	2,601
Wealth quintile											
Lowest	15.4	16.4	31.8	16,073	64.3	21.2	5.7	5,105	6.9	33.3	12,572
Second	23.5	17.5	40.9	16,070	73.8	31.1	6.4	6,579	14.2	36.2	12,995
Middle	35.3	18.0	53.4	16,078	76.5	43.0	5.8	8,582	24.0	40.3	13,281
Fourth	49.5	19.8	69.3	16,072	80.5	55.6	4.4	11,141	40.2	38.8	14,033
Highest	81.1	7.9	89.0	16,075	93.8	79.4	1.5	14,303	73.2	20.8	15,049
Total	41.0	15.9	56.9	80,369	81.2	53.3	4.2	45,711	33.2	33.6	67,930

[1] Soap includes soap or detergent in bar, liquid, powder, or paste form.
[2] Cleansing agents other than soap include locally available materials such as ash, mud, or sand.
[3] The availability of a handwashing facility on premises with soap and water
[4] The availability of a handwashing facility on premises without soap and/or water

Table 2.10 Household population by age, sex, and residence

Percent distribution of the de facto household population by various age groups and percentage of the de facto household population age 10-19, according to sex and residence, Papua New Guinea DHS 2016-18

	Urban			Rural					
Age	Male	Female	Total	Male	Female	Total	Male	Female	Total
<5	13.0	12.1	12.6	14.3	13.5	13.9	14.2	13.3	13.8
5-9	12.7	11.7	12.2	15.3	14.7	15.0	15.0	14.3	14.7
10-14	11.7	11.9	11.8	13.6	13.3	13.4	13.4	13.1	13.2
15-19	10.7	10.7	10.7	10.0	8.9	9.5	10.1	9.1	9.6
20-24	9.4	10.1	9.7	7.5	8.0	7.8	7.7	8.2	8.0
25-29	8.4	8.5	8.4	6.8	7.4	7.1	6.9	7.5	7.2
30-34	7.2	7.5	7.3	5.6	6.4	6.0	5.8	6.5	6.2
35-39	5.4	6.1	5.8	5.4	5.9	5.7	5.4	5.9	5.7
40-44	5.2	5.1	5.1	4.3	4.2	4.3	4.4	4.3	4.4
45-49	4.0	3.8	3.9	4.0	3.5	3.7	4.0	3.5	3.8
50-54	4.5	5.2	4.8	4.6	6.4	5.5	4.6	6.3	5.4
55-59	3.0	2.9	2.9	3.2	2.8	3.0	3.2	2.8	3.0
60-64	1.9	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.1
65-69	1.4	1.1	1.3	1.6	1.2	1.4	1.6	1.2	1.4
70-74	0.7	0.6	0.6	0.7	0.6	0.7	0.7	0.6	0.7
75-79	0.3	0.3	0.3	0.5	0.4	0.4	0.4	0.4	0.4
80 +	0.3	0.3	0.3	0.4	0.5	0.4	0.4	0.5	0.4
Don't know/missing	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Dependency age groups									
0-14	37.5	35.7	36.6	43.2	41.5	42.3	42.5	40.8	41.7
15-64	59.6	61.9	60.7	53.5	55.6	54.5	54.2	56.3	55.2
65+	2.7	2.3	2.5	3.1	2.8	2.9	3.1	2.7	2.9
Don't know/missing	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Child and adult populations									
0-17	43.7	41.9	42.9	49.3	46.7	48.1	48.7	46.2	47.5
18+	56.1	57.9	56.9	50.5	53.1	51.7	51.1	53.6	52.3
Don't know/missing	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Adolescents 10-19	22.4	22.6	22.5	23.6	22.2	22.9	23.5	22.2	22.9
Number of persons	4,751	4,467	9,219	36,020	34,114	70,134	40,772	38,581	79,353

Table 2.11 Household composition

Percent distribution of households by sex of head of household and by household size; mean size of household, and percentage of households with orphans and foster children under age 18, according to residence, Papua New Guinea DHS 2016-18

Characteristic	Residence		Total
	Urban	Rural	
Household headship			
Male	79.4	82.9	82.5
Female	20.6	17.1	17.5
Total	100.0	100.0	100.0
Number of usual members			
1	5.2	6.8	6.6
2	6.6	9.8	9.5
3	9.9	14.3	13.9
4	13.9	16.1	15.8
5	12.6	15.9	15.6
6	13.7	13.7	13.7
7	10.4	9.1	9.2
8	10.3	6.5	6.9
9+	17.4	7.9	8.8
Total	100.0	100.0	100.0
Mean size of households	6.0	4.9	5.0
Percentage of households with orphans and foster children under age 18			
Double orphans	1.1	1.0	1.1
Single orphans[1]	10.6	6.9	7.3
Foster children[2]	28.4	21.3	22.0
Orphans and/or foster children	32.9	24.5	25.3
Number of households	1,521	14,500	16,021

Note: Table is based on de jure household members, i.e., usual residents.
[1] Includes children with one dead parent and an unknown survival status of the other parent
[2] Foster children are those under age 18 living in households with neither their mother nor their father present, and the mother and/or the father are alive.

Table 2.12 Children's living arrangements and orphanhood

Percent distribution of de jure children under age 18 by living arrangements and survival status of parents, percentage of children not living with a biological parent, and percentage of children with one or both parents dead, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Living with both parents	Living with mother but not with father		Living with father but not with mother		Not living with either parent					Total	Percentage not living with a biological parent	Percentage with one or both parents dead[1]	Number of children
		Father alive	Father dead	Mother alive	Mother dead	Both alive	Only father alive	Only mother alive	Both dead	Missing information on father/ mother				
Age														
0-4	72.5	16.0	1.4	2.2	0.2	5.7	0.4	0.2	0.2	1.1	100.0	6.4	2.4	10,975
<2	74.0	18.2	1.2	1.3	0.1	3.3	0.1	0.1	0.1	1.6	100.0	3.7	1.6	3,983
2-4	71.7	14.8	1.5	2.8	0.3	7.0	0.5	0.3	0.2	0.8	100.0	8.0	2.9	6,992
5-9	66.1	12.4	2.0	3.7	1.0	11.6	0.6	1.0	0.5	1.3	100.0	13.6	5.0	11,741
10-14	61.7	10.5	3.8	4.8	1.3	13.5	1.1	1.3	0.9	1.1	100.0	16.9	8.4	10,635
15-17	56.3	10.3	4.3	3.7	2.1	17.3	1.3	2.2	1.3	1.3	100.0	22.1	11.2	4,691
Sex														
Male	66.0	11.9	2.4	4.1	1.0	11.1	0.7	0.9	0.7	1.1	100.0	13.4	5.7	20,034
Female	64.9	13.4	2.7	3.0	1.0	11.1	0.8	1.1	0.5	1.3	100.0	13.6	6.2	18,007
Residence														
Urban	58.8	14.9	3.2	4.9	1.1	12.8	1.2	1.1	0.5	1.4	100.0	15.7	7.3	3,948
Rural	66.3	12.4	2.5	3.4	1.0	10.9	0.7	1.0	0.6	1.2	100.0	13.2	5.8	34,093
Region														
Southern	67.1	11.2	2.6	3.7	1.3	11.0	0.8	0.8	0.7	0.9	100.0	13.3	6.2	7,130
Highlands	61.1	14.2	2.6	4.2	0.8	12.8	0.7	1.1	0.8	1.7	100.0	15.4	6.0	15,251
Momase	70.4	10.5	3.0	3.0	1.1	8.8	0.8	1.1	0.4	1.0	100.0	11.0	6.4	10,020
Islands	66.9	14.0	1.9	2.8	0.9	10.8	0.8	0.9	0.4	0.7	100.0	12.9	4.9	5,640
Province														
Western	71.4	11.2	2.4	2.5	1.0	9.1	0.7	0.9	0.2	0.6	100.0	10.9	5.2	942
Gulf	72.2	10.1	2.5	3.1	0.5	8.8	0.2	0.7	0.7	1.3	100.0	10.3	4.6	739
Central	67.7	11.1	3.6	3.1	1.4	9.7	0.9	0.6	1.3	0.7	100.0	12.4	7.8	1,530
National Capital District	60.8	14.5	3.7	5.9	0.8	10.1	1.3	0.8	0.7	1.4	100.0	12.9	7.3	873
Milne Bay	65.1	11.6	1.6	3.6	1.1	14.0	0.9	0.7	0.6	0.7	100.0	16.3	5.0	1,951
Northern	67.6	8.8	2.5	4.3	2.4	11.4	0.9	0.9	0.3	1.0	100.0	13.4	7.0	1,095
Southern Highlands	60.8	15.6	2.6	3.4	0.4	11.8	0.7	2.1	1.0	1.5	100.0	15.7	7.0	2,850
Enga	68.8	10.0	2.4	3.2	1.7	9.4	0.2	1.4	1.9	0.9	100.0	13.0	7.7	1,274
Western Highlands	67.7	12.0	3.9	3.8	1.0	8.4	1.0	0.3	0.7	1.3	100.0	10.3	6.9	1,757
Chimbu	58.9	15.1	2.1	4.8	0.7	14.7	0.2	0.8	0.5	2.2	100.0	16.2	4.3	2,455
Eastern Highlands	61.8	10.3	1.1	6.0	1.3	15.6	0.9	0.5	0.3	2.2	100.0	17.3	4.1	3,014
Morobe	66.3	12.5	2.6	3.9	1.2	9.2	1.0	1.4	0.4	1.3	100.0	12.1	6.7	3,382
Madang	73.3	7.4	3.8	2.7	0.7	9.0	0.7	1.0	0.3	1.1	100.0	10.9	6.4	2,817
East Sepik	68.6	12.7	2.7	2.8	1.3	9.9	0.6	0.5	0.2	0.5	100.0	11.3	5.4	2,290
West Sepik	76.6	8.4	2.5	1.8	1.3	5.6	0.8	1.1	1.1	0.7	100.0	8.6	6.9	1,531
Manus	55.5	19.9	2.0	4.6	0.3	14.6	0.7	1.1	0.1	1.2	100.0	16.5	4.3	339
New Ireland	59.7	16.7	2.7	3.0	0.6	14.8	0.7	0.9	0.4	0.4	100.0	16.8	5.4	1,145
East New Britain	66.4	16.3	1.4	1.5	1.0	11.1	1.0	0.9	0.2	0.1	100.0	13.3	4.5	1,484
West New Britain	71.5	12.2	1.8	3.2	1.1	7.9	0.2	1.3	0.2	0.5	100.0	9.7	4.7	1,303
Autonomous Region of Bougainville	71.7	9.3	1.9	3.1	1.0	9.0	1.1	0.5	0.8	1.5	100.0	11.4	5.4	1,369
Hela	49.3	22.6	4.6	3.4	0.3	14.7	0.8	1.4	1.1	1.9	100.0	18.0	8.1	2,465
Jiwaka	69.0	10.3	1.2	4.0	0.5	11.1	0.8	1.3	0.6	1.3	100.0	13.7	4.4	1,436
Wealth quintile														
Lowest	68.4	12.3	3.3	2.6	1.4	8.9	0.4	0.8	0.7	1.1	100.0	10.8	6.7	7,953
Second	68.4	11.8	2.3	3.5	1.2	9.5	0.6	0.8	0.7	1.3	100.0	11.6	5.6	7,786
Middle	68.1	10.5	2.4	3.9	0.6	10.6	1.0	0.8	0.8	1.3	100.0	13.2	5.6	7,801
Fourth	64.7	12.7	2.8	2.9	0.9	12.0	0.8	1.5	0.6	1.2	100.0	14.9	6.6	7,636
Highest	56.8	16.4	1.9	5.2	0.8	15.2	1.0	1.2	0.3	1.1	100.0	17.7	5.3	6,865
Total <15	66.8	13.0	2.3	3.6	0.8	10.3	0.7	0.8	0.5	1.2	100.0	12.3	5.2	33,351
Total <18	65.5	12.6	2.6	3.6	1.0	11.1	0.8	1.0	0.6	1.2	100.0	13.5	6.0	38,041

Note: Table is based on de jure members, i.e., usual residents.

[1] Includes children with father dead, mother dead, both dead, and one parent dead but missing information on survival status of the other parent

Table 2.13 Birth registration of children under age 5

Percentage of de jure children under age 5 whose births are registered with the civil authorities, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage of children whose births are registered and who:			Number of children
	Had a birth certificate	Did not have birth certificate	Total percentage of children whose births are registered	
Age				
<2	6.3	6.5	12.8	3,983
2-4	7.5	6.3	13.8	6,992
Sex				
Male	7.1	6.2	13.3	5,769
Female	7.1	6.5	13.6	5,206
Residence				
Urban	17.0	7.9	24.9	1,153
Rural	5.9	6.2	12.1	9,822
Region				
Southern	11.4	7.8	19.2	2,193
Highlands	8.0	8.1	16.1	4,173
Momase	3.7	3.8	7.5	3,000
Islands	5.1	4.6	9.6	1,610
Province				
Western	4.4	7.0	11.4	285
Gulf	2.8	1.1	3.9	223
Central	10.1	11.3	21.4	481
National Capital District	26.5	14.4	40.8	273
Milne Bay	10.7	4.2	14.9	613
Northern	14.1	9.1	23.2	319
Southern Highlands	7.4	0.8	8.2	832
Enga	0.8	12.0	12.7	336
Western Highlands	4.1	0.5	4.6	432
Chimbu	7.1	5.3	12.4	694
Eastern Highlands	7.3	20.7	28.1	838
Morobe	6.3	2.2	8.4	1,047
Madang	1.9	1.2	3.1	814
East Sepik	2.9	1.6	4.5	655
West Sepik	2.2	14.9	17.1	484
Manus	4.5	3.2	7.7	100
New Ireland	4.5	1.4	5.9	313
East New Britain	6.9	0.4	7.3	441
West New Britain	2.3	6.7	9.0	370
Autonomous Region of Bougainville	6.2	10.2	16.4	385
Hela	3.5	10.4	14.0	637
Jiwaka	28.9	3.5	32.4	405
Wealth quintile				
Lowest	3.3	6.0	9.3	2,348
Second	3.6	6.1	9.7	2,267
Middle	6.1	6.0	12.1	2,238
Fourth	7.0	6.5	13.4	2,166
Highest	16.8	7.4	24.2	1,957
Total	7.1	6.4	13.4	10,975

Table 2.14.1 Educational attainment of the female household population

Percent distribution of the de facto female household population age 6 and over by highest level of schooling attended or completed and median years completed, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	No education	Some elementary	Completed elementary[1]	Some primary	Completed primary[2]	Some secondary	Completed secondary[3]	More than secondary	Don't know/ missing	Total	Number	Median years completed
Age												
6-14	29.6	31.1	7.2	27.2	0.9	0.5	0.0	0.0	3.5	100.0	9,653	0.1
6-9	45.6	41.3	4.5	3.9	0.2	0.0	0.0	0.0	4.4	100.0	4,596	0.0
10-14	15.0	21.8	9.7	48.4	1.5	1.0	0.0	0.0	2.6	100.0	5,057	1.8
15-24	13.5	1.8	2.2	37.0	13.7	21.7	4.7	3.4	1.9	100.0	6,697	6.4
15-19	11.1	2.0	2.6	48.6	11.3	19.5	2.4	0.1	2.3	100.0	3,521	5.8
20-24	16.2	1.6	1.7	24.3	16.3	24.2	7.1	7.1	1.5	100.0	3,175	7.3
25-29	26.1	1.6	2.7	25.4	13.2	18.0	6.2	4.5	2.4	100.0	2,908	5.6
30-34	29.5	1.4	2.9	28.3	10.1	16.0	4.3	4.9	2.5	100.0	2,514	5.1
35-39	32.5	2.3	2.8	34.4	6.3	13.4	1.5	5.0	1.9	100.0	2,282	4.6
40-44	31.3	1.7	2.5	38.0	5.0	12.7	2.6	5.0	1.3	100.0	1,663	5.1
45-49	38.9	1.9	2.5	36.6	3.8	11.2	1.0	2.9	1.3	100.0	1,349	3.9
50-54	55.9	0.9	1.5	28.6	3.0	4.4	1.3	2.1	2.3	100.0	2,427	0.0
55-59	57.3	1.3	1.7	24.8	2.5	5.3	1.2	3.4	2.7	100.0	1,073	0.0
60-64	62.9	1.5	1.0	22.5	1.2	5.7	0.5	1.7	3.0	100.0	811	0.0
65+	69.9	1.8	5.4	15.3	1.2	1.2	0.0	1.0	4.1	100.0	1,042	0.0
Don't know/ missing	57.7	1.5	1.0	15.1	2.5	1.6	0.0	0.0	20.6	100.0	79	0.0
Residence												
Urban	13.6	9.2	2.9	29.3	8.0	20.6	5.4	8.1	3.0	100.0	3,833	5.8
Rural	34.1	10.6	4.0	30.2	6.0	8.8	1.9	1.8	2.6	100.0	28,664	1.8
Region												
Southern	22.5	10.9	4.0	33.6	8.1	12.5	2.4	3.5	2.4	100.0	6,040	3.9
Highlands	43.0	8.5	4.1	23.6	4.1	8.5	2.0	3.0	3.3	100.0	13,266	0.3
Momase	29.4	12.3	3.7	32.5	6.7	8.7	2.8	1.5	2.3	100.0	8,446	2.3
Islands	16.2	11.7	3.1	39.6	9.1	14.7	2.1	2.1	1.4	100.0	4,744	4.9
Province												
Western	23.0	9.8	4.2	37.2	9.8	10.3	1.2	1.7	2.8	100.0	767	4.1
Gulf	40.1	9.4	4.1	28.4	5.9	6.7	0.9	0.6	3.9	100.0	585	0.7
Central	27.0	11.3	3.0	32.9	6.8	13.5	1.5	1.1	2.9	100.0	1,197	2.7
National Capital District	7.7	8.0	3.1	26.2	7.7	21.3	8.2	14.4	3.3	100.0	946	7.4
Milne Bay	19.3	12.2	4.8	36.8	9.6	12.1	1.9	2.3	1.0	100.0	1,631	4.1
Northern	25.5	13.2	4.8	36.8	7.8	8.6	0.5	0.6	2.3	100.0	914	2.8
Southern Highlands	51.9	8.2	3.9	21.0	3.1	6.5	1.1	1.5	2.8	100.0	2,446	0.0
Enga	53.4	8.7	4.2	20.6	3.6	6.5	1.0	0.9	1.1	100.0	1,182	0.0
Western Highlands	32.4	9.1	4.2	25.8	4.9	8.6	2.1	4.9	7.9	100.0	1,606	1.9
Chimbu	30.3	7.1	4.8	21.5	6.9	15.7	4.5	5.5	3.8	100.0	2,171	3.5
Eastern Highlands	37.5	10.9	3.5	29.1	3.6	8.2	2.0	3.6	1.7	100.0	2,692	1.2
Morobe	26.5	11.1	4.0	29.7	6.3	11.5	5.8	2.9	2.2	100.0	3,072	3.1
Madang	27.4	14.0	4.0	35.3	9.0	6.2	0.7	0.9	2.5	100.0	2,206	2.0
East Sepik	30.8	11.9	3.6	35.6	5.4	8.1	1.5	0.6	2.4	100.0	1,992	2.2
West Sepik	38.3	12.8	2.9	29.5	5.7	6.8	0.9	0.6	2.4	100.0	1,176	0.6
Manus	10.1	10.7	4.8	38.1	9.1	18.2	3.4	3.4	2.1	100.0	300	5.4
New Ireland	11.9	13.5	4.4	37.3	8.1	17.4	1.8	2.6	3.0	100.0	910	5.1
East New Britain	15.3	11.3	2.8	40.6	9.1	15.7	1.8	2.7	0.7	100.0	1,178	5.1
West New Britain	20.5	13.0	2.6	38.8	9.4	11.7	2.2	1.1	0.7	100.0	1,129	3.9
Autonomous Region of Bougainville	17.7	9.8	2.5	41.3	9.7	13.7	2.1	1.6	1.6	100.0	1,226	5.0
Hela	58.0	6.2	5.0	19.5	1.6	4.4	0.4	1.1	3.8	100.0	1,925	0.0
Jiwaka	39.7	8.8	3.0	26.6	5.4	9.3	2.4	2.6	2.1	100.0	1,245	1.1
Wealth quintile												
Lowest	54.4	10.2	3.9	23.2	3.0	2.6	0.2	0.2	2.3	100.0	6,421	0.0
Second	41.3	10.0	4.3	29.9	5.6	5.1	0.5	0.2	3.0	100.0	6,360	0.3
Middle	30.3	12.4	4.5	33.9	6.6	7.8	1.0	0.4	3.1	100.0	6,385	2.0
Fourth	21.0	12.1	3.5	36.3	8.4	12.4	1.6	2.1	2.5	100.0	6,638	3.9
Highest	12.7	7.3	3.0	27.2	7.6	22.6	7.8	9.6	2.2	100.0	6,694	6.6
Total	31.7	10.4	3.8	30.1	6.3	10.2	2.3	2.6	2.6	100.0	32,497	2.3

[1] Completed grade 2 at elementary level
[2] Completed grade 8 at primary level
[3] Completed grade 12 at secondary level

Table 2.14.2 Educational attainment of the male household population

Percent distribution of the de facto male household population age 6 and over by highest level of schooling attended or completed and median years completed, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	No education	Some elementary	Completed elementary[1]	Some primary	Completed primary[2]	Some secondary	Completed secondary[3]	More than secondary	Don't know/ missing	Total	Number	Median years completed
Age												
6-14	29.3	32.2	8.0	26.3	0.5	0.4	0.0	0.0	3.3	100.0	10,516	0.0
6-9	45.2	41.8	4.9	4.0	0.0	0.0	0.0	0.0	4.0	100.0	5,062	0.0
10-14	14.4	23.3	10.9	47.1	0.9	0.7	0.0	0.0	2.6	100.0	5,454	1.7
15-24	9.3	2.0	1.8	42.0	13.0	21.9	5.5	2.4	2.1	100.0	7,279	6.4
15-19	7.8	2.4	2.1	53.5	12.9	16.9	1.3	1.0	2.1	100.0	4,120	5.7
20-24	11.3	1.4	1.3	27.0	13.1	28.4	11.1	4.1	2.2	100.0	3,159	7.6
25-29	16.6	1.7	1.8	20.9	13.3	24.2	11.2	7.3	3.0	100.0	2,832	7.5
30-34	20.0	1.8	1.9	28.7	9.4	21.1	6.8	8.0	2.3	100.0	2,367	6.0
35-39	20.1	2.1	2.1	33.9	10.2	18.2	4.8	6.2	2.3	100.0	2,218	5.7
40-44	19.0	2.7	2.4	36.8	6.1	18.7	3.8	8.3	2.2	100.0	1,791	5.6
45-49	23.4	2.2	2.7	39.8	8.4	13.4	1.4	6.7	2.0	100.0	1,630	5.4
50-54	32.8	1.1	1.6	35.6	6.6	10.5	2.0	7.4	2.6	100.0	1,873	5.2
55-59	35.9	1.7	1.5	34.9	4.5	11.0	1.1	6.4	2.9	100.0	1,289	5.0
60-64	45.0	1.8	1.2	26.7	3.6	10.6	1.1	7.0	2.9	100.0	818	2.1
65+	53.4	2.3	2.6	26.0	2.0	5.9	1.0	3.1	3.8	100.0	1,257	0.0
Don't know/ missing	35.5	6.7	0.0	14.9	2.5	7.5	0.0	2.9	29.9	100.0	79	0.0
Residence												
Urban	9.7	9.7	2.8	28.3	6.8	20.2	7.3	12.2	2.9	100.0	3,998	6.5
Rural	25.4	11.6	3.9	32.4	6.8	11.6	2.9	2.6	2.8	100.0	29,950	3.2
Region												
Southern	18.3	11.7	3.9	33.1	7.6	13.7	3.5	5.7	2.5	100.0	6,347	4.8
Highlands	32.3	11.1	3.9	26.2	5.0	11.2	3.2	3.5	3.7	100.0	13,630	2.0
Momase	19.4	11.2	3.8	35.9	8.3	12.4	4.0	3.0	2.1	100.0	9,049	4.4
Islands	14.2	11.9	3.6	38.7	8.1	15.6	2.7	3.3	1.9	100.0	4,923	5.1
Province												
Western	17.5	10.2	3.3	36.9	9.6	14.2	3.2	2.3	2.9	100.0	785	5.1
Gulf	29.9	10.9	3.7	29.8	6.7	11.7	1.9	1.4	4.1	100.0	614	2.6
Central	19.8	11.4	3.8	32.1	6.7	17.4	2.8	2.7	3.3	100.0	1,274	4.4
National Capital District	6.1	7.9	2.5	22.6	6.6	17.7	10.4	22.7	3.5	100.0	1,011	9.0
Milne Bay	18.7	14.2	4.2	38.6	8.1	10.7	1.5	3.1	0.9	100.0	1,719	3.8
Northern	21.5	13.2	5.5	34.8	8.0	11.0	1.9	2.1	2.1	100.0	943	3.1
Southern Highlands	35.8	11.7	3.9	26.4	3.1	10.2	2.6	3.2	3.1	100.0	2,387	1.2
Enga	42.9	10.2	3.3	22.7	3.6	11.5	2.0	2.7	1.1	100.0	1,308	0.3
Western Highlands	21.5	9.4	4.2	32.0	4.6	13.1	3.6	3.9	7.7	100.0	1,662	4.0
Chimbu	25.2	13.3	3.6	22.2	5.0	13.5	6.6	6.5	4.2	100.0	2,166	3.0
Eastern Highlands	28.5	13.4	4.1	28.3	6.3	11.9	2.6	2.8	2.1	100.0	2,849	2.4
Morobe	15.5	8.6	4.1	34.9	8.3	14.3	8.2	4.2	1.9	100.0	3,390	5.3
Madang	21.4	12.5	3.7	34.8	8.7	12.3	1.7	2.8	2.2	100.0	2,359	3.7
East Sepik	20.1	14.5	3.0	37.9	7.5	11.5	1.3	2.0	2.2	100.0	2,021	3.7
West Sepik	24.7	10.8	4.4	37.0	8.6	8.6	1.5	2.1	2.2	100.0	1,278	3.4
Manus	9.1	10.6	4.5	36.0	9.0	18.8	3.3	6.6	2.0	100.0	320	5.6
New Ireland	12.1	14.6	4.2	36.1	6.5	15.8	2.7	4.3	3.7	100.0	977	4.9
East New Britain	14.0	11.6	2.1	43.6	6.4	15.7	2.7	3.1	0.9	100.0	1,150	5.1
West New Britain	16.6	13.0	4.9	34.0	9.8	15.8	2.7	2.2	1.0	100.0	1,239	4.8
Autonomous Region of Bougainville	15.0	9.3	2.9	41.8	9.1	14.1	2.6	2.8	2.3	100.0	1,237	5.1
Hela	48.7	7.3	3.1	21.2	5.7	5.4	1.1	1.5	5.9	100.0	1,926	0.0
Jiwaka	24.7	9.5	5.4	31.7	6.1	13.4	3.4	4.1	1.8	100.0	1,331	3.6
Wealth quintile												
Lowest	42.4	11.3	4.2	28.3	4.7	5.2	0.6	0.4	3.1	100.0	6,658	0.1
Second	31.2	12.9	4.3	32.4	6.4	8.1	1.2	0.5	2.9	100.0	6,808	1.8
Middle	21.6	12.6	4.1	35.0	7.4	12.8	2.3	1.3	3.0	100.0	6,811	3.6
Fourth	15.1	11.0	3.7	36.4	7.8	16.1	3.0	4.0	2.9	100.0	6,741	5.1
Highest	8.3	8.9	2.8	27.5	7.7	20.6	9.6	12.5	2.0	100.0	6,931	7.2
Total	23.6	11.3	3.8	31.9	6.8	12.6	3.4	3.8	2.8	100.0	33,948	3.6

[1] Completed grade 2 at elementary level
[2] Completed grade 8 at primary level
[3] Completed grade 12 at secondary level

Table 2.15.1 Current school attendance: Female

Percent distribution of the de facto female household population age 6-24 currently attending school by highest level of schooling attended or completed, and currently not attending school, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Level of schooling[1]					Currently not attending	Missing	Total	Number of females
	Preparatory[2]	Elementary[3]	Primary[4]	Secondary[5]	More than secondary[6]				
Age									
6-10	10.9	28.9	9.3	0.1	0.0	45.5	5.3	100.0	5,669
10-15	1.4	14.2	60.3	2.1	0.1	18.6	3.3	100.0	4,564
16-20	0.0	0.4	28.7	20.6	1.1	45.9	3.2	100.0	3,727
21-24	0.0	0.0	1.7	4.8	3.5	81.6	8.4	100.0	2,390
Residence									
Urban	3.9	12.2	28.5	12.2	1.3	36.4	5.6	100.0	1,889
Rural	4.2	14.3	26.6	5.2	0.7	44.3	4.6	100.0	14,460
Region									
Southern	4.6	14.7	26.4	4.6	0.5	44.5	4.8	100.0	3,103
Highlands	2.8	12.7	26.5	8.1	1.2	44.1	4.7	100.0	6,513
Momase	4.8	15.6	25.1	4.5	0.6	43.7	5.7	100.0	4,312
Islands	6.3	14.3	31.7	5.2	0.4	39.3	2.8	100.0	2,421
Living arrangements[7]									
Living with both parents	6.4	21.4	33.3	2.1	0.1	32.4	4.3	100.0	7,161
Living with mother but not father	5.1	15.7	34.6	7.0	0.0	33.4	4.2	100.0	1,773
Living with father but not mother	5.1	20.5	39.6	2.9	0.0	26.4	5.5	100.0	585
Not living with either parent	4.9	17.0	35.7	3.7	0.0	35.0	3.7	100.0	2,085
Wealth quintile									
Lowest	4.1	14.0	20.0	2.0	0.0	56.5	3.3	100.0	3,179
Second	3.8	14.3	24.5	2.7	0.0	49.3	5.3	100.0	3,084
Middle	4.7	15.4	29.6	3.9	0.0	41.6	4.8	100.0	3,282
Fourth	5.1	16.5	30.9	5.0	0.8	37.5	4.3	100.0	3,373
Highest	3.2	10.4	28.8	15.8	2.9	33.3	5.7	100.0	3,430
Total	4.2	14.1	26.9	6.0	0.8	43.4	4.7	100.0	16,349

[1] Currently attending school
[2] Preparatory refers to grade 0.
[3] Elementary refers to grades 1-2.
[4] Primary refers to grades 3-8.
[5] Secondary refers to grades 9-12.
[6] More than secondary or higher refers to more than grade 12 (tertiary).
[7] Includes only de jure children under age 18

Table 2.15.2 Current school attendance: Male

Percent distribution of the de facto male household population 6-24 years of age currently attending school by highest level schooling attended or completed, and currently not attending school, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Level of schooling[1]					Currently not attending	Missing	Total	Number of males
	Preparatory[2]	Elementary[3]	Primary[4]	Secondary[5]	More than secondary[6]				
Age									
6-10	11.0	29.0	9.9	0.1	0.0	45.5	4.5	100.0	6,308
10-15	1.5	16.1	58.6	1.8	0.0	18.1	3.9	100.0	5,012
16-20	0.0	1.3	36.6	22.0	0.6	35.5	3.9	100.0	4,198
21-24	0.0	0.1	8.9	12.8	3.7	70.0	4.5	100.0	2,277
Residence									
Urban	3.8	12.8	30.2	11.8	2.5	34.0	5.0	100.0	1,982
Rural	4.4	15.4	29.8	6.8	0.4	39.1	4.1	100.0	15,813
Region									
Southern	4.3	16.1	26.9	5.6	0.9	41.9	4.2	100.0	3,226
Highlands	3.2	15.6	29.1	10.1	0.8	36.6	4.7	100.0	7,255
Momase	5.1	13.5	30.9	5.5	0.4	40.9	3.7	100.0	4,754
Islands	6.0	15.6	33.6	5.3	0.4	35.6	3.6	100.0	2,560
Living arrangements[7]									
Living with both parents	6.6	21.3	32.8	2.5	0.0	32.6	4.1	100.0	8,090
Living with mother but not father	6.2	19.9	33.0	3.2	0.0	34.6	3.1	100.0	1,780
Living with father but not mother	4.3	26.0	34.0	2.6	0.0	27.4	5.6	100.0	792
Not living with either parent	3.8	16.9	41.4	4.4	0.0	29.5	4.0	100.0	2,212
Wealth quintile									
Lowest	3.9	14.6	23.9	4.0	0.1	49.5	3.9	100.0	3,592
Second	4.9	16.3	27.5	5.3	0.0	41.4	4.6	100.0	3,625
Middle	5.4	15.6	30.5	6.4	0.2	37.4	4.5	100.0	3,571
Fourth	4.3	15.2	33.8	7.6	0.4	33.9	4.7	100.0	3,494
Highest	3.0	14.0	33.5	13.7	2.4	30.2	3.2	100.0	3,513
Total	4.3	15.1	29.8	7.4	0.6	38.6	4.2	100.0	17,795

[1] Currently attending school
[2] Preparatory refers to grade 0.
[3] Elementary refers to grades 1-2.
[4] Primary refers to grades 3-8.
[5] Secondary refers to grades 9-12.
[6] More than secondary or higher refers to more than grade 12 (tertiary).
[7] Includes only de jure children under age 18

Table 2.16 School attendance ratios

Net attendance ratios (NAR) and gross attendance ratios (GAR) for the de facto household population by sex and level of schooling; and the Gender Parity Index (GPI), according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Net attendance ratio[1]				Gross attendance ratio[2]			
	Male	Female	Total	Gender parity index[3]	Male	Female	Total	Gender parity index[3]
	ELEMENTARY SCHOOL							
Residence								
Urban	57.6	60.0	58.7	1.04	102.8	106.5	104.5	1.04
Rural	42.4	41.8	42.1	0.99	95.3	90.2	92.8	0.95
Region								
Southern	49.3	45.5	47.5	0.92	99.2	97.8	98.5	0.99
Highlands	45.1	43.4	44.4	0.96	85.8	79.7	83.1	0.93
Momase	36.4	41.4	39.0	1.14	105.9	102.0	103.9	0.96
Islands	43.9	44.1	44.0	1.01	108.1	97.1	102.6	0.90
Province								
Western	51.8	41.2	46.2	0.80	96.7	79.6	87.7	0.82
Gulf	27.5	22.1	24.9	0.81	82.4	75.4	79.0	0.91
Central	45.6	40.3	42.9	0.88	87.5	77.4	82.3	0.88
National Capital District	66.0	66.5	66.2	1.01	109.1	114.1	111.5	1.05
Milne Bay	59.9	64.5	61.7	1.08	104.9	135.9	117.3	1.30
Northern	34.9	34.7	34.8	0.99	109.8	96.1	102.6	0.88
Southern Highlands	59.5	42.8	50.5	0.72	121.8	70.2	93.9	0.58
Enga	42.3	41.8	42.1	0.99	95.5	72.4	84.5	0.76
Western Highlands	44.4	43.9	44.2	0.99	73.8	82.5	78.1	1.12
Chimbu	55.5	54.6	55.2	0.98	91.5	100.0	94.6	1.09
Eastern Highlands	47.5	52.5	49.4	1.11	86.6	97.1	90.6	1.12
Morobe	49.4	53.1	51.5	1.07	120.7	96.9	107.4	0.80
Madang	30.0	37.5	33.9	1.25	101.3	108.0	104.7	1.07
East Sepik	40.1	39.7	39.9	0.99	106.5	107.9	107.1	1.01
West Sepik	20.1	26.9	23.5	1.34	88.5	93.9	91.2	1.06
Manus	53.6	59.1	56.1	1.10	103.3	112.0	107.4	1.08
New Ireland	48.7	49.9	49.3	1.03	119.8	111.7	116.0	0.93
East New Britain	45.0	48.2	46.6	1.07	94.9	99.1	97.0	1.04
West New Britain	37.8	39.7	38.8	1.05	137.7	101.8	118.7	0.74
Autonomous Region of Bougainville	41.1	37.1	39.0	0.90	85.1	76.8	80.8	0.90
Hela	18.9	20.4	19.6	1.08	51.0	55.7	53.0	1.09
Jiwaka	44.9	50.1	47.2	1.12	81.2	83.3	82.2	1.03
Wealth quintile								
Lowest	33.8	31.7	32.8	0.94	83.8	82.5	83.2	0.99
Second	36.3	36.8	36.5	1.02	93.6	86.1	90.3	0.92
Middle	45.1	41.4	43.3	0.92	99.9	92.8	96.4	0.93
Fourth	49.8	52.6	51.3	1.06	107.7	105.2	106.4	0.98
Highest	58.4	57.6	58.0	0.99	97.6	90.7	94.5	0.93
Total	43.7	43.4	43.6	0.99	95.9	91.6	93.9	0.95
	PRIMARY SCHOOL							
Residence								
Urban	62.8	65.6	64.2	1.05	92.7	85.7	89.3	0.93
Rural	47.8	49.5	48.6	1.03	82.1	75.2	78.8	0.92
Region								
Southern	49.3	51.7	50.5	1.05	79.3	75.1	77.2	0.95
Highlands	52.2	54.1	53.0	1.04	82.5	78.4	80.6	0.95
Momase	43.5	44.8	44.1	1.03	83.3	68.6	76.4	0.82
Islands	52.7	55.3	53.9	1.05	88.7	86.8	87.8	0.98
Province								
Western	53.5	54.6	54.1	1.02	87.3	77.0	82.3	0.88
Gulf	30.0	29.6	29.8	0.99	75.3	58.4	66.7	0.78
Central	55.2	51.3	53.4	0.93	81.3	77.9	79.7	0.96
National Capital District	69.2	68.4	68.8	0.99	91.5	91.2	91.3	1.00
Milne Bay	51.1	61.0	56.5	1.19	76.0	74.5	75.2	0.98
Northern	30.9	33.3	32.1	1.08	67.1	70.3	68.6	1.05
Southern Highlands	54.5	53.3	54.0	0.98	84.3	77.9	81.4	0.92
Enga	48.2	46.3	47.4	0.96	76.6	71.1	74.2	0.93
Western Highlands	65.4	65.2	65.3	1.00	101.0	99.8	100.5	0.99
Chimbu	56.6	67.2	62.0	1.19	84.9	91.3	88.1	1.08
Eastern Highlands	49.7	53.3	51.3	1.07	72.8	78.4	75.3	1.08
Morobe	55.4	54.9	55.2	0.99	88.6	76.0	83.3	0.86
Madang	37.7	40.6	39.1	1.08	74.0	61.3	67.7	0.83
East Sepik	38.1	43.6	40.9	1.14	91.1	70.7	80.6	0.78
West Sepik	31.8	34.8	33.3	1.09	76.5	64.8	70.9	0.85
Manus	66.1	72.7	69.1	1.10	99.6	100.4	99.9	1.01
New Ireland	49.2	54.9	51.9	1.11	80.2	78.7	79.5	0.98
East New Britain	64.6	59.2	62.0	0.92	106.8	90.9	99.0	0.85
West New Britain	37.6	46.6	41.8	1.24	74.4	74.2	74.3	1.00
Autonomous Region of Bougainville	55.7	56.0	55.8	1.00	89.9	99.5	94.5	1.11
Hela	33.0	35.9	34.4	1.09	68.4	57.3	62.9	0.84
Jiwaka	65.0	63.5	64.4	0.98	101.8	79.6	91.9	0.78

Continued...

Table 2.16—*Continued*

Background characteristic	Net attendance ratio[1]				Gross attendance ratio[2]			
	Male	Female	Total	Gender parity index[3]	Male	Female	Total	Gender parity index[3]
PRIMARY SCHOOL (continued)								
Wealth quintile								
Lowest	34.1	35.0	34.5	1.02	64.6	54.9	60.1	0.85
Second	40.7	40.9	40.8	1.01	73.5	68.4	71.2	0.93
Middle	47.8	52.8	50.3	1.10	87.4	79.7	83.6	0.91
Fourth	56.3	57.1	56.7	1.01	93.6	85.7	89.7	0.92
Highest	70.5	71.5	71.0	1.01	99.4	93.7	96.7	0.94
Total	49.4	51.3	50.3	1.04	83.1	76.4	79.9	0.92
SECONDARY SCHOOL								
Residence								
Urban	30.5	41.6	35.8	1.37	54.7	58.4	56.5	1.07
Rural	18.6	18.1	18.4	0.97	36.7	30.2	33.7	0.82
Region								
Southern	16.0	17.0	16.5	1.06	29.7	25.9	27.9	0.87
Highlands	28.3	28.9	28.6	1.02	54.7	41.3	48.2	0.76
Momase	14.4	12.5	13.6	0.87	28.8	29.2	29.0	1.01
Islands	13.5	17.7	15.4	1.31	27.1	30.4	28.6	1.12
Province								
Western	18.1	15.8	17.1	0.87	35.4	26.8	31.6	0.76
Gulf	5.8	3.6	4.7	0.62	13.3	6.0	9.7	0.46
Central	16.5	13.0	14.9	0.79	26.5	17.2	22.3	0.65
National Capital District	41.9	48.0	45.1	1.15	67.3	66.2	66.7	0.98
Milne Bay	9.4	12.8	10.8	1.36	17.5	18.2	17.8	1.04
Northern	7.9	5.1	6.4	0.64	26.6	16.4	21.2	0.62
Southern Highlands	25.4	15.9	20.9	0.63	51.1	26.6	39.6	0.52
Enga	15.8	21.8	18.3	1.38	47.8	41.0	44.9	0.86
Western Highlands	37.1	24.0	31.1	0.65	63.1	35.2	50.3	0.56
Chimbu	46.4	55.1	51.4	1.19	67.5	69.2	68.5	1.03
Eastern Highlands	26.7	29.3	28.0	1.10	61.8	38.4	49.7	0.62
Morobe	23.0	13.7	19.3	0.60	35.8	42.3	38.4	1.18
Madang	7.2	10.8	8.9	1.49	28.9	21.8	25.7	0.75
East Sepik	11.6	17.1	13.9	1.47	24.0	30.9	26.9	1.29
West Sepik	8.8	4.3	6.9	0.49	20.3	9.2	15.7	0.45
Manus	15.5	18.1	16.6	1.17	28.8	24.4	26.9	0.84
New Ireland	13.8	15.3	14.4	1.11	24.5	30.5	26.9	1.25
East New Britain	16.8	18.4	17.5	1.10	27.3	30.7	28.9	1.13
West New Britain	13.2	20.9	16.5	1.58	28.3	36.3	31.7	1.28
Autonomous Region of Bougainville	8.7	15.8	12.4	1.81	27.4	26.8	27.1	0.98
Hela	13.7	14.4	14.0	1.05	36.1	25.3	31.0	0.70
Jiwaka	30.3	21.4	26.7	0.71	52.0	39.5	46.9	0.76
Wealth quintile								
Lowest	8.7	5.9	7.4	0.68	23.9	11.8	18.2	0.49
Second	13.2	9.1	11.2	0.69	32.1	15.9	24.5	0.50
Middle	14.4	14.3	14.3	1.00	31.2	23.2	27.8	0.74
Fourth	18.8	16.4	17.7	0.87	36.9	28.4	33.0	0.77
Highest	43.1	52.5	47.7	1.22	68.2	79.0	73.5	1.16
Total	20.1	21.3	20.6	1.06	39.0	34.1	36.7	0.87

[1] The NAR for elementary school is the percentage of the elementary school-age (6-8 years) population that is attending elementary school. The NAR for primary school is the percentage of the primary-school age (9-14 years) population that is attending primary school. The NAR for secondary school is the percentage of the secondary-school age (15-18 years) population that is attending secondary school. By definition the NAR cannot exceed 100.0.
[2] The GAR for elementary school is the total number of elementary school students, expressed as a percentage of the official elementary school-age population. The GAR for primary school is the total number of primary school students, expressed as a percentage of the official primary-school-age population. The GAR for secondary school is the total number of secondary school students, expressed as a percentage of the official secondary-school-age population. If there are significant numbers of overage and underage students at a given level of schooling, the GAR can exceed 100.0.
[3] The gender parity index for elementary school is the ratio of the elementary school NAR (GAR) for females to the NAR (GAR) for males. The gender parity index for primary school is the ratio of the primary school NAR (GAR) for females to the NAR (GAR) for males. The gender parity index for secondary school is the ratio of the secondary school NAR (GAR) for females to the NAR (GAR) for males.

Table 2.17 Household food insecurity

Percentage of household population by level of food insecurity according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Moderate to severe food insecurity	Confidence limits		Severe food insecurity	Confidence limits		Household population
		Lower (R-2SE)	Lower (R+2SE)		Lower (R-2SE)	Lower (R+2SE)	
Residence							
Urban	52.1	47.5	56.7	22.0	18.6	25.4	8,503
Rural	57.9	55.4	60.3	25.9	24.1	27.6	66,109
Province							
Western	73.2	64.8	81.6	47.3	38.0	56.5	1,799
Gulf	71.6	64.0	79.1	36.7	28.0	45.4	1,341
Central	63.9	56.8	70.9	30.3	25.2	35.3	2,930
National Capital District	48.2	38.2	58.2	20.1	13.0	27.2	2,041
Milne Bay	62.4	56.6	68.2	23.4	18.3	28.5	3,867
Northern	59.9	52.8	67.0	29.3	24.0	34.5	1,885
Southern Highlands	68.1	59.9	76.3	34.8	27.1	42.5	5,630
Enga	56.5	48.8	64.2	23.7	17.7	29.7	2,738
Western Highlands	41.6	36.5	46.6	15.4	12.3	18.4	3,275
Chimbu	61.9	46.8	77.0	29.1	19.7	38.4	4,757
Eastern Highlands	60.2	52.3	68.2	25.5	19.7	31.3	6,261
Morobe	58.9	45.7	72.0	24.4	17.8	30.9	7,519
Madang	34.7	27.5	41.8	11.1	8.0	14.1	5,014
East Sepik	55.5	46.8	64.2	26.9	20.2	33.7	4,217
West Sepik	62.7	55.1	70.4	33.2	26.8	39.5	2,977
Manus	62.1	56.0	68.3	28.2	23.8	32.5	712
New Ireland	57.0	48.7	65.4	22.0	16.6	27.4	2,178
East New Britain	62.0	54.3	69.7	25.9	19.9	31.9	2,836
West New Britain	60.0	54.0	66.0	28.6	23.2	34.0	2,637
Autonomous Region of Bougainville	45.2	38.4	52.1	13.2	8.9	17.5	2,758
Hela	66.0	57.3	74.8	30.0	21.9	38.1	4,338
Jiwaka	36.6	30.9	42.3	15.0	11.5	18.6	2,900
Wealth quintile							
Lowest	67.8	64.1	71.6	34.2	30.8	37.6	14,731
Second	60.5	57.1	63.9	28.7	26.1	31.3	14,817
Middle	58.8	56.0	61.6	25.3	22.8	27.7	15,139
Fourth	57.5	54.9	60.1	23.5	21.5	25.6	15,042
Highest	41.6	37.8	45.4	15.5	13.5	17.5	14,883
Total	57.2	55.0	59.5	25.4	23.8	27.0	74,612

CHARACTERISTICS OF RESPONDENTS 3

Key Findings

- **Education:** Almost one in four women (23%) and 13% of men age 15-49 have no formal education.
- **Literacy:** Two-thirds of women and 80% of men age 15-49 are literate.
- **Exposure to mass media:** Media coverage is not widespread in Papua New Guinea; only 6% of women and 12% of men age 15-49 read a newspaper, watch television, and listen to the radio at least once a week.
- **Internet usage:** Only 11% of women and 18% of men age 15-49 used the internet in the 12 months before the survey.
- **Employment:** Three in ten women (29%) and 45% of men were employed in the 7 days preceding the survey; agriculture is the most common occupation for both sexes.
- **Health insurance:** Health insurance coverage is extremely rare; only 3% of women and 6% of men are covered.
- **Tobacco use:** Smoking is common; 26% of women and 60% of men smoke tobacco.

This chapter presents information on demographic and socioeconomic characteristics of the survey respondents, including their sex, age, education, religion, and wealth status. The survey also collected data on use of mass media and the internet, health insurance coverage, and tobacco smoking. This information is useful in understanding the factors that affect use of reproductive health services, contraceptive use, and other health behaviours.

3.1 BACKGROUND CHARACTERISTICS OF SURVEY RESPONDENTS

Table 3.1 shows the percent distribution of all women and men age 15-49 by background characteristics. Just over half of women and men are under age 30. About one-quarter of women and men are Roman Catholics, with Seventh Day Adventist, Evangelical Lutheran, and United Church each accounting for at least 10% of respondents.

The proportion of women who are currently married or living together with a partner is higher than among men (66% versus 54%). Women are less likely than men to have never been married (26% versus 43%) and more likely to be widowed, divorced, or separated (8% versus 4%).

A person's place of residence, whether rural or urban, determines her or his access to services and information about health and other aspects of life. Only 13% of respondents live in urban areas, the remaining 87% live in rural areas.

Regionally, about 40% of respondents live in the Highlands; the smallest proportion of respondents (14%) lives in the Islands. About 10% of respondents live in Morobe, followed by Eastern Highlands; Manus is the least populous province in the country.

3.2 EDUCATION AND LITERACY

Literacy

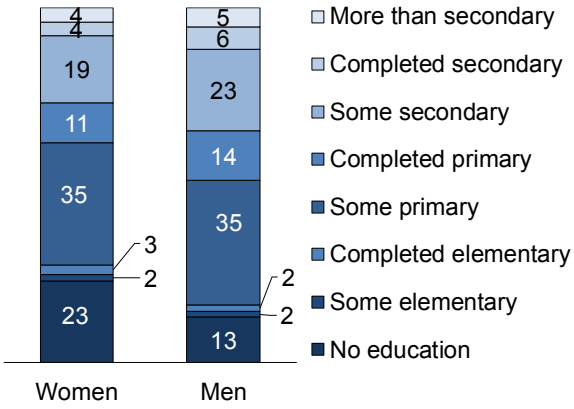
Respondents who have attended secondary or higher education are assumed to be literate. All other respondents, shown a typed sentence to read aloud, are considered literate if they can read all or part of the sentence.

Sample: Women and men age 15-49

Education is an important factor influencing an individual's attitudes and opportunities. **Tables 3.2.1** and **3.2.2** show that almost one in four women (23%) and 13% of men age 15-49 have no formal education. A large proportion of respondents (35% of women and men) have attended but not completed some primary school. Men have generally attained higher levels of education than women; only 8% of women age 15-49 have completed secondary school or attained a higher level of education compared with 11% of men (**Figure 3.1**).

***Figure 3.1* Education of survey respondents**

Percent distribution of women and men age 15-49 by highest level of schooling attended or completed



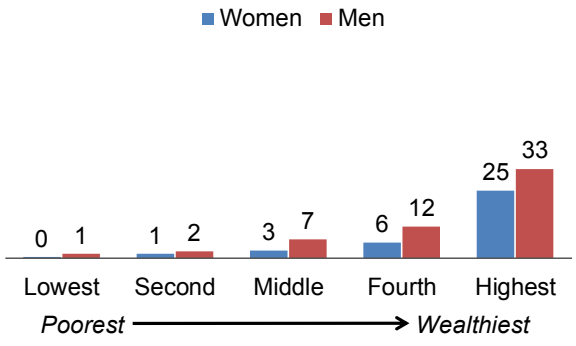
Patterns by background characteristics

- The percentage of women and men with no education generally increases by age group, suggesting an improvement in educational access over time.

- Residents of urban areas generally have more education than rural residents. The urban-rural difference is more pronounced at the secondary or higher levels of education. For example, 19% of women in urban areas have completed secondary or a higher level of education compared with only 6% of rural women. Similarly, 26% of urban men completed secondary or higher level of education, compared with 10% of rural men.

***Figure 3.2* Secondary education by household wealth**

Percentage of women and men age 15-49 with secondary education complete or higher



- Educational attainment also varies by wealth quintile. Less than 1% of women in the lowest wealth quintile have completed secondary or a higher level of education, compared with 25% of women in the highest quintile. Similarly, only 1% of men in the lowest wealth quintile have completed secondary or higher level of education, compared with 33% of those in the highest quintile **(Figure 3.2)**.

- Two-thirds of women and 80% of men age 15-49 are literate, meaning that they can at least read a simple sentence. Literacy levels are higher among younger respondents as well as urban respondents. They also increase with wealth quintiles (**Tables 3.3.1** and **3.3.2**).

3.3 MASS MEDIA EXPOSURE AND INTERNET USAGE

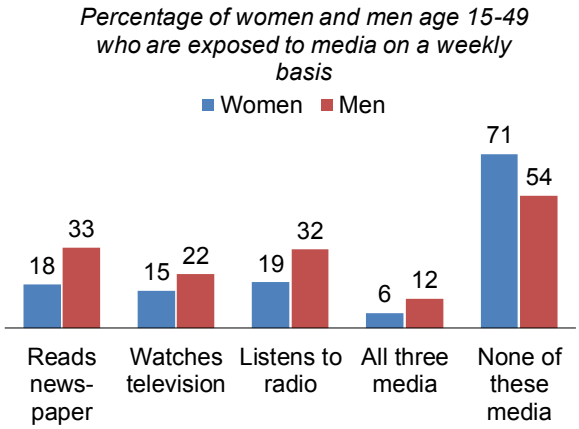
Exposure to mass media

Respondents were asked how often they read a newspaper, listened to the radio, or watched television. Those who responded *at least once a week* are considered regularly exposed to that form of media.

Sample: Women and men age 15-49

Tables 3.4.1 and **3.4.2** show the percentage of women and men who are exposed to different types of media, by background characteristics. Media coverage is not widespread in Papua New Guinea. Among women, radio is the most frequently accessed type of media, with 19% of women listening at least once a week, followed closely by newspapers (18%). Newspapers (33%) and radio (32%) are also the most common media accessed by men weekly. Television is the least commonly accessed of the three media: only 15% of women and 22% of men report watching television at least once a week. Very few respondents access all three media at least once a week (6% of women and 12% of men) (**Figure 3.3**).

Figure 3.3 **Exposure to mass media**



The internet is also a critical tool through which information is accessed. In Papua New Guinea, only 13% of women and 20% of men age 15-49 have ever used the internet, and 11% and 18% have used it in the past 12 months. Of those who said they used the internet in the 12 months before the survey, about one-third say they use it almost every day (**Tables 3.5.1** and **3.5.2**).

Trends: Compared with the 2006 DHS, the proportions of both women and men who accessed newspapers, television, and radio at least once a week have declined.

Patterns by background characteristics

- Women and men in urban areas are much more likely to read newspapers, watch television, and listen to the radio at least once a week than women and men in rural areas. They are also much more likely to have used the internet.
- Exposure to all forms of mass media increases with increasing education. For example, only 3% of women with no education watch television at least once a week, compared with 56% of those with more than a secondary education. Internet usage increases sharply as level of education increases. For example, less than 1% of women with no education have ever used the internet compared with 76% of those with more than a secondary education.
- Similarly, exposure to mass media also increases dramatically with wealth. For example, only 2% of women in the lowest wealth quintile watch television at least once a week compared with 47% of women in the highest quintile. The proportion of men who have ever used the internet increases from 2% in the lowest wealth quintile to 54% in the highest quintile.

3.4 EMPLOYMENT

Currently employed

Respondents who were employed in the 7 days before the survey

Sample: Women and men age 15-49

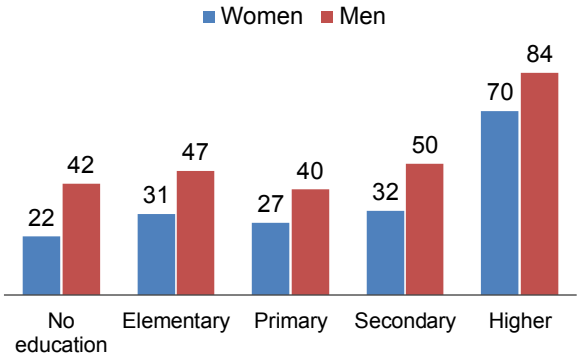
In the 2016-18 PNG DHS, respondents were asked whether they were employed at the time of the survey (that is, had worked in the past 7 days) and, if not, whether they had worked at any time during the 12 months preceding the survey. **Tables 3.6.1** and **3.6.2** show that 29% of women and 46% of men are currently employed. An additional 4% of women and 6% of men reported that they had worked in the past 12 months but were not currently employed.

Patterns by background characteristics

- Urban women and men are more likely than rural respondents to be employed.
- The percentage of women and men who are currently employed generally increases with increasing education. For example, only 22% of women with no education are currently employed, compared with 70% of those with higher than secondary education (**Figure 3.4**).
- The percentage of women and men who are employed also increases with increasing wealth.

Figure 3.4 **Employment status by education**

Percentage of women and men age 15-49 who are currently employed



3.5 OCCUPATION

Occupation

Categorised as professional/technical/managerial, clerical, sales and services, skilled manual, unskilled manual, domestic service, agriculture, and other

Sample: Women and men age 15-49 who were currently employed or had worked in the 12 months before the survey

Respondents who were currently employed or had worked in the 12 months before the survey were asked to state their occupation. **Tables 3.7.1** and **3.7.2**, respectively, show that 43% of employed women and 48% of men age 15-49 are engaged in agricultural occupations. Almost one-third of working women (32%) are engaged in sales or services, while 14% are engaged in professional, technical, or managerial jobs. Among working men, 16% are employed in skilled manual jobs, 15% in professional, technical, or managerial jobs, and 12% in sales and services (**Figure 3.5**).

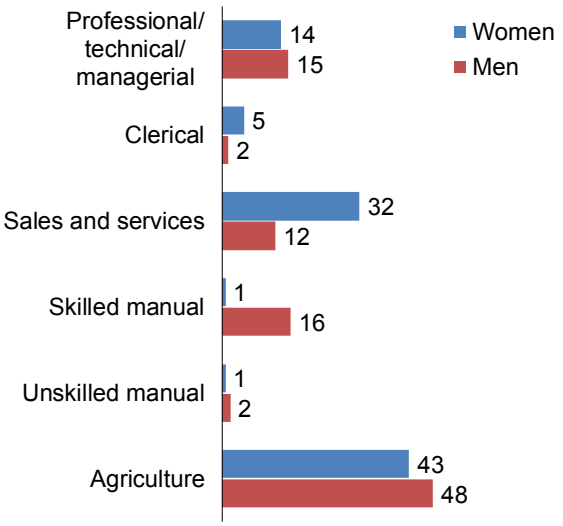
Patterns by background characteristics

- As expected, the proportion of respondents working in agriculture is much lower in urban areas than in rural areas, whereas the proportion working in sales and services and in professional, technical, or managerial jobs is higher in urban than rural areas (**Tables 3.7.1** and **3.7.2**).

- Among both women and men, employment in professional/technical/managerial occupations increases dramatically with increasing education and wealth, while employment in agriculture decreases with increasing education and wealth. For example, only 1% of working women with no education are employed in a professional or managerial position compared with 81% of those with higher than a secondary education.

***Figure 3.5* Occupation**

Percentage of women and men age 15-49 employed in the 12 months before the survey by occupation



- Among working women, the proportion employed in the agricultural sector is highest in East Sepik and West Sepik, while among men, it is highest in Southern Highlands and Milne Bay. For both women and men, the proportion employed in agriculture is lowest in National Capital District.

Table 3.8 shows the percent distribution of women who were employed in the 12 months preceding the survey by type of earnings, type of employer, and continuity of employment. Almost half of women who work are not paid (47%), while 40% are paid in cash only and 9% are paid in cash and in kind. Over half of working women (57%) are self-employed, while 22% work for a family member and 20% work for a non-family employer. Just over half of working women are employed year-round (55%). Women who work in agriculture are more likely to be unpaid workers and to be self-employed than women who work in non-agricultural jobs.

In the survey, women and men who were not working in the 7 days before the survey were asked what they had done most of the time in the previous week. As shown in **Tables 3.9.1** and **3.9.2**, 78% of women and 55% of men said they mostly did housework, and 16% of women and 28% of men said they were students.

3.6 Health Insurance Coverage

Respondents in the 2016-18 PNG DHS were asked if they had any health insurance. **Tables 3.10.1** and **3.10.2** show that, overall, only 3% of women and 6% of men age 15-49 were covered by any type of health insurance.

3.7 Tobacco and Betel Nut Use

Tables 3.11.1 and **3.11.2** show that tobacco smoking is quite common in Papua New Guinea. Over one-quarter (26%) of women smoke cigarettes and other types of tobacco, with cigarettes used only slightly more than other types of tobacco like pipes, brus, and spear rolls.

Men are even more likely than women to smoke any type of tobacco; 60% smoke and over half (54%) smoke daily. Men are more likely to smoke other types of tobacco than cigarettes. Among men who smoke cigarettes daily, half (49%) smoke fewer than five cigarettes each day; 26% of daily cigarette smokers smoke 5-9 cigarettes, while another 26% smoke 10 or more cigarettes each day (**Table 3.12**).

Table 3.13 shows that betel nut chewing is very common in Papua New Guinea. Sixty-two percent of women and 71% of men say they chew on a daily basis.

Patterns by background characteristics

- Use of tobacco is somewhat less among women and men age 15-19 than older respondents. It is also less among those with higher than secondary education.
- For both women and men, the prevalence of tobacco smoking differs little by urban-rural residence or by wealth quintile.
- As with tobacco use, betel nut chewing is less common among teens age 15-19 and older women age 45-49 than other respondents. Among women, it increases with education and wealth quintile, while among men, differences are less pronounced. Among both sexes, chewing betel nut is least common in Hela province.

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Table 3.1 Background characteristics of respondents

Percent distribution of women and men age 15-49 by selected background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Women			Men		
	Weighted percent	Weighted number	Unweighted number	Weighted percent	Weighted number	Unweighted number
Age						
15-19	19.4	2,945	2,980	20.0	1,469	1,502
20-24	18.2	2,759	2,699	17.0	1,246	1,266
25-29	16.7	2,543	2,487	16.0	1,171	1,100
30-34	14.3	2,180	2,214	14.4	1,058	1,079
35-39	13.5	2,059	2,039	13.2	966	953
40-44	9.8	1,484	1,550	10.7	782	771
45-49	8.1	1,228	1,229	8.7	641	662
Religion						
Anglican	2.7	410	598	3.1	230	344
Evangelical Alliance	3.8	573	432	3.1	230	191
Pentecostal	9.0	1,368	1,313	8.2	604	564
Evangelical Lutheran	12.5	1,907	1,478	14.4	1,060	840
Roman Catholic	24.9	3,785	4,079	23.5	1,725	1,927
Salvation Army	0.3	43	47	0.0	0	0
Seventh Day Adventist	13.7	2,077	2,093	15.3	1,122	1,024
United Church	10.4	1,582	1,958	11.3	825	960
Other Christian church	21.3	3,232	3,025	19.1	1,397	1,334
Other Christian	0.6	90	88	0.6	43	45
Other non-Christian	0.6	88	68	0.9	66	75
Other	0.0	0	0	0.2	17	14
Missing	0.3	43	19	0.2	15	15
Marital status						
Never married	26.1	3,968	4,155	42.5	3,114	3,144
Married	54.6	8,299	8,260	46.4	3,403	3,327
Living together	11.5	1,752	1,683	7.4	544	604
Divorced/separated	6.2	943	869	3.0	220	207
Widowed	1.6	236	231	0.7	52	51
Residence						
Urban	13.3	2,018	4,045	13.3	976	1,826
Rural	86.7	13,180	11,153	86.7	6,357	5,507
Region						
Southern	19.1	2,899	4,380	20.3	1,490	2,173
Highlands	40.9	6,213	4,123	39.2	2,871	2,056
Momase	25.8	3,919	3,060	27.3	1,999	1,498
Islands	14.3	2,167	3,635	13.3	973	1,606
Province						
Western	2.3	352	591	2.5	182	305
Gulf	1.8	277	675	1.9	137	353
Central	3.7	557	668	3.7	272	299
National Capital District	3.5	526	877	3.4	251	384
Milne Bay	5.0	767	775	5.8	423	412
Northern	2.8	421	794	3.0	223	420
Southern Highlands	7.2	1,089	648	6.2	457	281
Enga	3.7	563	422	4.2	306	279
Western Highlands	4.9	746	756	5.2	378	412
Chimbu	6.8	1,038	567	5.4	397	242
Eastern Highlands	8.6	1,310	609	8.0	587	291
Morobe	10.0	1,514	793	10.8	796	400
Madang	6.5	987	716	6.7	493	351
East Sepik	5.7	872	785	5.9	435	389
West Sepik	3.6	545	766	3.8	276	358
Manus	0.9	135	641	0.9	64	294
New Ireland	2.5	385	661	2.3	171	299
East New Britain	3.8	572	879	3.4	247	370
West New Britain	3.5	532	813	3.5	260	383
Autonomous Region of Bougainville	3.6	544	641	3.2	231	260
Hela	5.7	874	442	6.0	438	196
Jiwaka	3.9	594	679	4.2	309	355
Education						
No education	23.0	3,488	2,841	12.8	941	789
Elementary[1]	4.4	676	556	3.5	253	253
Primary[2]	45.9	6,969	7,344	49.0	3,593	3,633
Secondary[3]	22.8	3,460	3,875	29.4	2,156	2,259
Higher[4]	4.0	605	582	5.3	389	399
Wealth quintile						
Lowest	18.3	2,783	2,132	18.6	1,366	1,053
Second	18.6	2,831	2,304	18.9	1,384	1,193
Middle	19.1	2,897	2,666	20.8	1,528	1,432
Fourth	20.5	3,118	3,709	19.1	1,399	1,619
Highest	23.5	3,569	4,387	22.6	1,656	2,036
Total 15-49	100.0	15,198	15,198	100.0	7,333	7,333

Note: Education categories refer to the highest level of education attended, whether or not that level was completed.
[1] Elementary refers to grades 1-2.
[2] Primary refers to grades 3-8.
[3] Secondary refers to grades 9-12.
[4] Higher refers to above grade 12.

Table 3.2.1 Educational attainment: Women

Percent distribution of women age 15-49 by highest level of schooling attended or completed, and median years completed, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Highest level of schooling								Total	Median years completed	Number of women
	No education	Some elementary	Complete elementary[1]	Some primary	Completed primary[2]	Some secondary	Completed secondary[3]	More than secondary			
Age											
15-24	13.0	1.3	2.2	37.1	14.9	23.2	5.0	3.3	100.0	6.6	5,704
15-19	9.9	1.3	2.9	48.3	13.6	20.3	3.5	0.1	100.0	6.0	2,945
20-24	16.3	1.3	1.5	25.0	16.3	26.3	6.6	6.8	100.0	7.3	2,759
25-29	24.8	2.1	2.2	26.9	13.8	20.3	5.1	4.9	100.0	5.7	2,543
30-34	25.9	2.1	4.7	29.9	10.7	18.6	3.5	4.6	100.0	5.2	2,180
35-39	32.5	2.3	2.3	35.7	7.2	14.2	1.8	4.0	100.0	4.6	2,059
40-44	29.0	1.6	2.2	39.9	5.8	13.5	2.7	5.2	100.0	5.2	1,484
45-49	37.0	3.1	2.0	37.7	4.9	11.7	0.9	2.7	100.0	4.4	1,228
Residence											
Urban	6.9	1.4	1.8	26.4	11.2	33.9	8.9	9.6	100.0	8.2	2,018
Rural	25.4	2.0	2.7	35.7	11.4	16.7	3.0	3.1	100.0	5.3	13,180
Region											
Southern	12.2	2.0	2.3	37.6	14.7	22.7	4.1	4.5	100.0	6.3	2,899
Highlands	36.5	2.3	3.1	27.5	6.9	15.5	3.0	5.3	100.0	3.7	6,213
Momase	18.5	1.8	3.0	39.0	13.1	17.8	4.9	1.9	100.0	5.6	3,919
Islands	6.8	0.8	0.8	42.2	16.5	25.8	3.9	3.2	100.0	6.9	2,167
Province											
Western	10.7	1.1	1.7	43.5	18.1	18.6	1.9	4.4	100.0	6.0	352
Gulf	28.2	2.0	3.4	40.0	11.2	13.1	1.6	0.5	100.0	4.8	277
Central	17.1	2.0	3.3	35.1	11.8	25.9	3.2	1.6	100.0	5.8	557
National Capital District	2.5	0.7	1.3	23.8	11.7	33.5	12.4	14.1	100.0	9.2	526
Milne Bay	11.0	2.1	1.1	38.7	18.0	22.8	3.0	3.3	100.0	6.5	767
Northern	10.6	3.8	3.9	49.6	15.8	14.4	0.6	1.4	100.0	5.6	421
Southern Highlands	47.4	2.7	2.1	25.3	5.3	13.2	1.9	2.1	100.0	0.8	1,089
Enga	46.4	3.7	2.7	26.2	6.2	10.7	1.6	2.6	100.0	0.8	563
Western Highlands	25.8	1.8	2.6	28.8	9.0	19.9	4.0	8.1	100.0	5.6	746
Chimbu	24.0	1.2	3.5	24.5	8.2	21.2	3.3	14.0	100.0	6.0	1,038
Eastern Highlands	29.7	3.1	5.3	32.4	6.3	13.8	4.4	4.9	100.0	4.2	1,310
Morobe	14.6	2.0	4.3	29.6	12.2	24.3	9.7	3.5	100.0	6.9	1,514
Madang	18.8	1.6	2.0	45.2	18.0	12.0	1.4	1.0	100.0	5.5	987
East Sepik	17.3	1.6	2.3	46.9	11.9	16.1	2.8	1.0	100.0	5.5	872
West Sepik	30.5	1.7	2.4	41.2	8.9	13.1	1.3	0.9	100.0	4.0	545
Manus	2.3	1.1	0.9	36.4	16.0	32.4	4.6	6.4	100.0	7.6	135
New Ireland	3.7	0.7	1.0	39.2	14.4	33.0	4.3	3.7	100.0	7.4	385
East New Britain	7.9	1.2	0.6	41.7	13.9	25.7	4.5	4.6	100.0	6.7	572
West New Britain	11.1	0.8	1.3	43.3	17.4	20.9	2.8	2.4	100.0	6.0	532
Autonomous Region of Bougainville	4.7	0.4	0.5	45.4	19.8	24.1	3.7	1.5	100.0	6.9	544
Hela	51.2	2.0	1.6	27.5	6.4	8.9	0.5	1.9	100.0	0.0	874
Jiwaka	35.4	1.4	2.1	25.3	7.9	22.5	4.6	0.8	100.0	5.1	594
Wealth quintile											
Lowest	49.0	2.2	2.8	33.0	7.2	5.5	0.3	0.0	100.0	0.1	2,783
Second	32.0	2.0	3.5	39.8	11.4	9.9	1.0	0.4	100.0	4.1	2,831
Middle	22.3	2.7	2.9	41.4	13.1	14.8	1.9	0.7	100.0	5.2	2,897
Fourth	12.2	1.7	2.3	39.8	14.9	23.4	2.9	2.7	100.0	6.0	3,118
Highest	5.4	0.9	1.6	21.1	10.0	36.1	11.2	13.7	100.0	9.2	3,569
Total	23.0	1.9	2.6	34.5	11.4	18.9	3.8	4.0	100.0	5.5	15,198

[1] Completed grade 2 at elementary level
[2] Completed grade 8 at primary level
[3] Completed grade 12 at secondary level

Table 3.2.2 Educational attainment: Men

Percent distribution of men age 15-49 by highest level of schooling attended or completed, and median years completed, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Highest level of schooling								Total	Median years completed	Number of men
	No education	Some elementary	Complete elementary[1]	Some primary	Completed primary[2]	Some secondary	Completed secondary[3]	More than secondary			
Age											
15-24	7.0	1.4	1.0	38.4	16.6	25.8	7.2	2.5	100.0	7.1	2,715
15-19	5.8	1.4	0.9	49.4	17.3	22.7	2.3	0.1	100.0	6.5	1,469
20-24	8.5	1.5	1.2	25.4	15.7	29.4	13.1	5.3	100.0	7.9	1,246
25-29	12.6	1.1	1.0	21.9	13.2	29.1	13.2	7.8	100.0	8.0	1,171
30-34	18.9	2.1	2.4	31.2	10.8	22.1	5.9	6.7	100.0	6.0	1,058
35-39	18.1	1.5	3.1	36.2	12.1	19.7	3.8	5.5	100.0	5.7	966
40-44	14.7	3.0	2.5	42.1	10.6	15.3	2.1	9.7	100.0	5.7	782
45-49	17.5	2.2	2.2	41.8	15.4	15.5	0.9	4.5	100.0	5.6	641
Residence											
Urban	4.1	0.7	0.8	22.3	11.7	34.1	12.7	13.7	100.0	9.2	976
Rural	14.2	1.9	1.9	37.1	14.2	21.3	5.5	4.0	100.0	6.2	6,357
Region											
Southern	7.3	2.0	2.2	35.5	15.8	24.7	6.9	5.5	100.0	7.2	1,490
Highlands	22.0	1.7	1.7	30.4	10.7	22.3	5.0	6.1	100.0	6.0	2,871
Momase	7.8	2.0	1.4	38.9	16.1	20.3	8.7	4.9	100.0	7.0	1,999
Islands	4.7	0.7	1.7	40.7	15.7	27.5	5.4	3.5	100.0	7.1	973
Province											
Western	4.4	0.8	1.1	34.7	19.7	27.3	10.2	1.7	100.0	7.5	182
Gulf	14.1	1.7	1.9	39.7	15.3	21.3	3.6	2.3	100.0	6.0	137
Central	7.9	0.9	1.7	39.5	12.3	29.9	5.0	2.6	100.0	7.0	272
National Capital District	1.9	0.6	0.6	15.0	11.3	31.6	16.0	23.0	100.0	9.7	251
Milne Bay	10.3	2.2	3.2	39.8	19.9	19.5	3.6	1.4	100.0	6.1	423
Northern	5.0	5.4	3.9	43.7	14.7	20.6	4.5	2.2	100.0	5.7	223
Southern Highlands	34.1	0.5	1.2	28.7	9.0	15.1	6.5	4.7	100.0	4.8	457
Enga	37.6	1.8	2.0	26.7	7.3	19.9	2.7	2.1	100.0	4.1	306
Western Highlands	6.6	3.3	2.5	31.9	14.4	27.9	6.6	6.7	100.0	7.4	378
Chimbu	15.1	1.7	1.6	23.0	13.8	25.5	5.7	13.5	100.0	7.6	397
Eastern Highlands	14.4	3.0	2.4	33.4	11.3	27.0	4.7	3.9	100.0	6.0	587
Morobe	6.8	0.8	1.1	27.8	18.6	21.9	15.7	7.3	100.0	7.8	796
Madang	10.8	1.8	1.1	44.8	13.0	19.4	4.5	4.7	100.0	5.8	493
East Sepik	6.4	3.5	1.6	46.4	14.7	20.3	4.1	3.0	100.0	5.9	435
West Sepik	7.2	3.4	2.8	48.3	16.3	17.3	3.2	1.4	100.0	5.9	276
Manus	2.0	0.2	0.0	32.1	18.6	34.3	7.0	5.8	100.0	7.8	64
New Ireland	2.6	0.4	1.0	40.2	12.1	34.6	6.8	2.4	100.0	7.5	171
East New Britain	5.0	0.3	1.3	49.6	12.6	21.9	5.5	3.8	100.0	6.3	247
West New Britain	5.0	1.7	1.9	37.4	19.5	26.3	6.2	2.0	100.0	7.2	260
Autonomous Region of Bougainville	6.3	0.5	2.8	37.7	16.6	27.9	3.2	5.0	100.0	7.2	231
Hela	32.3	0.2	0.0	38.9	9.4	13.3	1.6	4.2	100.0	4.2	438
Jiwaka	16.1	1.1	2.5	26.6	9.0	28.3	7.7	8.6	100.0	7.4	309
Wealth quintile											
Lowest	30.8	3.4	1.9	39.3	12.9	10.3	0.8	0.6	100.0	4.0	1,366
Second	19.6	2.4	2.7	41.6	14.5	16.7	1.6	0.8	100.0	5.4	1,384
Middle	9.1	1.9	2.1	42.7	14.9	22.6	5.7	1.1	100.0	6.0	1,528
Fourth	6.3	0.8	1.5	37.8	13.7	28.3	6.3	5.2	100.0	7.3	1,399
Highest	1.3	0.3	0.8	16.9	13.3	34.4	16.0	17.0	100.0	9.5	1,656
Total	12.8	1.7	1.7	35.1	13.9	23.0	6.4	5.3	100.0	6.8	7,333

[1] Completed grade 2 at elementary level
[2] Completed grade 8 at primary level
[3] Completed grade 12 at secondary level

Table 3.3.1 Literacy: Women

Percent distribution of women age 15-49 by level of schooling attended and level of literacy, and percentage literate, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Secondary or higher schooling	No schooling, elementary or primary school: Can read a whole sentence	Can read part of a sentence	Cannot read at all	No card with required language	Blind/visually impaired	Missing	Total	Percentage literate[1]	Number of women
Age										
15-24	3.3	58.0	16.1	21.7	0.6	0.0	0.4	100.0	77.3	5,704
15-19	0.1	62.3	17.6	19.0	0.7	0.0	0.3	100.0	79.9	2,945
20-24	6.8	53.4	14.4	24.5	0.5	0.0	0.4	100.0	74.6	2,759
25-29	4.9	42.5	16.2	35.3	0.8	0.0	0.3	100.0	63.6	2,543
30-34	4.6	40.5	17.5	35.8	0.9	0.0	0.8	100.0	62.5	2,180
35-39	4.0	34.4	17.9	41.5	1.1	0.0	1.1	100.0	56.3	2,059
40-44	5.2	35.8	20.0	36.2	1.6	0.3	0.9	100.0	61.0	1,484
45-49	2.7	30.2	18.8	46.6	0.9	0.2	0.5	100.0	51.7	1,228
Residence										
Urban	9.6	63.8	11.4	13.1	1.2	0.0	0.8	100.0	84.8	2,018
Rural	3.1	42.4	18.0	35.0	0.8	0.1	0.5	100.0	63.6	13,180
Region										
Southern	4.5	53.0	17.3	23.6	0.9	0.1	0.6	100.0	74.8	2,899
Highlands	5.3	33.4	15.6	44.0	1.0	0.0	0.6	100.0	54.3	6,213
Momase	1.9	48.3	18.7	29.8	0.8	0.0	0.4	100.0	69.0	3,919
Islands	3.2	63.3	18.6	13.7	0.5	0.1	0.6	100.0	85.1	2,167
Province										
Western	4.4	37.6	25.4	29.3	0.4	0.1	2.8	100.0	67.4	352
Gulf	0.5	32.7	18.7	44.3	3.1	0.0	0.6	100.0	52.0	277
Central	1.6	55.6	17.6	24.9	0.0	0.0	0.3	100.0	74.8	557
National Capital District	14.1	69.8	6.1	7.1	2.8	0.0	0.2	100.0	89.9	526
Milne Bay	3.3	59.9	15.9	20.5	0.1	0.2	0.1	100.0	79.0	767
Northern	1.4	42.2	25.9	29.5	0.0	0.4	0.6	100.0	69.5	421
Southern Highlands	2.1	27.2	13.5	56.5	0.5	0.0	0.1	100.0	42.9	1,089
Enga	2.6	30.8	14.6	50.9	0.0	0.0	1.0	100.0	48.1	563
Western Highlands	8.1	40.3	14.5	30.0	4.0	0.0	3.1	100.0	62.9	746
Chimbu	14.0	38.9	13.4	33.2	0.4	0.0	0.1	100.0	66.3	1,038
Eastern Highlands	4.9	37.0	18.6	39.4	0.0	0.0	0.1	100.0	60.5	1,310
Morobe	3.5	50.3	18.3	25.8	1.7	0.0	0.5	100.0	72.1	1,514
Madang	1.0	55.7	13.4	29.0	0.3	0.1	0.6	100.0	70.0	987
East Sepik	1.0	47.2	24.0	27.4	0.3	0.0	0.0	100.0	72.3	872
West Sepik	0.9	31.6	20.8	46.2	0.0	0.0	0.4	100.0	53.3	545
Manus	6.4	68.5	12.7	10.7	1.1	0.0	0.7	100.0	87.6	135
New Ireland	3.7	75.9	9.4	10.3	0.0	0.0	0.7	100.0	89.0	385
East New Britain	4.6	62.3	19.2	13.0	0.0	0.0	1.0	100.0	86.1	572
West New Britain	2.4	43.8	31.4	21.0	0.7	0.5	0.3	100.0	77.5	532
Autonomous Region of Bougainville	1.5	73.2	13.4	10.3	1.1	0.0	0.6	100.0	88.0	544
Hela	1.9	19.2	17.2	58.0	2.8	0.2	0.8	100.0	38.3	874
Jiwaka	0.8	42.3	16.5	40.4	0.1	0.0	0.0	100.0	59.6	594
Wealth quintile										
Lowest	0.0	19.4	18.0	60.5	0.9	0.2	0.9	100.0	37.5	2,783
Second	0.4	34.5	20.3	43.2	1.2	0.0	0.4	100.0	55.2	2,831
Middle	0.7	42.7	21.8	33.2	1.0	0.0	0.6	100.0	65.2	2,897
Fourth	2.7	57.7	17.9	20.5	0.6	0.1	0.5	100.0	78.3	3,118
Highest	13.7	65.1	9.6	10.4	0.7	0.1	0.4	100.0	88.4	3,569
Total	4.0	45.3	17.2	32.1	0.9	0.1	0.6	100.0	66.4	15,198

[1] Refers to women who attended schooling higher than the secondary level and women who can read a whole sentence or part of a sentence

Table 3.3.2 Literacy: Men

Percent distribution of men age 15-49 by level of schooling attended and level of literacy, and percentage literate, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Secondary or higher schooling	No schooling, elementary or primary school: Can read a whole sentence	Can read part of a sentence	Cannot read at all	No card with required language	Blind/visually impaired	Missing	Total	Percentage literate[1]	Number of men
Age										
15-24	2.5	65.2	17.7	12.8	0.4	0.1	1.3	100.0	85.4	2,715
15-19	0.1	65.9	20.1	11.8	0.3	0.0	1.7	100.0	86.1	1,469
20-24	5.3	64.4	15.0	14.0	0.4	0.1	0.8	100.0	84.7	1,246
25-29	7.8	58.6	15.8	16.5	0.7	0.1	0.5	100.0	82.3	1,171
30-34	6.7	48.4	20.0	22.8	1.4	0.1	0.5	100.0	75.1	1,058
35-39	5.5	44.8	21.6	25.3	0.9	0.6	1.1	100.0	72.0	966
40-44	9.7	45.4	21.8	20.7	0.5	0.0	2.0	100.0	76.8	782
45-49	4.5	49.3	22.3	21.7	0.9	0.1	1.2	100.0	76.0	641
Residence										
Urban	13.7	69.6	8.5	7.1	0.3	0.0	0.9	100.0	91.8	976
Rural	4.0	53.4	20.7	19.8	0.8	0.2	1.1	100.0	78.1	6,357
Region										
Southern	5.5	61.2	17.6	14.3	0.9	0.0	0.4	100.0	84.4	1,490
Highlands	6.1	46.8	19.2	25.9	0.9	0.2	0.8	100.0	72.1	2,871
Momase	4.9	58.6	19.6	14.7	0.5	0.1	1.6	100.0	83.1	1,999
Islands	3.5	66.3	20.1	7.8	0.3	0.1	1.9	100.0	89.9	973
Province										
Western	1.7	68.0	17.8	6.8	5.0	0.0	0.7	100.0	87.5	182
Gulf	2.3	49.5	23.2	20.8	3.6	0.0	0.7	100.0	74.9	137
Central	2.6	62.3	17.8	16.9	0.0	0.0	0.3	100.0	82.8	272
National Capital District	23.0	66.7	5.6	4.7	0.0	0.0	0.0	100.0	95.3	251
Milne Bay	1.4	60.9	18.3	19.3	0.0	0.0	0.0	100.0	80.7	423
Northern	2.2	56.0	26.1	14.7	0.0	0.0	1.0	100.0	84.4	223
Southern Highlands	4.7	37.2	15.2	38.1	4.1	0.0	0.6	100.0	57.2	457
Enga	2.1	39.4	18.9	38.6	0.0	0.0	0.9	100.0	60.5	306
Western Highlands	6.7	59.5	20.3	12.1	0.8	0.0	0.5	100.0	86.5	378
Chimbu	13.5	49.7	15.9	18.9	0.5	0.0	1.4	100.0	79.1	397
Eastern Highlands	3.9	55.8	19.5	20.0	0.0	0.1	0.7	100.0	79.2	587
Morobe	7.3	73.9	7.6	9.7	0.7	0.0	0.9	100.0	88.7	796
Madang	4.7	53.5	19.1	17.5	0.8	0.0	4.4	100.0	77.3	493
East Sepik	3.0	45.2	32.7	18.3	0.0	0.0	0.8	100.0	80.9	435
West Sepik	1.4	45.0	34.4	18.1	0.0	1.0	0.0	100.0	80.8	276
Manus	5.8	74.0	16.2	3.7	0.0	0.0	0.4	100.0	95.9	64
New Ireland	2.4	80.7	12.9	3.4	0.0	0.0	0.7	100.0	95.9	171
East New Britain	3.8	60.5	23.1	10.8	0.0	0.0	1.9	100.0	87.4	247
West New Britain	2.0	64.2	20.4	8.1	0.7	0.4	4.1	100.0	86.7	260
Autonomous Region of Bougainville	5.0	61.9	23.1	8.8	0.4	0.0	0.9	100.0	90.0	231
Hela	4.2	33.2	27.2	32.3	0.4	1.3	1.3	100.0	64.7	438
Jiwaka	8.6	51.1	16.1	23.6	0.0	0.2	0.3	100.0	75.9	309
Wealth quintile										
Lowest	0.6	30.8	28.9	37.5	1.4	0.1	0.8	100.0	60.2	1,366
Second	0.8	44.0	24.4	27.3	0.9	0.5	2.0	100.0	69.2	1,384
Middle	1.1	60.6	20.9	15.3	1.0	0.1	1.1	100.0	82.6	1,528
Fourth	5.2	65.3	16.4	11.2	0.4	0.1	1.4	100.0	87.0	1,399
Highest	17.0	72.6	7.2	2.8	0.0	0.0	0.3	100.0	96.8	1,656
Total	5.3	55.5	19.1	18.1	0.7	0.1	1.1	100.0	79.9	7,333

[1] Refers to men who attended schooling higher than the secondary level and men who can read a whole sentence or part of a sentence

Table 3.4.1 Exposure to mass media: Women

Percentage of women age 15-49 who are exposed to specific media on a weekly basis, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Reads a newspaper at least once a week	Watches television at least once a week	Listens to the radio at least once a week	Accesses all three media at least once a week	Accesses none of the three media at least once a week	Number of women
Age						
15-19	20.9	17.5	21.9	8.5	67.2	2,945
20-24	21.8	19.4	23.2	8.3	64.4	2,759
25-29	18.0	13.8	19.1	5.8	71.3	2,543
30-34	15.9	13.6	17.1	4.6	72.8	2,180
35-39	13.4	12.6	14.4	4.1	75.9	2,059
40-44	14.1	13.7	14.4	4.2	73.8	1,484
45-49	13.9	12.3	13.4	4.0	75.3	1,228
Residence						
Urban	41.1	46.1	41.5	20.1	34.6	2,018
Rural	14.0	10.5	15.0	3.9	76.2	13,180
Region						
Southern	22.9	21.9	24.3	9.7	62.3	2,899
Highlands	14.0	15.5	16.8	5.6	74.1	6,213
Momase	18.3	12.9	18.0	5.0	70.2	3,919
Islands	19.5	9.7	16.6	4.5	72.7	2,167
Province						
Western	9.0	5.6	12.6	1.4	80.9	352
Gulf	13.3	17.2	18.2	5.2	70.9	277
Central	28.8	25.3	31.0	12.8	54.2	557
National Capital District	54.8	65.3	54.0	30.5	17.6	526
Milne Bay	10.6	5.8	10.9	1.6	81.0	767
Northern	15.8	9.5	16.3	4.2	73.8	421
Southern Highlands	7.6	4.2	5.6	1.4	87.4	1,089
Enga	13.8	19.6	18.5	6.0	72.8	563
Western Highlands	18.4	20.4	25.5	10.3	66.8	746
Chimbu	18.3	18.0	17.3	8.2	70.5	1,038
Eastern Highlands	15.2	28.3	28.5	7.5	61.6	1,310
Morobe	28.2	20.5	20.0	7.7	60.7	1,514
Madang	16.7	9.5	19.7	4.2	71.5	987
East Sepik	11.6	9.7	21.0	4.1	72.6	872
West Sepik	4.5	3.3	4.9	0.6	90.6	545
Manus	37.4	13.3	35.7	7.5	49.4	135
New Ireland	25.0	5.2	15.1	3.3	71.0	385
East New Britain	14.6	13.1	14.8	4.9	76.3	572
West New Britain	16.9	8.1	15.9	4.8	77.2	532
Autonomous Region of Bougainville	18.6	10.1	15.6	4.1	71.4	544
Hela	11.7	4.1	7.3	2.4	85.5	874
Jiwaka	13.7	10.1	12.1	2.7	77.0	594
Education						
No education	0.3	3.3	5.7	0.2	93.2	3,488
Elementary	0.9	10.9	15.5	0.3	81.3	676
Primary	12.9	11.3	16.8	3.8	74.5	6,969
Secondary	41.4	28.9	30.8	13.9	45.8	3,460
Higher	53.9	55.5	45.0	27.2	27.3	605
Wealth quintile						
Lowest	3.2	1.8	3.8	0.6	93.7	2,783
Second	6.1	2.9	8.5	1.0	88.0	2,831
Middle	11.3	6.4	14.8	1.7	77.8	2,897
Fourth	17.5	10.7	18.9	3.8	70.2	3,118
Highest	43.2	46.6	40.7	19.9	33.5	3,569
Total	17.6	15.2	18.5	6.1	70.6	15,198

Table 3.4.2 Exposure to mass media: Men

Percentage of men age 15-49 who are exposed to specific media on a weekly basis, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Reads a newspaper at least once a week	Watches television at least once a week	Listens to the radio at least once a week	Accesses all three media at least once a week	Accesses none of the three media at least once a week	Number of men
Age						
15-19	29.0	19.2	29.6	9.5	56.1	1,469
20-24	37.8	28.1	42.1	16.9	45.2	1,246
25-29	40.5	29.3	39.3	17.3	46.0	1,171
30-34	30.3	22.0	28.3	11.6	57.9	1,058
35-39	28.5	14.4	26.5	8.1	59.6	966
40-44	29.4	18.8	26.3	8.4	56.2	782
45-49	30.8	16.9	25.2	7.8	58.7	641
Residence						
Urban	65.7	57.1	63.2	35.3	15.5	976
Rural	27.6	16.4	27.1	8.2	59.4	6,357
Region						
Southern	34.5	25.5	36.4	15.3	50.6	1,490
Highlands	30.5	21.0	28.7	11.0	56.6	2,871
Momase	36.9	20.6	34.1	11.1	49.6	1,999
Islands	27.7	21.1	30.1	10.6	57.4	973
Province						
Western	14.4	5.3	17.0	1.5	75.8	182
Gulf	19.1	9.4	19.3	5.8	72.2	137
Central	33.7	33.2	37.4	13.8	45.2	272
National Capital District	79.1	70.9	71.7	48.6	7.0	251
Milne Bay	24.2	7.7	27.4	4.2	60.0	423
Northern	30.5	25.0	38.7	17.9	55.0	223
Southern Highlands	15.8	9.8	16.2	5.6	77.9	457
Enga	25.9	19.9	26.5	10.2	60.8	306
Western Highlands	37.3	27.3	37.4	15.7	46.0	378
Chimbu	35.4	25.5	25.9	10.5	50.2	397
Eastern Highlands	40.3	27.1	42.3	13.5	42.0	587
Morobe	54.1	33.4	38.1	16.4	35.2	796
Madang	29.8	14.0	33.0	9.4	55.5	493
East Sepik	28.3	13.5	40.1	8.4	51.4	435
West Sepik	13.2	6.9	15.0	3.4	77.4	276
Manus	26.3	10.1	29.9	5.1	61.9	64
New Ireland	15.8	9.4	15.5	3.6	75.6	171
East New Britain	22.6	26.3	30.7	9.8	56.0	247
West New Britain	37.5	23.9	34.1	15.7	51.9	260
Autonomous Region of Bougainville	31.5	24.2	35.8	12.1	50.5	231
Hela	20.5	12.4	17.5	6.9	72.9	438
Jiwaka	37.4	26.0	32.6	15.4	47.0	309
Education						
No education	1.5	5.2	11.9	0.7	86.8	941
Elementary	7.3	9.5	26.4	2.3	70.7	253
Primary	22.8	15.7	25.9	5.7	61.6	3,593
Secondary	57.0	35.1	47.7	23.6	31.0	2,156
Higher	80.8	53.7	52.2	36.9	13.7	389
Wealth quintile						
Lowest	11.6	4.8	12.9	2.0	81.9	1,366
Second	14.4	5.9	19.0	2.4	73.5	1,384
Middle	27.1	11.9	29.5	5.6	58.0	1,528
Fourth	34.6	21.9	36.4	10.5	46.8	1,399
Highest	68.7	58.4	56.9	34.7	15.3	1,656
Total	32.7	21.8	31.9	11.8	53.6	7,333

Table 3.5.1 Internet usage: Women

Percentage of women age 15-49 who have ever used the internet, and percentage who have used the internet in the past 12 months; and among women who have used the internet in the past 12 months, percent distribution by frequency of internet use in the past month, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Ever used the internet	Used the internet in the past 12 months	Number of women	Among respondents who have used the internet in the past 12 months, percentage who, in the past month, used internet: Almost every day	At least once a week	Less than once a week	Not at all	Missing	Total	Number of women
Age										
15-19	16.5	13.6	2,945	32.0	43.6	19.8	4.4	0.3	100.0	400
20-24	24.3	22.2	2,759	36.3	51.0	10.1	2.6	0.0	100.0	612
25-29	12.6	9.7	2,543	43.6	36.4	16.3	3.7	0.0	100.0	247
30-34	8.6	7.2	2,180	40.4	35.5	17.1	6.3	0.7	100.0	156
35-39	6.1	5.1	2,059	28.0	43.7	27.0	1.3	0.0	100.0	106
40-44	10.4	9.5	1,484	33.2	43.7	21.8	1.3	0.0	100.0	141
45-49	4.1	3.2	1,228	50.3	19.4	26.7	3.7	0.0	100.0	40
Residence										
Urban	37.9	33.4	2,018	47.4	34.1	14.5	3.9	0.2	100.0	675
Rural	9.3	7.8	13,180	29.0	50.4	17.5	3.0	0.1	100.0	1,027
Region										
Southern	18.0	15.4	2,899	44.2	37.4	13.9	4.2	0.2	100.0	448
Highlands	11.4	9.8	6,213	19.2	57.2	19.6	3.8	0.2	100.0	611
Momase	13.6	11.5	3,919	53.6	31.3	13.6	1.4	0.0	100.0	451
Islands	10.7	8.9	2,167	31.3	46.1	18.2	4.5	0.0	100.0	192
Province										
Western	5.4	4.3	352	(24.5)	(53.2)	(21.9)	(0.0)	(0.4)	100.0	15
Gulf	5.6	2.8	277	(38.0)	(54.5)	(4.9)	(2.6)	(0.0)	100.0	8
Central	16.7	14.5	557	30.6	47.4	19.6	1.2	1.3	100.0	81
National Capital District	54.8	49.8	526	52.4	34.0	9.7	3.9	0.0	100.0	262
Milne Bay	10.5	8.3	767	36.4	35.1	18.7	9.8	0.0	100.0	64
Northern	6.2	4.4	421	32.5	31.7	29.3	6.4	0.0	100.0	19
Southern Highlands	4.4	3.3	1,089	(19.8)	(53.4)	(24.0)	(2.8)	(0.0)	100.0	36
Enga	9.1	8.2	563	14.1	56.6	27.1	2.2	0.0	100.0	46
Western Highlands	14.6	13.4	746	27.4	57.3	12.1	3.2	0.0	100.0	100
Chimbu	24.0	20.7	1,038	12.9	57.4	26.3	3.4	0.0	100.0	215
Eastern Highlands	12.7	11.5	1,310	20.2	60.5	13.9	4.7	0.8	100.0	151
Morobe	25.4	22.4	1,514	57.4	30.3	11.7	0.7	0.0	100.0	339
Madang	3.5	2.4	987	(20.9)	(44.6)	(34.5)	(0.0)	(0.0)	100.0	23
East Sepik	9.3	7.4	872	49.9	33.3	13.9	2.9	0.0	100.0	65
West Sepik	5.8	4.5	545	42.9	27.8	19.4	9.8	0.0	100.0	24
Manus	18.4	14.6	135	27.0	41.2	26.5	5.2	0.0	100.0	20
New Ireland	12.2	9.7	385	31.5	48.3	14.6	5.7	0.0	100.0	37
East New Britain	14.5	12.1	572	21.9	54.0	17.1	7.0	0.0	100.0	69
West New Britain	7.4	6.5	532	31.2	49.5	18.9	0.3	0.0	100.0	35
Autonomous Region of Bougainville	6.9	5.7	544	(54.6)	(25.1)	(18.8)	(1.4)	(0.0)	100.0	31
Hela	3.0	1.9	874	*	*	*	*	*	100.0	17
Jiwaka	9.8	7.8	594	(37.2)	(57.4)	(5.5)	(0.0)	(0.0)	100.0	46
Education										
No education	0.2	0.1	3,488	*	*	*	*	*	100.0	4
Elementary	1.0	0.9	676	*	*	*	*	*	100.0	6
Primary	4.5	3.3	6,969	31.2	45.2	19.3	3.8	0.4	100.0	227
Secondary	34.6	29.7	3,460	39.4	41.1	16.3	3.2	0.1	100.0	1,026
Higher	76.4	72.5	605	32.4	49.8	15.0	2.8	0.0	100.0	439
Wealth quintile										
Lowest	1.0	0.6	2,783	*	*	*	*	*	100.0	16
Second	1.3	1.0	2,831	(14.8)	(39.4)	(33.2)	(12.6)	(0.0)	100.0	29
Middle	3.7	2.7	2,897	7.2	42.1	43.1	7.6	0.0	100.0	77
Fourth	9.7	7.3	3,118	27.0	44.0	23.2	5.4	0.4	100.0	227
Highest	42.5	37.9	3,569	40.4	43.8	13.2	2.6	0.1	100.0	1,352
Total	13.1	11.2	15,198	36.3	43.9	16.3	3.4	0.1	100.0	1,702

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Table 3.5.2 Internet usage: Men

Percentage of men age 15-49 who have ever used the internet, and percentage who have used the internet in the past 12 months; and among men who have used the internet in the past 12 months, percent distribution by frequency of internet use in the past month, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Ever used the internet	Used the internet in the past 12 months	Number of women	Among respondents who have used the internet in the past 12 months, percentage who, in the past month, used internet: Almost every day	At least once a week	Less than once a week	Not at all	Missing	Total	Number of men
Age										
15-19	18.0	16.6	1,469	32.0	38.4	25.6	4.0	0.0	100.0	244
20-24	33.3	30.4	1,246	24.7	51.0	23.1	1.3	0.0	100.0	379
25-29	26.2	23.2	1,171	33.0	41.4	22.0	3.6	0.0	100.0	272
30-34	18.3	16.1	1,058	34.7	30.6	31.8	1.8	1.1	100.0	171
35-39	13.4	10.7	966	28.7	45.5	23.7	2.0	0.1	100.0	104
40-44	14.5	12.8	782	50.8	29.9	18.3	1.0	0.0	100.0	100
45-49	10.2	8.9	641	37.7	28.7	24.8	8.8	0.0	100.0	57
Residence										
Urban	51.0	47.3	976	41.2	38.2	17.6	2.9	0.1	100.0	462
Rural	15.6	13.6	6,357	26.9	42.6	27.8	2.6	0.2	100.0	865
Region										
Southern	24.5	21.1	1,490	32.5	45.5	19.7	2.2	0.0	100.0	315
Highlands	15.3	13.9	2,871	30.8	38.5	28.3	2.0	0.3	100.0	400
Momase	24.2	22.5	1,999	37.2	40.1	19.3	3.2	0.1	100.0	449
Islands	20.6	16.7	973	18.3	41.5	36.3	3.9	0.0	100.0	163
Province										
Western	12.6	9.0	182	(8.9)	(49.8)	(41.3)	(0.0)	(0.0)	100.0	16
Gulf	15.5	13.4	137	14.8	45.3	31.8	8.2	0.0	100.0	18
Central	23.1	20.2	272	25.5	58.7	15.5	0.4	0.0	100.0	55
National Capital District	67.6	64.1	251	48.4	36.2	13.0	2.4	0.0	100.0	161
Milne Bay	13.3	9.9	423	9.1	47.2	42.1	1.6	0.0	100.0	42
Northern	14.0	9.8	223	10.3	75.3	11.1	3.3	0.0	100.0	22
Southern Highlands	8.3	8.0	457	(20.2)	(33.2)	(46.6)	(0.0)	(0.0)	100.0	36
Enga	14.7	14.6	306	(25.9)	(24.3)	(49.8)	(0.0)	(0.0)	100.0	45
Western Highlands	23.8	21.8	378	20.5	48.3	26.4	3.1	1.7	100.0	82
Chimbu	17.2	16.4	397	(67.0)	(17.3)	(11.5)	(4.1)	(0.0)	100.0	65
Eastern Highlands	18.5	17.7	587	18.6	54.7	24.0	2.6	0.0	100.0	104
Morobe	36.6	35.0	796	44.0	38.5	15.5	1.8	0.2	100.0	278
Madang	16.3	14.8	493	22.7	36.7	34.5	6.1	0.0	100.0	73
East Sepik	17.2	16.1	435	29.7	49.1	15.7	5.4	0.2	100.0	70
West Sepik	13.4	10.0	276	25.6	43.2	27.9	3.3	0.0	100.0	28
Manus	33.6	30.1	64	24.0	44.6	26.4	5.0	0.0	100.0	19
New Ireland	19.6	15.6	171	17.6	30.4	44.4	7.5	0.0	100.0	27
East New Britain	20.5	17.9	247	17.2	43.1	32.4	7.4	0.0	100.0	44
West New Britain	21.0	13.0	260	8.7	45.2	45.7	0.5	0.0	100.0	34
Autonomous Region of Bougainville	17.2	16.8	231	25.7	42.6	31.7	0.0	0.0	100.0	39
Hela	5.3	3.3	438	*	*	*	*	*	100.0	15
Jiwaka	21.3	17.3	309	(44.7)	(29.0)	(26.3)	(0.0)	(0.0)	100.0	54
Education										
No education	0.3	0.3	941	*	*	*	*	*	100.0	3
Elementary	2.7	2.1	253	*	*	*	*	*	100.0	5
Primary	8.9	7.5	3,593	13.1	49.2	33.2	4.6	0.0	100.0	269
Secondary	39.2	34.8	2,156	28.9	43.0	25.8	2.1	0.3	100.0	750
Higher	79.9	76.9	389	56.7	29.3	12.2	1.8	0.0	100.0	299
Wealth quintile										
Lowest	2.2	1.7	1,366	*	*	*	*	*	100.0	23
Second	5.4	4.6	1,384	8.1	56.2	30.2	5.4	0.0	100.0	64
Middle	12.5	9.8	1,528	8.1	38.8	46.4	5.7	0.9	100.0	150
Fourth	21.1	18.5	1,399	14.4	39.4	41.5	4.5	0.2	100.0	259
Highest	54.2	50.1	1,656	43.7	41.1	13.9	1.4	0.0	100.0	830
Total	20.3	18.1	7,333	31.8	41.1	24.2	2.7	0.2	100.0	1,327

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Table 3.6.1 Employment status: Women

Percent distribution of women age 15-49 by employment status, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Employed in the 12 months preceding the survey: Currently employed[1]	Employed in the 12 months preceding the survey: Not currently employed	Not employed in the 12 months preceding the survey	Missing/don't know	Total	Number of women
Age						
15-19	14.2	2.8	82.4	0.6	100.0	2,945
20-24	26.1	4.2	69.2	0.6	100.0	2,759
25-29	31.1	3.5	64.4	1.0	100.0	2,543
30-34	34.6	3.6	61.2	0.6	100.0	2,180
35-39	34.4	4.1	61.3	0.2	100.0	2,059
40-44	36.9	4.9	57.8	0.4	100.0	1,484
45-49	37.9	3.7	58.1	0.2	100.0	1,228
Marital status						
Never married	18.9	3.0	77.5	0.5	100.0	3,968
Married or living together	31.7	4.1	63.6	0.6	100.0	10,052
Divorced/separated/widowed	39.5	3.1	57.2	0.2	100.0	1,179
Number of living children						
0	21.2	3.4	74.8	0.6	100.0	4,957
1-2	30.7	3.7	65.1	0.5	100.0	4,273
3-4	33.8	4.2	61.3	0.7	100.0	3,554
5+	34.9	3.7	61.0	0.4	100.0	2,414
Residence						
Urban	38.0	3.0	58.7	0.3	100.0	2,018
Rural	27.6	3.9	68.0	0.6	100.0	13,180
Region						
Southern	35.1	6.1	58.5	0.3	100.0	2,899
Highlands	23.5	3.4	72.2	1.0	100.0	6,213
Momase	28.8	3.2	67.7	0.3	100.0	3,919
Islands	36.8	2.6	60.4	0.2	100.0	2,167
Province						
Western	38.2	2.3	59.1	0.3	100.0	352
Gulf	28.1	2.3	68.9	0.7	100.0	277
Central	28.8	5.3	64.9	1.0	100.0	557
National Capital District	37.0	3.9	59.0	0.2	100.0	526
Milne Bay	50.3	13.2	36.5	0.0	100.0	767
Northern	15.2	2.8	82.0	0.1	100.0	421
Southern Highlands	13.0	2.8	82.0	2.2	100.0	1,089
Enga	17.0	3.8	78.6	0.7	100.0	563
Western Highlands	18.0	3.4	77.6	1.0	100.0	746
Chimbu	31.5	3.9	64.4	0.2	100.0	1,038
Eastern Highlands	40.8	5.1	53.5	0.6	100.0	1,310
Morobe	22.7	3.9	73.1	0.3	100.0	1,514
Madang	25.0	1.6	73.0	0.4	100.0	987
East Sepik	38.6	3.9	57.1	0.3	100.0	872
West Sepik	37.2	2.7	60.0	0.2	100.0	545
Manus	27.4	2.3	70.0	0.3	100.0	135
New Ireland	36.9	3.0	59.9	0.2	100.0	385
East New Britain	55.7	1.9	42.4	0.0	100.0	572
West New Britain	30.9	2.8	66.1	0.2	100.0	532
Autonomous Region of Bougainville	25.2	2.8	71.7	0.3	100.0	544
Hela	11.0	2.1	85.2	1.7	100.0	874
Jiwaka	21.8	1.3	76.9	0.0	100.0	594
Education						
No education	22.0	4.1	73.1	0.7	100.0	3,488
Elementary	30.6	4.7	63.3	1.4	100.0	676
Primary	27.3	3.6	68.5	0.6	100.0	6,969
Secondary	31.9	3.7	64.1	0.3	100.0	3,460
Higher	69.5	2.2	27.9	0.4	100.0	605
Wealth quintile						
Lowest	20.9	4.6	73.8	0.7	100.0	2,783
Second	24.9	3.3	70.9	0.8	100.0	2,831
Middle	27.6	4.2	67.4	0.7	100.0	2,897
Fourth	32.8	2.8	64.1	0.3	100.0	3,118
Highest	36.2	3.8	59.7	0.3	100.0	3,569
Total	29.0	3.7	66.7	0.6	100.0	15,198

[1] *Currently employed* is defined as having done work in the past 7 days. Included are persons who did not work in the past 7 days but who are regularly employed and were absent from work for leave, illness, vacation, or any other such reason.

Table 3.6.2 Employment status: Men

Percent distribution of men age 15-49 by employment status, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Employed in the 12 months preceding the survey: Currently employed[1]	Employed in the 12 months preceding the survey: Not currently employed	Not employed in the 12 months preceding the survey	Missing/don't know	Total	Number of men
Age						
15-19	14.2	3.8	81.6	0.3	100.0	1,469
20-24	41.2	5.2	53.6	0.0	100.0	1,246
25-29	56.5	5.7	37.1	0.7	100.0	1,171
30-34	57.1	6.0	36.3	0.6	100.0	1,058
35-39	54.4	5.8	39.5	0.4	100.0	966
40-44	59.8	5.1	34.9	0.2	100.0	782
45-49	56.1	8.9	34.8	0.2	100.0	641
Marital status						
Never married	28.5	4.7	66.5	0.3	100.0	3,114
Married or living together	57.9	5.9	35.9	0.4	100.0	3,947
Divorced/separated/widowed	62.3	10.1	27.6	0.0	100.0	272
Number of living children						
0	31.9	4.9	62.7	0.4	100.0	3,503
1-2	59.7	5.5	34.4	0.4	100.0	1,444
3-4	56.4	7.4	35.9	0.3	100.0	1,348
5+	57.7	5.0	37.2	0.1	100.0	1,038
Residence						
Urban	54.1	7.0	38.8	0.0	100.0	976
Rural	44.2	5.3	50.1	0.4	100.0	6,357
Region						
Southern	51.9	5.9	42.0	0.1	100.0	1,490
Highlands	42.7	5.7	51.0	0.6	100.0	2,871
Momase	42.1	5.2	52.4	0.3	100.0	1,999
Islands	51.3	4.9	43.5	0.3	100.0	973
Province						
Western	30.8	1.8	67.3	0.0	100.0	182
Gulf	31.8	4.2	63.3	0.6	100.0	137
Central	59.7	5.0	34.9	0.4	100.0	272
National Capital District	54.8	13.9	31.2	0.0	100.0	251
Milne Bay	69.7	6.4	23.9	0.0	100.0	423
Northern	34.8	1.8	63.4	0.0	100.0	223
Southern Highlands	50.8	5.3	43.7	0.2	100.0	457
Enga	27.1	5.4	67.3	0.2	100.0	306
Western Highlands	23.3	5.1	71.2	0.4	100.0	378
Chimbu	65.1	11.4	23.2	0.3	100.0	397
Eastern Highlands	59.7	5.3	35.0	0.0	100.0	587
Morobe	37.7	5.3	56.9	0.0	100.0	796
Madang	37.0	7.6	54.3	1.1	100.0	493
East Sepik	43.0	3.1	53.9	0.0	100.0	435
West Sepik	62.6	3.6	33.8	0.0	100.0	276
Manus	32.2	4.0	63.8	0.0	100.0	64
New Ireland	30.6	5.8	63.5	0.0	100.0	171
East New Britain	35.1	4.3	60.7	0.0	100.0	247
West New Britain	57.7	5.1	36.8	0.5	100.0	260
Autonomous Region of Bougainville	82.0	4.9	12.1	0.9	100.0	231
Hela	17.7	0.3	79.4	2.6	100.0	438
Jiwaka	44.1	9.0	46.8	0.1	100.0	309
Education						
No education	42.1	3.5	53.6	0.8	100.0	941
Elementary	46.9	6.4	46.8	0.0	100.0	253
Primary	39.8	6.2	53.6	0.4	100.0	3,593
Secondary	49.5	5.6	44.9	0.1	100.0	2,156
Higher	84.1	2.8	11.5	1.6	100.0	389
Wealth quintile						
Lowest	35.9	6.0	57.4	0.6	100.0	1,366
Second	40.2	4.2	54.8	0.9	100.0	1,384
Middle	41.7	5.2	52.8	0.4	100.0	1,528
Fourth	53.0	5.4	41.5	0.0	100.0	1,399
Highest	55.3	6.5	38.2	0.1	100.0	1,656
Total	45.6	5.5	48.6	0.4	100.0	7,333

[1] *Currently employed* is defined as having done work in the past 7 days. Included are persons who did not work in the past 7 days but who are regularly employed and were absent from work for leave, illness, vacation, or any other such reason.

Table 3.7.1 Occupation: Women

Percent distribution of women age 15-49 employed in the 12 months preceding the survey by occupation, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Profes-sional/ technical/ managerial	Clerical	Sales and services	Skilled manual	Unskilled manual	Agriculture	Missing	Total	Number of women
Age									
15-19	1.3	0.6	34.9	0.5	0.6	53.3	9.0	100.0	500
20-24	10.1	9.5	31.4	1.1	0.6	42.6	4.6	100.0	833
25-29	14.7	4.9	26.5	0.8	1.1	46.4	5.7	100.0	880
30-34	14.7	5.3	33.3	0.8	2.2	39.5	4.2	100.0	834
35-39	18.6	2.5	29.4	1.0	0.3	41.7	6.6	100.0	792
40-44	17.9	3.9	31.8	0.4	0.3	40.9	4.8	100.0	620
45-49	13.8	7.5	36.8	1.0	0.1	36.7	4.1	100.0	511
Marital status									
Never married	8.0	7.7	29.2	1.0	1.2	45.4	7.4	100.0	870
Married or living together	13.6	4.7	30.7	0.8	0.5	44.4	5.3	100.0	3,598
Divorced/separated/ widowed	22.4	3.0	40.6	0.8	2.2	27.8	3.2	100.0	503
Number of living children									
0	8.4	6.4	34.5	1.2	1.0	41.6	6.8	100.0	1,220
1-2	17.9	5.0	31.3	1.0	1.4	40.1	3.4	100.0	1,469
3-4	17.7	4.4	29.6	0.7	0.5	42.2	5.0	100.0	1,349
5+	7.2	4.3	30.5	0.3	0.1	49.9	7.6	100.0	932
Residence									
Urban	22.8	12.9	55.3	2.7	0.6	2.3	3.5	100.0	827
Rural	11.6	3.5	26.7	0.5	0.9	51.0	5.8	100.0	4,144
Region									
Southern	13.4	5.7	31.6	0.9	0.3	44.7	3.5	100.0	1,194
Highlands	17.8	3.4	26.6	0.6	1.4	39.4	10.9	100.0	1,668
Momase	7.2	7.2	36.4	0.9	0.9	44.3	3.0	100.0	1,254
Islands	14.4	4.3	33.6	1.2	0.4	45.0	1.1	100.0	854
Province									
Western	12.6	2.9	18.7	2.1	0.6	61.7	1.5	100.0	143
Gulf	6.3	1.7	44.6	0.0	0.0	35.0	12.4	100.0	84
Central	12.2	6.9	41.1	1.0	0.0	35.2	3.6	100.0	190
National Capital District	32.3	17.0	44.7	2.7	0.3	0.0	3.1	100.0	215
Milne Bay	7.7	2.0	25.6	0.1	0.0	61.7	2.9	100.0	487
Northern	9.6	3.4	19.1	0.0	2.2	64.2	1.4	100.0	76
Southern Highlands	17.8	0.4	15.6	0.0	0.0	62.5	3.7	100.0	171
Enga	11.6	2.5	25.5	0.9	0.0	58.8	0.7	100.0	117
Western Highlands	44.3	4.4	27.9	1.0	5.4	14.1	3.0	100.0	160
Chimbu	28.9	1.3	36.5	0.1	0.2	14.9	18.2	100.0	367
Eastern Highlands	6.8	5.4	21.3	0.8	1.8	51.2	12.7	100.0	602
Morobe	11.3	17.6	46.8	2.4	2.2	17.9	1.8	100.0	403
Madang	3.3	3.2	68.0	0.0	1.0	18.6	5.9	100.0	263
East Sepik	6.1	1.9	12.7	0.0	0.0	76.1	3.2	100.0	371
West Sepik	6.5	1.9	19.2	0.7	0.0	70.4	1.3	100.0	217
Manus	20.2	10.1	51.6	2.0	0.0	14.2	2.0	100.0	40
New Ireland	20.0	4.8	46.3	1.3	0.6	25.6	1.4	100.0	153
East New Britain	9.9	4.8	24.8	1.6	0.0	58.5	0.4	100.0	329
West New Britain	11.9	3.5	33.4	0.5	0.5	49.0	1.1	100.0	179
Autonomous Region of Bougainville	20.1	2.0	35.6	0.8	0.8	38.5	2.2	100.0	152
Hela	13.7	4.6	40.4	0.0	0.0	23.6	17.8	100.0	115
Jiwaka	13.6	2.9	25.0	1.1	2.0	50.5	4.9	100.0	137
Education									
No education	0.9	0.0	24.6	0.0	1.2	65.8	7.4	100.0	913
Elementary	0.4	0.1	44.2	1.6	0.8	46.6	6.3	100.0	239
Primary	2.9	1.3	36.7	0.8	0.9	51.7	5.6	100.0	2,153
Secondary	20.0	14.8	34.3	1.4	0.6	24.2	4.8	100.0	1,232
Higher	81.4	9.5	5.2	0.5	0.0	1.6	1.8	100.0	434
Wealth quintile									
Lowest	0.2	0.1	16.6	0.0	0.2	77.1	5.8	100.0	708
Second	3.5	0.7	21.1	0.3	1.9	64.8	7.7	100.0	800
Middle	5.8	1.2	31.2	0.6	0.9	52.9	7.5	100.0	922
Fourth	13.7	4.1	38.4	1.5	0.9	37.8	3.4	100.0	1,112
Highest	30.5	13.2	39.5	1.2	0.3	11.0	4.3	100.0	1,428
Total	13.5	5.1	31.5	0.8	0.8	42.9	5.4	100.0	4,970

Table 3.7.2 Occupation: Men

Percent distribution of men age 15-49 employed in the 12 months preceding the survey by occupation, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Profes-sional/ technical/ managerial	Clerical	Sales and services	Skilled manual	Unskilled manual	Agriculture	Missing	Total	Number of men
Age									
15-19	3.4	0.4	14.0	7.4	3.3	62.2	9.3	100.0	265
20-24	7.9	2.0	9.8	19.8	1.1	52.7	6.7	100.0	579
25-29	12.4	1.2	11.3	15.9	5.3	49.2	4.7	100.0	729
30-34	17.7	1.7	13.0	17.2	1.4	44.3	4.6	100.0	668
35-39	17.6	1.7	16.1	13.2	1.2	45.4	4.7	100.0	581
40-44	23.8	1.5	11.2	15.5	0.3	44.4	3.3	100.0	507
45-49	20.0	1.7	10.3	16.6	0.3	46.6	4.6	100.0	416
Marital status									
Never married	8.1	1.4	13.1	16.1	2.2	52.7	6.3	100.0	1,032
Married or living together	17.7	1.6	11.6	15.8	1.9	46.7	4.7	100.0	2,515
Divorced/separated/ widowed	20.3	1.3	14.0	12.8	1.5	45.1	4.9	100.0	197
Number of living children									
0	8.6	1.3	11.9	15.1	3.8	52.7	6.6	100.0	1,291
1-2	16.4	2.2	15.7	15.2	1.8	44.8	3.9	100.0	941
3-4	20.6	1.5	10.0	18.9	0.5	44.2	4.4	100.0	860
5+	19.5	1.0	10.5	13.7	0.5	49.8	5.0	100.0	651
Residence									
Urban	24.7	3.7	29.8	28.0	1.7	7.5	4.7	100.0	597
Rural	13.4	1.1	8.8	13.4	2.0	56.0	5.2	100.0	3,147
Region									
Southern	14.1	2.5	12.0	17.5	1.4	49.8	2.6	100.0	862
Highlands	15.9	0.7	9.4	12.3	0.5	52.0	9.2	100.0	1,390
Momase	17.3	1.8	16.5	16.8	4.1	41.2	2.4	100.0	945
Islands	11.7	1.5	12.1	19.9	2.6	48.6	3.6	100.0	547
Province									
Western	28.6	0.0	10.4	15.4	1.0	41.9	2.8	100.0	60
Gulf	12.0	0.8	13.3	10.2	2.6	57.6	3.5	100.0	49
Central	13.9	2.7	8.8	21.8	0.9	47.6	4.2	100.0	176
National Capital District	29.3	5.8	24.5	32.9	2.8	1.9	2.9	100.0	173
Milne Bay	4.6	1.7	6.9	11.2	0.0	74.4	1.3	100.0	322
Northern	10.4	1.6	12.9	6.8	4.9	60.1	3.2	100.0	82
Southern Highlands	10.5	0.8	1.4	4.9	0.0	82.1	0.2	100.0	256
Enga	8.2	0.0	27.7	34.5	3.8	21.8	4.1	100.0	99
Western Highlands	37.1	2.5	14.8	23.3	0.0	13.8	8.5	100.0	107
Chimbu	16.2	0.8	6.3	5.8	0.2	52.7	18.1	100.0	303
Eastern Highlands	6.3	0.2	7.1	14.6	0.3	60.5	11.0	100.0	381
Morobe	21.7	2.1	27.2	26.5	8.1	10.6	3.9	100.0	342
Madang	16.6	1.4	10.6	13.3	3.6	51.4	3.0	100.0	220
East Sepik	13.7	0.7	9.3	6.3	0.0	69.3	0.8	100.0	200
West Sepik	13.7	3.0	11.4	14.2	1.8	55.3	0.5	100.0	183
Manus	23.7	3.8	23.9	27.0	0.0	17.0	4.5	100.0	23
New Ireland	17.6	5.6	20.6	26.3	3.6	23.9	2.4	100.0	62
East New Britain	10.7	3.5	17.6	32.9	2.2	30.8	2.3	100.0	97
West New Britain	16.0	0.3	14.2	15.1	4.5	46.8	3.1	100.0	163
Autonomous Region of Bougainville	5.4	0.0	3.8	14.7	1.3	70.0	4.8	100.0	201
Hela	(23.5)	(0.0)	(19.6)	(9.4)	(0.0)	(28.0)	(19.4)	100.0	79
Jiwaka	33.0	1.4	13.4	11.3	1.0	38.4	1.3	100.0	164
Education									
No education	1.3	0.1	6.0	9.8	0.8	76.0	6.0	100.0	429
Elementary	6.1	0.9	13.0	16.9	1.4	56.6	5.1	100.0	135
Primary	7.0	1.0	11.7	17.1	1.3	56.7	5.2	100.0	1,655
Secondary	16.9	2.8	16.8	18.3	3.6	37.8	3.8	100.0	1,187
Higher	70.6	2.2	5.6	7.0	0.8	5.1	8.7	100.0	339
Wealth quintile									
Lowest	3.7	0.2	6.2	7.4	0.1	77.4	5.0	100.0	573
Second	6.2	0.4	6.5	7.2	0.9	73.7	5.1	100.0	614
Middle	7.8	1.3	10.8	13.7	1.1	58.3	6.9	100.0	717
Fourth	17.0	1.8	15.4	19.2	1.9	40.9	3.8	100.0	818
Highest	30.8	2.9	17.3	24.2	4.2	15.5	5.1	100.0	1,023
Total	15.2	1.5	12.2	15.7	1.9	48.3	5.1	100.0	3,744

Note: Figures in parentheses are based on 25-49 unweighted cases.

Table 3.8 Type of employment: Women

Percent distribution of women age 15-49 employed in the 12 months preceding the survey by type of earnings, type of employer, and continuity of employment, according to type of employment (agricultural or nonagricultural), Papua New Guinea DHS 2016-18

Employment characteristic	Agricultural work	Nonagricultural work	Total
Type of earnings			
Cash only	11.9	63.4	39.6
Cash and in-kind	7.2	9.8	8.6
In-kind only	4.5	2.7	4.0
Not paid	75.9	23.9	46.9
Missing	0.4	0.3	1.0
Total	100.0	100.0	100.0
Type of employer			
Employed by family member	25.6	18.4	22.0
Employed by nonfamily member	5.7	32.3	20.3
Self-employed	68.4	49.1	56.9
Missing	0.2	0.2	0.8
Total	100.0	100.0	100.0
Continuity of employment			
All year	54.9	56.9	55.4
Seasonal	18.4	13.8	16.0
Occasional	26.0	29.1	27.5
Missing	0.7	0.2	1.2
Total	100.0	100.0	100.0
Number of women employed during the last 12 months	2,130	2,569	4,970

Note: Total includes women with missing information on type of employment who are not shown separately.

Table 3.9.1 Agricultural and non-agricultural employment: Women

Percent distribution of women age 15-49 employed in the last 12 months preceding the survey by type of employment (agricultural or non-agricultural) and percent distribution of women age 15-49 who were not working in the 7 days prior to the survey by how they mostly spent time during this period, according to background characteristics, Papua New Guinea DHS 2016-18

	Currently employed[1]					Not employed in the last 7 days							
Background characteristic	Agricultural work	Non-agricultural work	Missing	Total	Number of women	Student	Housework	Old/sick/ disabled	Other	Unemployed	Missing/ don't know	Total	Number of women
Age													
15-19	53.3	37.8	9.0	100.0	500	56.9	39.5	0.6	0.2	1.9	0.9	100.0	2,540
20-24	42.6	52.8	4.6	100.0	833	13.5	80.6	1.1	0.3	3.7	0.7	100.0	2,071
25-29	46.4	47.9	5.7	100.0	880	1.7	91.8	1.0	1.0	2.7	1.9	100.0	1,780
30-34	39.5	56.3	4.2	100.0	834	0.6	93.6	1.0	0.9	2.9	1.1	100.0	1,467
35-39	41.7	51.8	6.6	100.0	792	0.4	93.2	0.8	0.4	4.2	1.0	100.0	1,367
40-44	40.9	54.3	4.8	100.0	620	0.2	95.3	0.5	0.6	2.7	0.6	100.0	950
45-49	36.7	59.2	4.1	100.0	511	0.3	90.8	0.5	1.6	5.3	1.5	100.0	773
Marital status													
Never married	45.4	47.2	7.4	100.0	870	52.9	42.3	1.2	0.4	2.3	0.8	100.0	3,241
Married or living together	44.4	50.4	5.3	100.0	3,598	0.6	93.5	0.6	0.7	3.4	1.2	100.0	6,989
Divorced/separated/ widowed	27.8	69.0	3.2	100.0	503	2.4	91.1	0.9	0.7	3.6	1.4	100.0	718
Residence													
Urban	2.3	94.2	3.5	100.0	827	23.0	70.8	2.8	0.5	2.1	0.8	100.0	1,283
Rural	51.0	43.2	5.8	100.0	4,144	15.3	79.2	0.6	0.6	3.3	1.1	100.0	9,664
Region													
Southern	44.7	51.9	3.5	100.0	1,194	19.4	75.8	1.6	0.7	2.1	0.5	100.0	1,913
Highlands	39.4	49.7	10.9	100.0	1,668	13.7	78.7	0.5	0.9	4.7	1.6	100.0	4,776
Momase	44.3	52.7	3.0	100.0	1,254	15.2	81.1	1.1	0.2	1.6	0.8	100.0	2,872
Islands	45.0	53.9	1.1	100.0	854	22.3	73.5	0.5	0.5	2.3	0.9	100.0	1,387
Education													
No education	65.8	26.8	7.4	100.0	913	0.5	93.1	0.1	0.9	4.0	1.3	100.0	2,753
Elementary	46.6	47.1	6.3	100.0	239	6.8	87.5	0.1	0.1	3.4	2.1	100.0	476
Primary	51.7	42.7	5.6	100.0	2,153	21.1	73.6	0.8	0.4	3.1	1.0	100.0	5,127
Secondary	24.2	71.0	4.8	100.0	1,232	24.1	71.0	1.6	0.8	1.9	0.5	100.0	2,387
Higher	1.6	96.6	1.8	100.0	434	33.5	54.3	3.2	0.8	4.2	4.0	100.0	206
Province													
Western	61.7	36.8	1.5	100.0	143	20.4	73.8	2.0	0.3	2.2	1.2	100.0	223
Gulf	35.0	52.5	12.4	100.0	84	17.7	79.6	0.7	0.4	0.4	1.2	100.0	201
Central	35.2	61.2	3.6	100.0	190	16.1	81.0	0.2	1.1	0.9	0.6	100.0	400
National Capital District	0.0	96.9	3.1	100.0	215	25.6	64.7	6.3	0.5	2.4	0.7	100.0	340
Milne Bay	61.7	35.4	2.9	100.0	487	17.1	77.1	0.2	1.3	4.3	0.1	100.0	388
Northern	64.2	34.3	1.4	100.0	76	19.9	78.0	0.4	0.1	1.5	0.1	100.0	361
Southern Highlands	62.5	33.8	3.7	100.0	171	11.0	79.4	0.5	0.4	4.7	4.1	100.0	953
Enga	58.8	40.5	0.7	100.0	117	9.1	86.1	0.1	0.4	3.3	1.0	100.0	468
Western Highlands	14.1	82.9	3.0	100.0	160	19.8	75.6	0.5	0.4	2.2	1.5	100.0	615
Chimbu	14.9	66.9	18.2	100.0	367	20.6	76.9	0.2	0.3	1.8	0.3	100.0	715
Eastern Highlands	51.2	36.1	12.7	100.0	602	11.4	70.5	0.7	3.5	12.8	1.2	100.0	781
Morobe	17.9	80.4	1.8	100.0	403	10.7	86.8	0.2	0.0	1.7	0.5	100.0	1,178
Madang	18.6	75.5	5.9	100.0	263	14.5	80.7	2.2	0.2	1.5	1.0	100.0	752
East Sepik	76.1	20.7	3.2	100.0	371	23.3	72.3	0.8	0.6	2.0	0.9	100.0	582
West Sepik	70.4	28.2	1.3	100.0	217	18.7	77.6	1.8	0.2	0.9	0.8	100.0	359
Manus	14.2	83.8	2.0	100.0	40	14.2	83.1	0.2	0.2	1.2	1.1	100.0	100
New Ireland	25.6	73.0	1.4	100.0	153	23.6	73.1	0.7	0.7	1.1	0.8	100.0	247
East New Britain	58.5	41.1	0.4	100.0	329	35.0	62.6	0.1	1.3	1.0	0.0	100.0	256
West New Britain	49.0	49.9	1.1	100.0	179	17.1	76.0	0.5	0.2	4.5	1.8	100.0	374
Autonomous Region of Bougainville	38.5	59.3	2.2	100.0	152	20.4	76.1	0.6	0.2	2.0	0.6	100.0	411
Hela	23.6	58.6	17.8	100.0	115	10.4	84.4	0.2	0.0	4.0	1.0	100.0	777
Jiwaka	50.5	44.6	4.9	100.0	137	14.8	81.4	1.2	0.7	1.4	0.4	100.0	466
Wealth quintile													
Lowest	77.1	17.1	5.8	100.0	708	8.3	85.7	0.1	0.7	3.8	1.3	100.0	2,238
Second	64.8	27.5	7.7	100.0	800	12.8	81.6	0.5	0.5	3.4	1.1	100.0	2,147
Middle	52.9	39.6	7.5	100.0	922	15.5	78.5	0.9	0.4	3.5	1.3	100.0	2,125
Fourth	37.8	58.7	3.4	100.0	1,112	18.9	76.6	1.1	0.4	2.3	0.7	100.0	2,119
Highest	11.0	84.7	4.3	100.0	1,428	25.0	68.9	1.5	1.0	2.5	1.0	100.0	2,318
Total	42.9	51.7	5.4	100.0	4,970	16.2	78.2	0.8	0.6	3.1	1.1	100.0	10,948

[1] *Currently employed* is defined as having done work in the past 7 days. Included are persons who did not work in the past 7 days but who are regularly employed and were absent from work for leave, illness, vacation, or any other such reason.

Table 3.9.2 Agricultural and non-agricultural employment: Men

Percent distribution of men age 15-49 employed in the last 12 months preceding the survey by type of employment (agricultural or non-agricultural) and percent distribution of men age 15-49 who were not working in the 7 days prior to the survey by how they mostly spent time during this period, according to background characteristics, Papua New Guinea DHS 2016-18

	Currently employed[1]					Not employed in the last 7 days							
Background characteristic	Agricultural work	Non-agricultural work	Missing	Total	Number of women	Student	Housework	Old/sick/ disabled	Other	Unemployed	Missing/ don't know	Total	Number of men
Age													
15-19	62.2	28.5	9.3	100.0	265	68.3	26.6	1.0	0.3	3.1	0.7	100.0	1,270
20-24	52.7	40.6	6.7	100.0	579	28.5	52.7	5.2	0.3	13.0	0.3	100.0	753
25-29	49.2	46.0	4.7	100.0	729	9.4	69.8	7.5	0.5	10.6	2.2	100.0	540
30-34	44.3	51.1	4.6	100.0	668	0.9	73.1	6.5	0.7	15.9	2.8	100.0	491
35-39	45.4	49.9	4.7	100.0	581	1.1	74.9	3.3	1.0	17.6	2.1	100.0	468
40-44	44.4	52.3	3.3	100.0	507	0.1	76.5	4.0	0.9	17.2	1.2	100.0	335
45-49	46.6	48.8	4.6	100.0	416	0.0	74.5	2.8	0.8	20.4	1.5	100.0	298
Marital status													
Never married	52.7	40.9	6.3	100.0	1,032	49.4	38.5	3.6	0.4	7.5	0.8	100.0	2,264
Married or living together	46.7	48.7	4.7	100.0	2,515	1.4	75.5	4.1	0.7	16.1	2.2	100.0	1,781
Divorced/separated/ widowed	45.1	49.9	4.9	100.0	197	0.8	76.3	6.3	1.2	15.4	0.0	100.0	111
Residence													
Urban	7.5	87.8	4.7	100.0	597	33.4	44.1	9.4	0.4	11.8	0.9	100.0	479
Rural	56.0	38.8	5.2	100.0	3,147	26.7	56.8	3.2	0.6	11.3	1.4	100.0	3,677
Region													
Southern	49.8	47.6	2.6	100.0	862	28.6	50.3	4.1	1.0	14.5	1.5	100.0	746
Highlands	52.0	38.8	9.2	100.0	1,390	25.5	59.7	3.9	0.2	9.0	1.8	100.0	1,711
Momase	41.2	56.5	2.4	100.0	945	27.6	52.6	3.8	0.6	14.5	0.8	100.0	1,198
Islands	48.6	47.8	3.6	100.0	547	32.5	54.4	3.6	0.9	7.6	0.9	100.0	502
Education													
No education	76.0	17.9	6.0	100.0	429	0.6	84.7	4.1	0.3	8.1	2.3	100.0	559
Elementary	56.6	38.3	5.1	100.0	135	15.5	66.3	2.9	1.4	13.6	0.3	100.0	143
Primary	56.7	38.1	5.2	100.0	1,655	32.6	50.8	2.0	0.4	13.0	1.2	100.0	2,230
Secondary	37.8	58.4	3.8	100.0	1,187	32.4	49.6	7.2	0.6	9.4	0.8	100.0	1,147
Higher	5.1	86.2	8.7	100.0	339	23.7	40.8	10.0	3.4	14.3	7.8	100.0	78
Province													
Western	41.9	55.3	2.8	100.0	60	23.7	50.0	2.7	0.4	21.8	1.3	100.0	127
Gulf	57.6	38.8	3.5	100.0	49	27.1	52.3	2.2	0.0	17.8	0.6	100.0	96
Central	47.6	48.2	4.2	100.0	176	33.3	53.9	4.7	1.4	1.8	4.9	100.0	116
National Capital District	1.9	95.2	2.9	100.0	173	29.7	49.3	7.4	0.8	12.8	0.0	100.0	125
Milne Bay	74.4	24.3	1.3	100.0	322	28.7	37.2	5.5	2.7	23.9	2.0	100.0	133
Northern	60.1	36.7	3.2	100.0	82	29.2	59.2	1.9	0.4	8.9	0.4	100.0	149
Southern Highlands	82.1	17.7	0.2	100.0	256	30.2	48.5	2.9	0.0	17.3	1.1	100.0	234
Enga	21.8	74.2	4.1	100.0	99	14.1	78.6	2.8	0.5	2.8	1.4	100.0	237
Western Highlands	13.8	77.7	8.5	100.0	107	29.7	52.0	3.8	0.0	12.3	2.2	100.0	296
Chimbu	52.7	29.3	18.1	100.0	303	17.6	55.6	3.8	0.0	20.8	2.1	100.0	150
Eastern Highlands	60.5	28.5	11.0	100.0	381	29.2	55.7	10.1	0.2	4.9	0.0	100.0	247
Morobe	10.6	85.6	3.9	100.0	342	28.7	51.9	3.2	0.0	15.7	0.5	100.0	507
Madang	51.4	45.6	3.0	100.0	220	11.1	61.9	6.5	1.8	16.8	2.0	100.0	322
East Sepik	69.3	30.0	0.8	100.0	200	42.9	42.7	1.9	0.7	11.7	0.1	100.0	258
West Sepik	55.3	44.1	0.5	100.0	183	35.2	52.6	3.1	0.0	8.8	0.4	100.0	110
Manus	17.0	78.5	4.5	100.0	23	28.5	61.0	1.6	0.0	7.9	1.0	100.0	44
New Ireland	23.9	73.7	2.4	100.0	62	22.7	65.9	1.6	0.0	8.5	1.2	100.0	122
East New Britain	30.8	66.9	2.3	100.0	97	38.1	46.8	5.7	1.1	8.3	0.0	100.0	170
West New Britain	46.8	50.1	3.1	100.0	163	30.9	59.2	3.4	0.5	5.7	0.3	100.0	117
Autonomous Region of Bougainville	70.0	25.2	4.8	100.0	201	45.2	34.7	3.6	4.4	7.7	4.4	100.0	48
Hela	(28.0)	(52.5)	(19.4)	100.0	79	25.6	63.1	1.9	0.0	5.4	4.0	100.0	368
Jiwaka	38.4	60.2	1.3	100.0	164	28.5	63.9	2.9	0.6	3.8	0.3	100.0	178
Wealth quintile													
Lowest	77.4	17.6	5.0	100.0	573	17.3	66.8	2.9	0.1	11.4	1.5	100.0	894
Second	73.7	21.2	5.1	100.0	614	23.9	61.6	1.5	0.9	10.2	1.9	100.0	854
Middle	58.3	34.7	6.9	100.0	717	27.8	55.7	2.6	0.3	12.4	1.1	100.0	918
Fourth	40.9	55.4	3.8	100.0	818	32.7	49.7	7.1	1.0	9.0	0.5	100.0	697
Highest	15.5	79.4	5.1	100.0	1,023	38.1	40.3	6.1	0.5	13.5	1.6	100.0	792
Total	48.3	46.6	5.1	100.0	3,744	27.5	55.4	3.9	0.5	11.4	1.3	100.0	4,156

Note: Figures in parentheses are based on 25-49 unweighted cases.

[1] Currently employed is defined as having done work in the past 7 days. Included are persons who did not work in the past 7 days but who are regularly employed and were absent from work for leave, illness, vacation, or any other such reason.

Table 3.10.1 Health insurance coverage: Women

Percentage of women age 15-49 with specific types of health insurance coverage, and percentage with any health insurance, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Employer-based insurance	Mutual health organization/ community based insurance	Privately purchased commercial insurance	Other	None	Any health insurance	Number of women
Age							
15-19	1.7	0.2	0.4	0.0	97.7	2.3	2,945
20-24	2.2	0.3	1.0	0.2	96.4	3.6	2,759
25-29	1.9	0.2	0.5	0.5	96.8	3.2	2,543
30-34	1.6	0.3	1.2	0.2	96.7	3.3	2,180
35-39	2.4	0.1	0.8	0.1	96.6	3.4	2,059
40-44	1.5	1.7	0.8	0.0	96.0	4.0	1,484
45-49	2.2	0.3	1.2	0.1	96.4	3.6	1,228
Residence							
Urban	6.7	1.1	4.0	0.6	87.8	12.2	2,018
Rural	1.2	0.3	0.3	0.1	98.1	1.9	13,180
Region							
Southern	3.7	0.7	1.7	0.3	93.6	6.4	2,899
Highlands	1.1	0.4	0.3	0.2	98.0	2.0	6,213
Momase	2.2	0.1	0.7	0.0	97.0	3.0	3,919
Islands	1.3	0.4	1.1	0.2	97.1	2.9	2,167
Education							
No education	0.1	0.1	0.0	0.0	99.8	0.2	3,488
Elementary	0.2	0.0	0.0	0.0	99.7	0.3	676
Primary	0.5	0.1	0.4	0.1	99.0	1.0	6,969
Secondary	5.3	0.7	1.9	0.4	91.9	8.1	3,460
Higher	11.2	4.5	4.8	0.9	78.9	21.1	605
Wealth quintile							
Lowest	0.0	0.0	0.0	0.3	99.6	0.4	2,783
Second	0.0	0.0	0.0	0.0	99.9	0.1	2,831
Middle	0.1	0.1	0.1	0.0	99.7	0.3	2,897
Fourth	0.5	0.2	0.4	0.1	98.9	1.1	3,118
Highest	7.6	1.4	2.9	0.4	87.8	12.2	3,569
Total	1.9	0.4	0.8	0.2	96.8	3.2	15,198

Table 3.10.2 Health insurance coverage: Men

Percentage of men age 15-49 with specific types of health insurance coverage, and percentage with any health insurance, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Employer based insurance	Mutual health organization/ community based insurance	Privately purchased commercial insurance	Other	None	Any health insurance	Number of men
Age							
15-19	0.3	0.3	0.4	0.1	98.9	1.1	1,469
20-24	2.3	0.7	3.3	0.1	93.7	6.3	1,246
25-29	2.7	1.3	5.9	0.1	90.3	9.7	1,171
30-34	2.9	0.3	1.8	0.7	94.3	5.7	1,058
35-39	3.5	0.1	1.7	0.2	94.6	5.4	966
40-44	5.2	0.3	1.9	0.1	92.5	7.5	782
45-49	2.1	1.0	2.3	0.2	94.5	5.5	641
Residence							
Urban	7.4	2.8	5.4	1.0	83.7	16.3	976
Rural	1.8	0.2	2.0	0.1	96.0	4.0	6,357
Region							
Southern	3.7	1.5	2.7	0.5	91.7	8.3	1,490
Highlands	1.2	0.1	1.2	0.1	97.6	2.4	2,871
Momase	3.0	0.4	4.7	0.1	91.8	8.2	1,999
Islands	3.6	0.7	1.4	0.4	94.0	6.0	973
Education							
No education	0.2	0.0	0.1	0.2	99.5	0.5	941
Elementary	0.7	0.0	0.4	0.0	98.9	1.1	253
Primary	0.9	0.1	0.5	0.1	98.3	1.7	3,593
Secondary	3.4	1.2	6.3	0.4	88.9	11.1	2,156
Higher	19.4	2.4	6.3	0.4	72.1	27.9	389
Wealth quintile							
Lowest	0.1	0.0	0.4	0.0	99.5	0.5	1,366
Second	0.2	0.1	1.0	0.0	98.7	1.3	1,384
Middle	0.8	0.2	0.8	0.1	98.1	1.9	1,528
Fourth	1.6	0.5	1.5	0.3	96.1	3.9	1,399
Highest	8.8	1.7	7.7	0.7	81.4	18.6	1,656
Total	2.5	0.6	2.5	0.2	94.4	5.6	7,333

Table 3.11.1 Tobacco smoking: Women

Percentage of women age 15-49 who smoke various tobacco products, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage who smoke:[1]			Number of women
	Cigarettes[2]	Other type of tobacco[3]	Any type of tobacco	
Age				
15-19	13.4	7.4	14.6	2,945
20-24	23.1	15.5	25.7	2,759
25-29	26.0	19.6	30.5	2,543
30-34	26.9	22.8	32.9	2,180
35-39	23.6	20.1	28.1	2,059
40-44	22.3	23.1	28.8	1,484
45-49	20.1	22.1	25.5	1,228
Residence				
Urban	30.1	13.0	31.6	2,018
Rural	20.7	18.2	25.2	13,180
Region				
Southern	17.8	8.6	19.4	2,899
Highlands	21.0	14.7	22.0	6,213
Momase	26.6	28.0	35.6	3,919
Islands	22.1	18.8	29.0	2,167
Province				
Western	13.3	5.4	13.7	352
Gulf	21.3	14.9	25.3	277
Central	16.2	4.1	16.8	557
National Capital District	24.5	3.3	24.9	526
Milne Bay	16.6	13.8	20.2	767
Northern	15.1	10.3	15.1	421
Southern Highlands	12.5	8.7	14.2	1,089
Enga	24.9	16.1	26.5	563
Western Highlands	15.8	9.1	16.8	746
Chimbu	35.0	23.7	35.4	1,038
Eastern Highlands	19.1	12.8	19.6	1,310
Morobe	25.3	22.0	34.1	1,514
Madang	27.2	29.7	31.9	987
East Sepik	24.1	34.8	39.1	872
West Sepik	33.1	30.8	41.3	545
Manus	28.0	18.0	34.7	135
New Ireland	25.1	25.2	36.3	385
East New Britain	16.3	11.2	23.5	572
West New Britain	21.0	19.0	24.6	532
Autonomous Region of Bougainville	25.7	22.2	32.8	544
Hela	17.0	16.0	18.3	874
Jiwaka	24.9	18.1	25.8	594
Education				
No education	22.8	22.4	27.9	3,488
Elementary	26.6	25.5	32.5	676
Primary	20.0	18.0	24.7	6,969
Secondary	24.6	11.9	26.5	3,460
Higher	19.6	7.5	19.8	605
Wealth quintile				
Lowest	20.1	23.6	27.1	2,783
Second	21.2	19.2	25.3	2,831
Middle	19.6	17.5	23.3	2,897
Fourth	22.0	16.7	25.5	3,118
Highest	25.9	12.2	28.3	3,569
Total	22.0	17.5	26.0	15,198

[1] Includes daily and occasional (less than daily) use
[2] Cigarettes include manufactured cigarettes, spear rolls/hand-rolled cigarettes, and kreteks.
[3] Includes pipes full of tobacco and brus.

Table 3.11.2 Tobacco smoking: Men

Percentage of men age 15-49 who smoke various tobacco products, and percent distribution of men by smoking frequency, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage who smoke:[1]			Smoking frequency				Total	Number of men
	Cigarettes[2]	Other type of tobacco[3]	Any type of tobacco	Daily smoker	Occasional smoker[4]	Non-smoker	Missing		
Age									
15-19	21.2	27.5	33.5	23.6	10.1	66.2	0.1	100.0	1,469
20-24	45.5	53.7	64.1	54.7	9.8	35.2	0.2	100.0	1,246
25-29	55.7	60.4	75.0	68.0	7.7	23.7	0.5	100.0	1,171
30-34	41.6	56.0	69.5	64.4	6.5	28.9	0.2	100.0	1,058
35-39	43.3	60.7	71.0	64.3	8.2	26.9	0.6	100.0	966
40-44	33.1	50.2	59.9	57.0	3.8	38.9	0.3	100.0	782
45-49	31.4	48.6	56.9	54.7	3.3	42.0	0.0	100.0	641
Residence									
Urban	50.8	38.8	59.6	50.4	9.5	39.8	0.2	100.0	976
Rural	37.0	51.7	60.4	54.0	7.4	38.4	0.3	100.0	6,357
Region									
Southern	40.5	45.9	62.6	55.5	7.7	36.7	0.1	100.0	1,490
Highlands	37.0	41.7	51.1	45.5	6.7	47.3	0.4	100.0	2,871
Momase	41.0	60.7	68.1	61.7	7.1	30.9	0.3	100.0	1,999
Islands	37.1	58.4	67.9	57.1	11.4	31.4	0.1	100.0	973
Province									
Western	35.6	42.1	52.1	47.4	5.5	46.6	0.6	100.0	182
Gulf	36.3	48.4	65.2	57.0	8.8	33.8	0.4	100.0	137
Central	47.7	26.1	58.5	49.6	10.8	39.6	0.0	100.0	272
National Capital District	52.3	18.7	53.3	45.3	8.2	46.4	0.0	100.0	251
Milne Bay	35.7	66.1	69.6	64.5	5.1	30.4	0.0	100.0	423
Northern	34.3	63.8	71.7	62.5	9.3	28.2	0.0	100.0	223
Southern Highlands	31.8	42.2	48.1	44.8	3.4	51.8	0.0	100.0	457
Enga	34.0	48.9	58.9	53.2	5.7	41.1	0.0	100.0	306
Western Highlands	47.0	40.5	49.5	45.5	5.2	48.9	0.4	100.0	378
Chimbu	39.9	35.7	50.0	49.0	3.8	46.8	0.4	100.0	397
Eastern Highlands	39.6	42.9	54.3	40.5	14.4	44.7	0.4	100.0	587
Morobe	42.2	58.6	67.1	58.9	8.3	32.7	0.2	100.0	796
Madang	37.5	66.9	70.1	65.7	5.2	28.0	1.0	100.0	493
East Sepik	43.0	62.6	66.3	60.7	6.4	32.9	0.0	100.0	435
West Sepik	40.8	52.6	70.3	64.7	7.9	27.5	0.0	100.0	276
Manus	47.9	54.0	71.0	63.4	7.6	29.0	0.0	100.0	64
New Ireland	15.5	59.2	62.7	52.9	9.9	37.2	0.0	100.0	171
East New Britain	45.1	54.4	67.4	47.7	19.7	32.6	0.0	100.0	247
West New Britain	41.5	63.9	69.5	63.5	6.9	29.2	0.4	100.0	260
Autonomous Region of Bougainville	36.7	57.1	69.7	61.1	9.8	29.1	0.0	100.0	231
Hela	31.0	44.9	46.3	44.6	4.3	49.5	1.5	100.0	438
Jiwaka	35.6	36.5	52.4	45.3	7.5	47.2	0.0	100.0	309
Education									
No education	32.7	58.4	64.3	59.6	5.7	34.0	0.6	100.0	941
Elementary	35.1	56.6	64.4	61.9	4.9	33.2	0.0	100.0	253
Primary	35.4	52.6	60.1	53.7	7.2	38.9	0.2	100.0	3,593
Secondary	47.2	45.3	61.4	51.8	10.3	37.8	0.1	100.0	2,156
Higher	41.4	26.1	44.3	40.9	3.5	54.0	1.6	100.0	389
Wealth quintile									
Lowest	34.6	59.0	65.2	60.0	5.6	33.9	0.4	100.0	1,366
Second	34.5	56.7	61.5	56.8	6.1	36.6	0.5	100.0	1,384
Middle	35.8	51.8	58.8	52.2	7.7	40.0	0.1	100.0	1,528
Fourth	37.6	49.3	60.2	52.0	8.6	39.1	0.3	100.0	1,399
Highest	49.8	35.8	56.8	47.8	9.7	42.2	0.2	100.0	1,656
Total	38.8	50.0	60.3	53.5	7.6	38.6	0.3	100.0	7,333

[1] Includes daily and occasional (less than daily) use
[2] Includes manufactured cigarettes, spear rolls/hand-rolled cigarettes, and kreteks
[3] Includes pipes full of tobacco and brus.
[4] Occasional refers to less often than daily use.

Table 3.12 Average number of cigarettes smoked daily: Men

Among men age 15-49 who smoke cigarettes daily, percent distribution by average number of cigarettes smoked per day, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Average number of cigarettes smoked per day[1]					Total	Number of respondents who smoke cigarettes daily[1]
	<5	5-9	10-14	15-24	>=25		
Age							
15-19	70.7	20.0	7.5	1.8	0.0	100.0	111
20-24	52.2	28.5	6.8	12.0	0.6	100.0	331
25-29	40.0	23.7	18.2	15.3	2.8	100.0	438
30-34	56.0	24.8	11.4	5.3	2.5	100.0	268
35-39	44.8	27.8	16.5	6.6	4.2	100.0	216
40-44	47.7	26.3	15.3	5.8	4.9	100.0	160
45-49	41.6	29.2	17.7	5.3	6.2	100.0	105
Residence							
Urban	40.0	28.6	16.1	7.8	7.5	100.0	343
Rural	51.0	25.0	12.8	9.7	1.4	100.0	1,285
Region							
Southern	38.0	35.4	14.9	6.3	5.5	100.0	351
Highlands	54.5	29.0	11.1	3.8	1.6	100.0	655
Momase	48.2	12.9	17.4	19.7	1.8	100.0	466
Islands	50.1	29.0	8.6	8.6	3.7	100.0	157
Province							
Western	51.5	35.6	12.7	0.2	0.0	100.0	58
Gulf	40.0	25.8	15.6	17.5	1.0	100.0	20
Central	31.2	44.0	17.0	3.5	4.3	100.0	90
National Capital District	19.6	37.4	19.9	10.3	12.9	100.0	111
Milne Bay	(70.3)	(20.2)	(9.1)	(0.4)	(0.0)	100.0	41
Northern	53.7	29.3	3.0	11.6	2.4	100.0	32
Southern Highlands	52.6	40.3	4.0	2.7	0.3	100.0	103
Enga	50.3	30.6	11.0	4.8	3.3	100.0	77
Western Highlands	43.7	29.5	20.0	4.6	2.3	100.0	155
Chimbu	64.2	18.3	8.6	5.5	3.4	100.0	114
Eastern Highlands	68.7	21.9	7.7	1.7	0.0	100.0	125
Morobe	40.4	10.6	17.1	31.0	0.9	100.0	244
Madang	71.7	12.9	9.8	3.9	1.7	100.0	75
East Sepik	68.9	13.4	15.1	0.6	2.0	100.0	64
West Sepik	34.1	19.1	27.1	15.1	4.6	100.0	83
Manus	30.4	34.1	19.7	7.5	8.3	100.0	16
New Ireland	(43.5)	(10.2)	(8.2)	(26.0)	(12.2)	100.0	11
East New Britain	55.7	25.9	11.7	5.7	1.0	100.0	36
West New Britain	50.1	41.9	3.8	1.8	2.4	100.0	57
Autonomous Region of Bougainville	(54.7)	(15.7)	(8.4)	(17.1)	(4.1)	100.0	37
Hela	*	*	*	*	*	100.0	18
Jiwaka	45.3	34.9	14.8	4.4	0.7	100.0	63
Education							
No education	61.6	23.9	8.6	3.0	2.8	100.0	158
Elementary	(61.9)	(19.8)	(12.5)	(5.8)	(0.0)	100.0	51
Primary	52.9	25.4	11.6	7.8	2.2	100.0	666
Secondary	40.6	28.4	14.6	13.0	3.5	100.0	628
Higher	45.5	19.4	24.4	8.3	2.4	100.0	126
Wealth quintile							
Lowest	60.3	25.5	9.6	4.6	0.0	100.0	224
Second	65.7	20.4	9.5	3.5	0.9	100.0	238
Middle	58.2	27.1	9.5	3.4	1.8	100.0	297
Fourth	52.0	28.1	12.3	4.5	3.1	100.0	270
Highest	31.4	26.3	19.0	18.5	4.7	100.0	599
Total	48.7	25.8	13.5	9.3	2.7	100.0	1,628

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Includes manufactured cigarettes, hand-rolled cigarettes, and kreteks

Table 3.13 Betel nut chewing

Percentage of women and men age 15-49 that chew betel nut on a daily basis, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Women		Men	
	Percentage of women who chew	Number of women	Percentage of men who chew	Number of men
Age				
15-19	56.3	2,945	59.5	1,469
20-24	66.3	2,759	71.7	1,246
25-29	63.6	2,543	80.0	1,171
30-34	68.6	2,180	77.2	1,058
35-39	62.4	2,059	75.8	966
40-44	62.4	1,484	68.7	782
45-49	53.2	1,228	69.5	641
Residence				
Urban	70.8	2,018	72.5	976
Rural	61.0	13,180	71.2	6,357
Region				
Southern	75.8	2,899	83.2	1,490
Highlands	39.3	6,213	56.3	2,871
Momase	77.4	3,919	80.3	1,999
Islands	82.8	2,167	80.0	973
Province				
Western	26.0	352	63.4	182
Gulf	82.1	277	81.3	137
Central	84.0	557	90.4	272
National Capital District	69.6	526	69.7	251
Milne Bay	89.3	767	92.6	423
Northern	85.3	421	88.6	223
Southern Highlands	24.2	1,089	52.1	457
Enga	48.3	563	59.7	306
Western Highlands	42.1	746	54.5	378
Chimbu	60.0	1,038	68.1	397
Eastern Highlands	44.6	1,310	56.9	587
Morobe	82.8	1,514	80.3	796
Madang	81.1	987	83.7	493
East Sepik	69.8	872	77.7	435
West Sepik	67.9	545	78.0	276
Manus	80.5	135	78.1	64
New Ireland	90.2	385	83.6	171
East New Britain	82.6	572	78.8	247
West New Britain	80.9	532	74.1	260
Autonomous Region of Bougainville	80.4	544	85.7	231
Hela	16.0	874	47.9	438
Jiwaka	41.1	594	56.8	309
Education				
No education	47.4	3,488	66.5	941
Elementary	62.7	676	78.7	253
Primary	66.6	6,969	72.2	3,593
Secondary	67.5	3,460	73.5	2,156
Higher	67.4	605	59.6	389
Wealth quintile				
Lowest	47.2	2,783	68.8	1,366
Second	57.8	2,831	70.5	1,384
Middle	64.1	2,897	70.6	1,528
Fourth	68.4	3,118	74.6	1,399
Highest	70.7	3,569	72.5	1,656
Total	62.3	15,198	71.4	7,333

MARRIAGE AND SEXUAL ACTIVITY 4

Key Findings

- **Current marital status:** Two-thirds of women and 54% of men age 15-49 are currently in a marital union.
- **Polygyny:** Almost 1 in 5 currently married women (18%) report that their husband has another wife/wives.
- **Age at first marriage:** Marriage is nearly universal in Papua New Guinea, although women marry about 5 years earlier than men. The median age at first marriage is just over 20 years among women and 25 years among men age 25-49.
- **Sexual initiation:** The median age at first sexual intercourse is 19.7 for both women and men age 25-49.

Marriage and sexual activity help determine the extent to which women are exposed to the risk of pregnancy. Thus, they are important determinants of fertility levels. The timing and circumstances of marriage and sexual activity also have profound consequences for women's and men's lives.

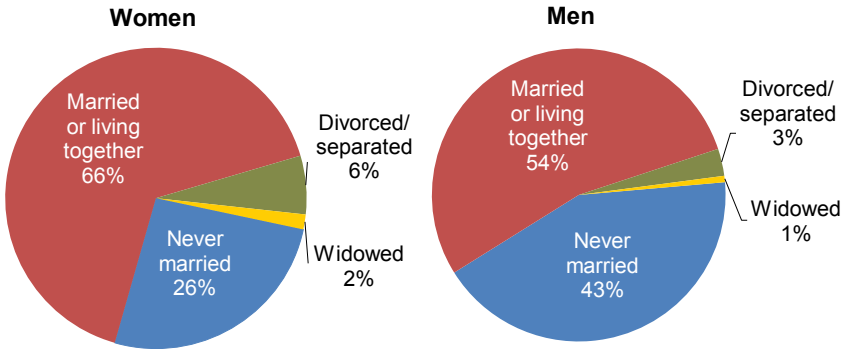
4.1 MARITAL STATUS

Currently married
Women and men who report being married or living together with a partner as though married at the time of the survey.
Sample: Women and men age 15-49

Marriage is nearly universal in Papua New Guinea. By age 45-49, only 3% of women and 4% of men have never married. Two-thirds of women (66%) and 54% of men age 15-49 are currently married or living with a partner (**Table 4.1** and **Figure 4.1**). Overall, women are more likely than men to be separated, divorced, or widowed. Women are less likely than men to be single; one in four women (26%) and 43% of men have never been married.

***Figure 4.1* Marital status**

Percent distribution of women and men age 15-49



Trends: The overall proportion of women and men who are currently in a union has decreased since 2006, especially among men. Among women age 15-49, the proportion currently married or living together decreased from 70% in 2006 to 66% in 2016-18, while among men, the proportion decreased from 60% to 54% in the same period.

Patterns by background characteristics

- There are marked differences in marital status by sex and age. The percentage of women in a union is higher than that among men until age group 35-39. For example, 58% of women age 20-24 are currently married or living together with a partner, compared with only 23% of men in the same age group.
- Among both women and men, the proportion who are divorced is highest at age group 35-39, while the proportion who are separated is highest at age 30-34; the proportion widowed is highest among those age 45-49.

4.2 POLYGYNY

Polygyny
Women who report that their husband or partner has other wives are considered to be in a polygynous marriage.
Sample: Currently married women age 15-49

Polygyny is not uncommon in Papua New Guinea. Almost one in five (18%) currently married women age 15-49 report that their husband or partner has other wives (**Table 4.2.1**); 8% of married men report having more than one wife (**Table 4.2.2**).

Trends: There has been no change in the proportion of married women in polygynous marriages between 2006 (18%) and 2016-18 (18%). However, the proportion of married men who are in polygynous marriages has increased from 4% to 8% in the same period.

Patterns by background characteristics

- Older women are more likely than younger women to have co-wives. The percentage of married women with co-wives ranges from 13% among those age 15-19 to 21% among those age 40-44 (**Table 4.2.1**).
- Polygyny appears to be most common in Hela for both women and men.
- The proportion of married women with co-wives decreases somewhat with increasing education, from 21% of women with no education to 14% of those with higher than a secondary education (**Table 4.2.1**). Among men, the proportion in polygynous marriages is highest among those with higher than a secondary education (**Table 4.2.2**).

4.3 AGE AT FIRST MARRIAGE

Median age at first marriage
Age by which half of respondents have been married.
Sample: Women and men age 25-49

In Papua New Guinea, women tend to marry earlier than men. Among those age 25-49, the median age at first marriage is 20.4 years among women and 25.0 years among men **(Figure 4.2)**. Twenty-nine percent of women but only 7% of men age 25-49 marry before their 18th birthday (**Table 4.3**).

Trends: The median age at first marriage among women age 25-49 has increased slightly since 2006, from 19.8 years to 20.4. Among men, the median age at first marriage has increased more steeply, from 22.5 in 2006 to 25.0 in 2016-18. However, looking only at data from the 2016-18 survey, there is no evidence of a change in age at first marriage. Among women, the median age at first marriage is slightly over 20 for all age groups. Similarly, the median age at first marriage for men is 25 for all age groups.

Patterns by background characteristics

- The median age at first marriage does not vary much by background characteristics except for education. Among women, the median age at first marriage increases from 18.4 among women with elementary education to 23.5 among women with higher than a secondary education (**Table 4.4** and **Figure 4.3**).

Figure 4.2 **Women's median age at marriage by education**

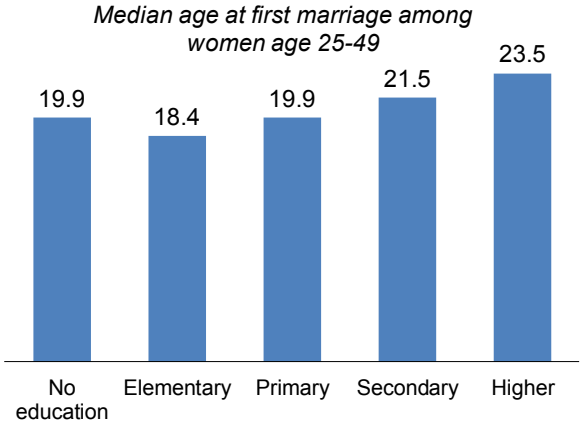
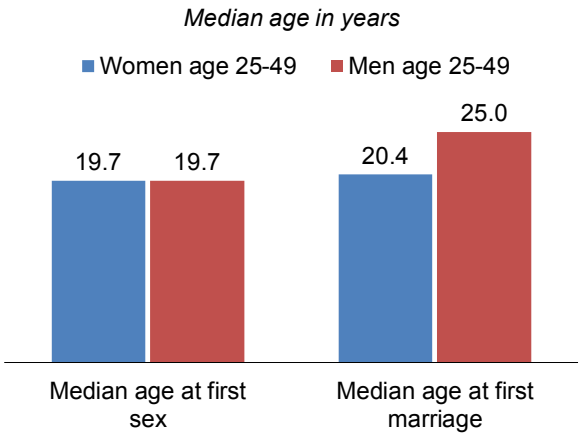


Figure 4.3 **Median age at first sex and first marriage**



4.4 Age at First Sexual Intercourse

Median age at first sexual intercourse
Age by which half of respondents have had sexual intercourse
Sample: Women and men age 20-49 and 25-49

In Papua New Guinea, the median age at first sexual intercourse among both women and men age 25-49 is 19.7 (**Figure 4.3**). One in three women (34%) have sexual intercourse before age 18. By age 20, over half of women have had sexual intercourse. Although men are slightly less likely than women to have sex before age 18 (28), they are as likely to have sexual intercourse by age 20 (53%) (**Table 4.5**).

Trends: The median age at first sexual intercourse among women age 25-49 has increased slightly from 18.8 in 2006 to 19.7 in 2016-18; among men, it has remained the same.

Patterns by background characteristics

- Rural women begin having sexual intercourse at slightly younger ages than urban women; however, the opposite is true among men (**Table 4.6**).
- Median age at first sexual intercourse generally increases with increasing education among women, but decreases slightly with increasing education among men.

4.5 Recent Sexual Activity

The survey also collected data on recent sexual activity. Overall, 44% of both women and men age 15-49 reported having sexual intercourse during the 4 weeks before the survey. Twenty percent of women and 22% of men have never had sexual intercourse. For more information on recent sexual activity, see **Tables 4.7.1** and **4.7.2**.

List of Tables

For more information on marriage and sexual activity, see the following tables:

- **Table 4.1 Current marital status**
- **Table 4.2.1 Number of women's co-wives**
- **Table 4.2.2 Number of men's wives**
- **Table 4.3 Age at first marriage**
- **Table 4.4 Median age at first marriage by background characteristics**
- **Table 4.5 Age at first sexual intercourse**
- **Table 4.6 Median age at first sexual intercourse by background characteristics**
- **Table 4.7.1 Recent sexual activity: Women**
- **Table 4.7.2 Recent sexual activity: Men**

Table 4.1 Current marital status

Percent distribution of women and men age 15-49 by current marital status, according to age, Papua New Guinea DHS 2016-18

Age	Marital status						Total	Percentage of respondents currently in union	Number of respondents
	Never married	Married	Living together	Divorced	Separated	Widowed			
				WOMEN					
15-19	84.7	11.5	2.2	0.1	1.5	0.0	100.0	13.7	2,945
20-24	36.9	49.8	8.0	0.8	4.4	0.1	100.0	57.8	2,759
25-29	9.7	67.3	15.7	1.6	5.0	0.7	100.0	83.0	2,543
30-34	4.3	71.5	14.6	1.3	7.0	1.3	100.0	86.2	2,180
35-39	2.7	68.8	16.8	1.9	6.7	3.0	100.0	85.7	2,059
40-44	1.9	69.7	16.0	1.6	7.5	3.2	100.0	85.8	1,484
45-49	2.6	70.4	13.4	1.4	5.9	6.3	100.0	83.8	1,228
Total	26.1	54.6	11.5	1.2	5.1	1.6	100.0	66.1	15,198
				MEN					
15-19	98.0	1.2	0.2	0.0	0.5	0.0	100.0	1.4	1,469
20-24	74.9	20.9	2.5	0.3	1.4	0.0	100.0	23.4	1,246
25-29	35.9	52.2	7.1	0.7	4.0	0.1	100.0	59.3	1,171
30-34	16.5	65.7	12.3	1.4	3.4	0.8	100.0	77.9	1,058
35-39	7.0	74.9	12.9	2.1	1.6	1.5	100.0	87.8	966
40-44	6.7	77.0	10.8	2.0	2.0	1.6	100.0	87.8	782
45-49	4.1	76.9	13.7	1.7	1.2	2.4	100.0	90.6	641
Total	42.5	46.4	7.4	1.0	2.0	0.7	100.0	53.8	7,333

Table 4.2.1 Number of women's co-wives

Percent distribution of currently married women age 15-49 by number of co-wives, and percentage of currently married women with one or more co-wives, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Number of co-wives					Total	Percentage with one or more co-wives[1]	Number of women
	0	1	2+	Don't know	Missing			
Age								
15-19	81.8	9.9	2.6	2.9	2.8	100.0	12.5	403
20-24	83.2	8.1	6.5	1.6	0.7	100.0	14.6	1,594
25-29	76.9	15.2	4.3	2.3	1.3	100.0	19.4	2,110
30-34	77.9	14.9	3.9	2.3	1.0	100.0	18.7	1,878
35-39	78.4	12.8	5.5	2.5	0.8	100.0	18.3	1,764
40-44	77.5	15.0	5.6	1.5	0.4	100.0	20.6	1,273
45-49	78.3	14.1	5.4	1.3	0.8	100.0	19.6	1,029
Residence								
Urban	76.6	14.4	4.4	3.3	1.3	100.0	18.8	1,200
Rural	79.1	13.1	5.1	1.9	0.9	100.0	18.1	8,852
Region								
Southern	85.7	9.2	2.5	1.5	1.2	100.0	11.7	1,867
Highlands	72.5	16.2	7.8	2.4	1.2	100.0	24.0	4,189
Momase	82.5	12.5	3.2	1.2	0.5	100.0	15.8	2,630
Islands	81.6	11.1	3.1	3.3	0.8	100.0	14.2	1,366
Province								
Western	83.5	13.0	1.1	1.2	1.2	100.0	14.1	224
Gulf	82.7	12.3	4.2	0.5	0.3	100.0	16.5	184
Central	88.9	6.3	1.2	1.0	2.7	100.0	7.4	374
National Capital District	80.2	10.9	3.5	3.4	2.0	100.0	14.4	307
Milne Bay	86.5	8.5	3.3	1.7	0.1	100.0	11.7	516
Northern	89.9	7.5	1.7	0.2	0.6	100.0	9.2	263
Southern Highlands	65.6	15.0	14.8	2.8	1.8	100.0	29.8	732
Enga	75.3	12.0	5.6	6.2	0.9	100.0	17.5	404
Western Highlands	73.1	15.4	6.6	1.3	3.6	100.0	22.0	499
Chimbu	79.0	16.5	3.1	1.2	0.3	100.0	19.6	634
Eastern Highlands	74.2	18.5	3.0	3.0	1.3	100.0	21.5	922
Morobe	73.7	19.4	4.6	2.0	0.3	100.0	24.0	1,013
Madang	91.7	7.1	1.0	0.1	0.0	100.0	8.2	708
East Sepik	86.6	7.3	3.7	1.8	0.5	100.0	11.0	534
West Sepik	82.9	11.7	3.0	0.4	2.0	100.0	14.8	374
Manus	77.8	13.1	2.9	2.7	3.5	100.0	16.0	83
New Ireland	76.6	13.8	4.7	3.8	1.1	100.0	18.5	241
East New Britain	87.6	9.3	1.5	1.6	0.0	100.0	10.8	362
West New Britain	77.8	11.2	4.3	5.8	0.8	100.0	15.5	344
Autonomous Region of Bougainville	83.6	10.4	2.6	2.5	0.9	100.0	13.0	336
Hela	61.4	20.7	15.7	1.8	0.4	100.0	36.4	566
Jiwaka	81.8	11.6	6.2	0.4	0.0	100.0	17.8	433
Education								
No education	75.2	14.6	6.8	2.6	0.8	100.0	21.3	2,808
Elementary	77.0	13.6	6.7	0.8	1.9	100.0	20.3	465
Primary	80.8	12.1	4.3	1.9	1.0	100.0	16.3	4,381
Secondary	79.0	14.7	3.5	1.9	0.9	100.0	18.2	2,021
Higher	82.4	8.8	5.6	2.0	1.2	100.0	14.3	377
Wealth quintile								
Lowest	79.3	12.3	6.2	1.7	0.5	100.0	18.5	1,933
Second	81.3	12.0	3.7	2.0	1.0	100.0	15.7	1,946
Middle	78.5	13.6	4.8	1.7	1.5	100.0	18.3	2,021
Fourth	79.4	12.4	4.9	2.5	0.7	100.0	17.3	2,042
Highest	75.6	15.8	5.3	2.2	1.1	100.0	21.1	2,110
Total	78.8	13.2	5.0	2.0	1.0	100.0	18.2	10,052

[1] Excludes women who responded "don't know" when asked if their husband has other wives

Table 4.2.2 Number of men's wives

Percent distribution of currently married men age 15-49 by number of wives, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Number of wives		Total	Number of men
	1	2+		
Age				
15-19	(94.3)	(5.7)	100.0	21
20-24	95.6	4.4	100.0	292
25-29	91.7	8.3	100.0	695
30-34	94.9	5.1	100.0	825
35-39	92.7	7.3	100.0	848
40-44	88.9	11.1	100.0	687
45-49	91.3	8.7	100.0	580
Residence				
Urban	94.9	5.1	100.0	440
Rural	92.0	8.0	100.0	3,507
Region				
Southern	95.7	4.3	100.0	780
Highlands	89.4	10.6	100.0	1,543
Momase	92.4	7.6	100.0	1,100
Islands	96.0	4.0	100.0	526
Province				
Western	94.8	5.2	100.0	91
Gulf	91.6	8.4	100.0	76
Central	97.2	2.8	100.0	144
National Capital District	95.0	5.0	100.0	117
Milne Bay	97.1	2.9	100.0	234
Northern	94.9	5.1	100.0	118
Southern Highlands	84.9	15.1	100.0	276
Enga	85.9	14.1	100.0	164
Western Highlands	91.8	8.2	100.0	192
Chimbu	94.7	5.3	100.0	211
Eastern Highlands	93.2	6.8	100.0	306
Morobe	87.1	12.9	100.0	406
Madang	96.6	3.4	100.0	308
East Sepik	96.4	3.6	100.0	205
West Sepik	92.5	7.5	100.0	180
Manus	92.3	7.7	100.0	32
New Ireland	96.6	3.4	100.0	81
East New Britain	97.4	2.6	100.0	134
West New Britain	96.0	4.0	100.0	136
Autonomous Region of Bougainville	95.3	4.7	100.0	142
Hela	83.1	16.9	100.0	219
Jiwaka	91.5	8.5	100.0	175
Education				
No education	92.9	7.1	100.0	623
Elementary	93.3	6.7	100.0	164
Primary	93.6	6.4	100.0	1,857
Secondary	91.9	8.1	100.0	1,056
Higher	82.3	17.7	100.0	248
Wealth quintile				
Lowest	91.8	8.2	100.0	824
Second	93.0	7.0	100.0	783
Middle	95.2	4.8	100.0	817
Fourth	94.7	5.3	100.0	732
Highest	87.2	12.8	100.0	791
Total	92.3	7.7	100.0	3,947

Note: Figures in parentheses are based on 25-49 unweighted cases.

Table 4.3 Age at first marriage

Percentage of women and men age 15-49 who were first married, by specific exact ages, and median age at first marriage, according to current age, Papua New Guinea DHS 2016-18

Current age	Percentage first married by exact age: 15	18	20	22	25	Percentage never married	Number of respondents	Median age at first marriage
				WOMEN				
15-19	3.6	na	na	na	na	84.7	2,945	a
20-24	8.0	27.3	46.0	na	na	36.9	2,759	a
25-29	9.6	28.8	47.6	66.8	83.8	9.7	2,543	20.2
30-34	10.6	28.8	44.5	60.5	80.0	4.3	2,180	20.7
35-39	9.1	30.5	47.0	65.4	79.5	2.7	2,059	20.3
40-44	6.5	26.9	48.2	65.8	84.4	1.9	1,484	20.2
45-49	7.4	27.3	44.7	61.8	77.9	2.6	1,228	20.5
20-49	8.8	28.4	46.4	na	na	12.0	12,253	a
25-49	9.0	28.7	46.5	64.2	81.3	4.8	9,494	20.4
				MEN				
15-19	0.0	na	na	na	na	98.0	1,469	a
20-24	0.0	3.7	10.7	na	na	74.9	1,246	a
25-29	0.0	5.6	13.3	28.4	49.3	35.9	1,171	a
30-34	0.0	7.4	18.1	29.7	50.1	16.5	1,058	25.0
35-39	0.1	8.2	19.4	32.9	51.5	7.0	966	24.8
40-44	0.0	7.0	15.8	27.3	48.6	6.7	782	25.2
45-49	0.0	5.5	16.3	30.9	51.2	4.1	641	24.8
20-49	0.0	6.1	15.3	na	na	28.5	5,864	a
25-49	0.0	6.8	16.5	29.8	50.1	16.0	4,618	25.0

Note: The age at first marriage is defined as the age at which the respondent began living with her/his first spouse/partner.
na = Not applicable due to censoring
a = Omitted because less than 50% of the women or men began living with their spouse or partner for the first time before reaching the beginning of the age group.

Table 4.4 Median age at first marriage by background characteristics

Median age at first marriage among women and men age 25-49, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Women age 25-49	Men age 25-49
Residence		
Urban	20.8	a
Rural	20.3	24.8
Region		
Southern	20.5	a
Highlands	19.7	24.4
Momase	20.7	a
Islands	21.4	a
Province		
Western	20.2	24.9
Gulf	20.2	24.7
Central	20.8	a
National Capital District	20.9	a
Milne Bay	20.3	24.9
Northern	20.2	24.3
Southern Highlands	20.1	a
Enga	19.0	a
Western Highlands	21.5	24.4
Chimbu	19.0	24.9
Eastern Highlands	18.9	23.6
Morobe	20.7	a
Madang	20.3	a
East Sepik	20.6	25.0
West Sepik	21.2	23.4
Manus	21.5	a
New Ireland	20.8	a
East New Britain	21.8	a
West New Britain	21.2	24.5
Autonomous Region of Bougainville	21.4	a
Hela	20.0	24.3
Jiwaka	20.0	23.2
Education		
No education	19.9	24.4
Elementary	18.4	23.8
Primary	19.9	24.6
Secondary	21.5	a
Higher	23.5	a
Wealth quintile		
Lowest	20.0	24.0
Second	20.1	24.8
Middle	20.0	24.6
Fourth	20.5	a
Highest	21.1	a
Total	20.4	25.0

Note: The age at first marriage is defined as the age at which the respondent began living with her/his first spouse/partner.
a = Omitted because less than 50% percent of the respondents began living with their spouse/partners for the first time before reaching the beginning of the age group

Table 4.5 Age at first sexual intercourse

Percentage of women and men age 15-49 who had first sexual intercourse by specific exact ages, percentage who never had sexual intercourse, and median age at first sexual intercourse, according to current age, Papua New Guinea DHS 2016-18

	Percentage who had first sexual intercourse by exact age:					Percentage who never had sexual		Median age at first sexual
Current age	15	18	20	22	25	intercourse	Number	intercourse
				WOMEN				
15-19	4.0	na	na	na	na	74.4	2,945	a
20-24	6.3	33.9	57.5	na	na	20.9	2,759	19.3
25-29	6.2	33.1	53.0	70.0	82.2	4.4	2,543	19.7
30-34	6.2	34.2	52.0	66.8	79.2	1.8	2,180	19.8
35-39	6.9	34.0	53.1	68.4	77.9	1.2	2,059	19.6
40-44	4.9	35.3	56.0	69.4	81.6	1.0	1,484	19.4
45-49	5.1	31.7	51.7	66.2	78.7	1.3	1,228	19.8
20-49	6.1	33.8	54.1	na	na	6.4	12,253	19.6
25-49	6.0	33.7	53.1	68.3	80.0	2.1	9,494	19.7
15-24	5.1	na	na	na	na	48.5	5,704	a
				MEN				
15-19	3.5	na	na	na	na	73.7	1,469	a
20-24	4.7	32.5	55.4	na	na	27.7	1,246	19.5
25-29	6.7	32.4	58.3	75.1	84.7	8.9	1,171	19.2
30-34	5.5	29.5	53.4	70.6	80.6	6.1	1,058	19.7
35-39	2.9	27.2	55.4	72.6	83.0	2.1	966	19.5
40-44	4.5	26.3	48.1	66.3	78.9	1.7	782	20.1
45-49	2.8	22.4	46.4	70.2	81.1	1.3	641	20.2
20-49	4.7	29.1	53.7	na	na	9.5	5,864	19.6
25-49	4.7	28.2	53.2	71.4	81.9	4.6	4,618	19.7
15-24	4.0	na	na	na	na	52.6	2,715	a

na = Not applicable due to censoring
a = Omitted because less than 50% of the respondents had sexual intercourse for the first time before reaching the beginning of the age group

Table 4.6 Median age at first sexual intercourse by background characteristics

Median age at first sexual intercourse among women age 20-49 and age 25-49, and median age at first sexual intercourse among men age 20-49 and age 25-49, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Women age		Men age	
	20-49	25-49	20-49	25-49
Residence				
Urban	a	20.1	19.1	19.2
Rural	19.5	19.6	19.7	19.8
Region				
Southern	19.4	19.5	19.2	19.3
Highlands	19.2	19.3	20.0	20.0
Momase	19.6	19.7	19.7	19.8
Islands	a	20.4	18.9	18.8
Province				
Western	19.5	19.5	19.9	19.7
Gulf	19.8	19.8	19.9	20.1
Central	a	20.5	19.2	19.3
National Capital District	a	19.8	18.8	18.8
Milne Bay	18.5	18.6	19.7	19.6
Northern	19.0	19.2	17.9	18.1
Southern Highlands	a	21.3	a	20.2
Enga	19.3	19.2	a	22.7
Western Highlands	a	21.8	19.8	20.1
Chimbu	17.6	17.4	19.8	19.7
Eastern Highlands	17.5	17.5	18.6	18.7
Morobe	18.9	18.9	19.0	19.1
Madang	a	20.0	19.7	19.6
East Sepik	a	20.2	a	20.2
West Sepik	a	20.2	a	20.3
Manus	a	20.2	18.5	18.6
New Ireland	19.9	20.0	18.7	18.4
East New Britain	a	20.1	18.8	18.7
West New Britain	a	20.8	18.6	18.6
Autonomous Region of Bougainville	a	20.6	a	20.2
Hela	a	20.6	a	20.8
Jiwaka	19.7	19.6	19.6	19.8
Education				
No education	19.4	19.6	a	20.5
Elementary	18.1	18.0	19.6	19.7
Primary	18.9	19.1	19.8	19.9
Secondary	a	20.4	19.0	18.9
Higher	a	22.6	19.1	19.0
Wealth quintile				
Lowest	19.3	19.4	a	20.1
Second	19.3	19.3	a	20.3
Middle	19.2	19.4	19.6	19.7
Fourth	19.5	19.7	19.5	19.6
Highest	a	20.4	18.8	18.8
Total	19.6	19.7	19.6	19.7

a = Omitted because less than 50% of the respondents had intercourse for the first time before reaching the beginning of the age group

Table 4.7.1 Recent sexual activity: Women

Percent distribution of women age 15-49 by timing of last sexual intercourse, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Timing of last sexual intercourse				Never had sexual intercourse	Total	Number of women
	Within the past 4 weeks	Within 1 year[1]	One or more years	Missing			
Age							
15-19	12.0	8.3	4.7	0.6	74.4	100.0	2,945
20-24	39.9	23.1	15.4	0.7	20.9	100.0	2,759
25-29	55.9	20.6	17.3	1.8	4.4	100.0	2,543
30-34	59.8	20.4	16.4	1.6	1.8	100.0	2,180
35-39	57.2	18.8	20.5	2.3	1.2	100.0	2,059
40-44	52.7	19.9	24.3	2.2	1.0	100.0	1,484
45-49	47.3	16.6	32.3	2.5	1.3	100.0	1,228
Marital status							
Never married	5.3	9.2	10.2	0.5	74.7	100.0	3,968
Married or living together	64.3	21.5	12.4	1.8	0.1	100.0	10,052
Divorced/separated/widowed	4.1	17.6	75.9	2.4	0.0	100.0	1,179
Marital duration[2]							
0-4 years	63.9	24.7	10.4	0.9	0.0	100.0	1,997
5-9 years	63.2	24.2	10.2	2.2	0.1	100.0	2,062
10-14 years	66.9	20.2	10.2	2.3	0.3	100.0	1,513
15-19 years	67.4	19.3	10.7	2.6	0.0	100.0	1,359
20-24 years	59.7	20.9	16.7	2.7	0.0	100.0	1,061
25+ years	54.7	20.7	23.4	1.1	0.0	100.0	869
Married more than once	71.1	16.5	11.9	0.5	0.0	100.0	1,190
Residence							
Urban	41.2	19.1	14.1	1.6	24.0	100.0	2,018
Rural	44.7	17.8	17.1	1.5	18.9	100.0	13,180
Region							
Southern	44.5	20.4	14.1	1.3	19.7	100.0	2,899
Highlands	42.8	17.9	18.1	1.8	19.5	100.0	6,213
Momase	45.6	16.2	18.4	1.6	18.2	100.0	3,919
Islands	45.5	18.3	13.5	0.6	22.1	100.0	2,167
Province							
Western	46.0	17.3	15.3	1.5	19.9	100.0	352
Gulf	45.4	17.1	14.5	1.9	21.1	100.0	277
Central	46.4	19.6	13.9	1.7	18.4	100.0	557
National Capital District	43.7	17.8	9.3	1.8	27.3	100.0	526
Milne Bay	43.2	23.7	19.1	0.7	13.3	100.0	767
Northern	43.9	23.3	9.9	0.7	22.1	100.0	421
Southern Highlands	42.2	18.8	16.1	2.9	20.1	100.0	1,089
Enga	40.1	15.9	25.2	0.9	18.0	100.0	563
Western Highlands	40.1	14.0	16.5	4.8	24.7	100.0	746
Chimbu	42.9	19.3	16.0	1.5	20.4	100.0	1,038
Eastern Highlands	52.7	18.7	13.1	0.8	14.7	100.0	1,310
Morobe	49.4	17.8	18.7	0.4	13.6	100.0	1,514
Madang	44.1	16.7	19.1	1.8	18.2	100.0	987
East Sepik	38.4	13.2	20.3	4.0	24.1	100.0	872
West Sepik	49.1	15.2	13.0	1.0	21.8	100.0	545
Manus	40.1	19.7	21.1	0.9	18.2	100.0	135
New Ireland	44.7	17.6	18.6	0.8	18.3	100.0	385
East New Britain	44.2	23.4	9.6	0.9	22.0	100.0	572
West New Britain	49.8	11.9	12.2	0.6	25.6	100.0	532
Autonomous Region of Bougainville	44.5	19.2	13.4	0.4	22.5	100.0	544
Hela	24.1	19.7	30.0	0.9	25.3	100.0	874
Jiwaka	55.3	16.4	14.0	0.6	13.6	100.0	594
Education							
No education	51.0	17.2	21.2	2.4	8.2	100.0	3,488
Elementary	45.8	18.8	16.3	3.8	15.3	100.0	676
Primary	42.8	17.3	15.3	1.3	23.4	100.0	6,969
Secondary	41.6	18.5	14.2	0.6	25.1	100.0	3,460
Higher	35.2	27.0	22.6	1.2	14.1	100.0	605
Wealth quintile							
Lowest	42.8	17.5	21.6	1.6	16.5	100.0	2,783
Second	43.9	17.7	18.1	1.6	18.6	100.0	2,831
Middle	49.4	15.8	15.1	1.9	17.8	100.0	2,897
Fourth	44.0	19.3	14.7	1.7	20.4	100.0	3,118
Highest	41.6	19.2	14.9	0.8	23.5	100.0	3,569
Total	44.2	18.0	16.7	1.5	19.6	100.0	15,198

[1] Excludes women who had sexual intercourse within the past 4 weeks
[2] Excludes women who are not currently married

Table 4.7.2 Recent sexual activity: Men

Percent distribution of men age 15-49 by timing of last sexual intercourse, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Timing of last sexual intercourse				Never had sexual intercourse	Total	Number of men
	Within the past 4 weeks	Within 1 year[1]	One or more years	Missing			
Age							
15-19	9.3	10.2	6.7	0.1	73.7	100.0	1,469
20-24	29.8	23.8	18.1	0.6	27.7	100.0	1,246
25-29	52.1	22.3	15.1	1.7	8.9	100.0	1,171
30-34	59.9	20.8	11.0	2.2	6.1	100.0	1,058
35-39	62.8	21.5	12.4	1.1	2.1	100.0	966
40-44	58.4	25.4	12.9	1.5	1.7	100.0	782
45-49	59.2	25.0	13.7	0.9	1.3	100.0	641
Marital status							
Never married	13.9	17.1	16.0	0.4	52.6	100.0	3,114
Married or living together	67.9	22.8	7.6	1.7	0.0	100.0	3,947
Divorced/separated/widowed	29.8	23.1	47.0	0.2	0.0	100.0	272
Marital duration[2]							
0-4 years	64.2	28.8	5.5	1.4	0.0	100.0	117
5-9 years	69.7	18.6	8.1	3.5	0.0	100.0	126
10-14 years	65.5	19.2	7.8	7.5	0.0	100.0	121
15-19 years	66.8	21.4	7.1	4.7	0.0	100.0	170
20-24 years	71.5	23.0	5.5	0.0	0.0	100.0	76
25+ years	(66.1)	(23.9)	(3.0)	(7.1)	(0.0)	100.0	47
Married more than once	68.1	22.9	7.8	1.2	0.0	100.0	3,291
Residence							
Urban	42.5	22.4	14.0	0.7	20.4	100.0	976
Rural	43.7	20.1	12.4	1.1	22.6	100.0	6,357
Region							
Southern	43.7	21.9	14.4	1.2	18.8	100.0	1,490
Highlands	42.1	19.2	12.2	1.7	24.8	100.0	2,871
Momase	45.5	20.8	12.9	0.2	20.5	100.0	1,999
Islands	43.6	20.7	10.6	0.8	24.3	100.0	973
Province							
Western	45.1	16.6	11.9	0.5	25.9	100.0	182
Gulf	38.3	18.3	17.1	2.6	23.7	100.0	137
Central	41.3	18.8	18.0	3.5	18.4	100.0	272
National Capital District	45.0	24.6	13.4	0.5	16.5	100.0	251
Milne Bay	49.0	20.4	12.7	0.2	17.7	100.0	423
Northern	37.5	32.2	14.6	0.5	15.1	100.0	223
Southern Highlands	46.6	17.2	11.0	0.3	24.9	100.0	457
Enga	31.3	19.6	19.2	0.8	29.2	100.0	306
Western Highlands	44.3	17.7	10.5	2.2	25.3	100.0	378
Chimbu	40.6	16.8	15.3	5.6	21.8	100.0	397
Eastern Highlands	47.9	25.1	10.0	1.4	15.6	100.0	587
Morobe	42.1	21.6	15.0	0.1	21.1	100.0	796
Madang	50.7	19.6	11.0	0.8	17.9	100.0	493
East Sepik	47.6	20.1	10.6	0.0	21.8	100.0	435
West Sepik	42.9	21.5	13.9	0.1	21.5	100.0	276
Manus	51.5	21.7	10.3	0.8	15.7	100.0	64
New Ireland	34.9	21.8	19.7	0.0	23.6	100.0	171
East New Britain	48.6	17.8	6.5	1.1	26.0	100.0	247
West New Britain	33.9	26.1	12.5	0.8	26.7	100.0	260
Autonomous Region of Bougainville	53.4	16.6	6.0	1.1	22.8	100.0	231
Hela	34.0	13.3	11.7	1.3	39.7	100.0	438
Jiwaka	45.5	23.8	10.2	0.6	20.0	100.0	309
Education							
No education	48.9	16.7	12.4	2.8	19.2	100.0	941
Elementary	45.6	28.8	11.3	0.8	13.5	100.0	253
Primary	40.5	17.5	12.2	0.9	28.9	100.0	3,593
Secondary	44.3	25.0	12.7	0.8	17.2	100.0	2,156
Higher	53.5	25.0	17.0	0.6	3.9	100.0	389
Wealth quintile							
Lowest	43.1	19.3	11.3	1.3	24.9	100.0	1,366
Second	46.2	16.8	12.5	1.6	22.9	100.0	1,384
Middle	39.5	21.0	12.6	1.3	25.6	100.0	1,528
Fourth	43.7	21.0	13.1	0.7	21.6	100.0	1,399
Highest	45.3	23.1	13.5	0.7	17.3	100.0	1,656
Total	43.6	20.4	12.6	1.1	22.3	100.0	7,333

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] Excludes men who had sexual intercourse within the past 4 weeks
[2] Excludes men who are not currently married

FERTILITY 5

Key Findings

- ***Total fertility rate:*** The total fertility rate for the 3 years preceding the survey is 4.2 children per woman, a slight decline from the rate reported in 2006 (4.4 children per woman).
- ***Patterns of fertility:*** Fertility levels are lower in urban areas than in rural areas (3.5 and 4.3, respectively). Fertility decreases with increasing educational attainment and household wealth.
- ***Birth intervals:*** The median interval between births is almost 3 years (33.2 months).
- ***Age at first birth:*** The median age at first birth among women age 25-49 is 21.9 years.
- ***Teenage pregnancy:*** Among women age 15-19, 12% have started childbearing (i.e., they have already had a birth or are pregnant with their first child).

The number of children that a woman bears depends on many factors, including the age she begins childbearing, how long she waits between births, and her fecundity. Postponing first births and extending the interval between births have played a role in reducing fertility levels in many countries. These factors also have positive health consequences. In contrast, short birth intervals (of less than 24 months) are associated with harmful outcomes for both newborns and their mothers, such as preterm birth, low birth weight, and death. Childbearing at a very young age is linked to an increased risk of complications during pregnancy and childbirth and higher rates of neonatal mortality.

This chapter describes the current level of fertility in Papua New Guinea and some of its proximate determinants. It presents information on the total fertility rate, birth intervals, insusceptibility to pregnancy (due to postpartum amenorrhoea, postpartum abstinence, or menopause), age at first birth, and teenage childbearing.

5.1 CURRENT FERTILITY

Total fertility rate

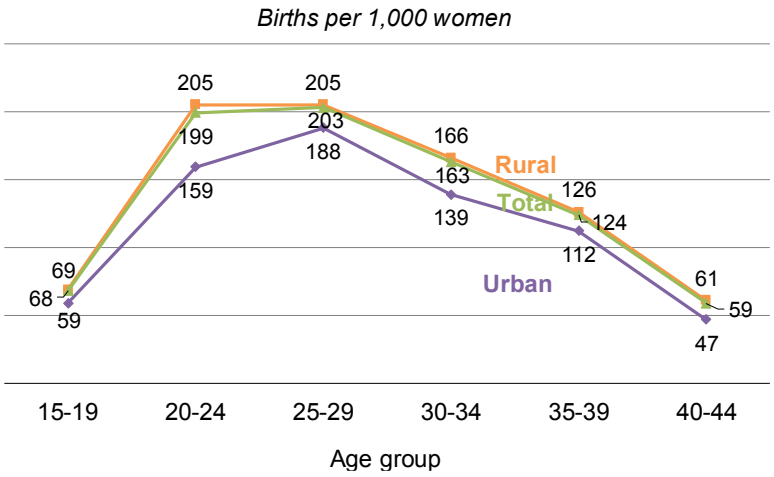
The average number of children a woman would have by the end of her childbearing years if she bore children at the current age-specific fertility rates. Age-specific fertility rates are calculated for the 3 years before the survey, based on detailed birth histories provided by women.

Sample: Women age 15-49

To generate data on fertility, all women who were interviewed were asked to report the total number of sons and daughters to whom they had ever given birth. To ensure that all information was reported, women were asked separately about children still living at home, those living elsewhere, and those who had died. A complete birth history was then obtained, including information on the sex, date of birth, and survival status of each child; age at death for children who had died was also recorded.

Table 5.1 shows age-specific fertility rates (ASFRs) among women by 5-year age groups for the 3-year period preceding the survey. Age-specific and total fertility rates were calculated directly from the birth history data, taking into account live births.[1] The sum of age-specific fertility rates (known as the total fertility rate, or TFR) is a summary measure of the level of fertility. It can be interpreted as the number of children a woman would have by the end of her childbearing years if she were to pass through those years bearing children at the currently observed age-specific rates.

Figure 5.1 **Age-specific fertility rates by residence**



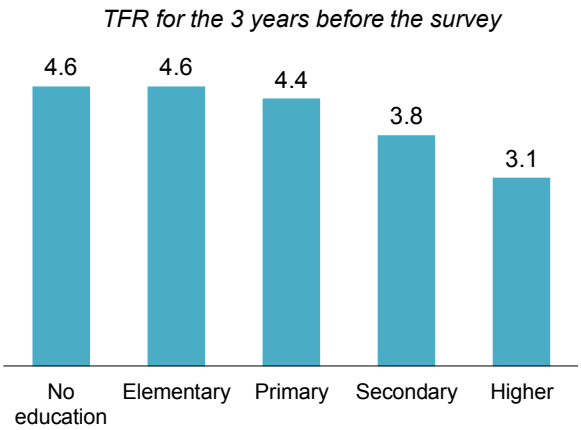
If fertility were to remain constant at current levels, a woman in Papua New Guinea would bear an average of 4.2 children in her lifetime. Fertility is low among adolescents age 15-19 (68 births per 1,000 women), peaks at 203 births per 1,000 among women age 25-59, and decreases thereafter (**Figure 5.1**).

Trends: The TFR reported in the 2006 PNG DHS was 4.4 births per woman (National Statistical Office 2009), indicating a slight decline in fertility over the past decade. The decline has occurred among almost all age groups (**Table 5.3.2**) and among both urban and rural women.

Patterns by background characteristics

- Fertility is higher among rural women than among urban women; on average, rural women will give birth to about 0.8 children more than urban women during their reproductive years (4.3 and 3.5, respectively). This pattern is consistent across the different age groups.
- The total fertility rate declines with increasing education, from 4.6 among women with no education or an elementary education to 3.1 among women with a higher education (**Figure 5.2**).
- Fertility also declines with increasing wealth. Women in the lowest wealth quintile give birth to 5.0 children on average, as compared with 3.2 children among women in the highest quintile (**Table 5.2**).

Figure 5.2 **Fertility by mother's education**



[1] Numerators for the age-specific rates are calculated by summing the births that occurred during the 1-36 months preceding the survey, classified by the 5-year age group of the mother at the time of the birth. The denominators are the numbers of woman-years lived in each 5-year age group during the 1-36 months preceding the survey.

5.2 CHILDREN EVER BORN AND LIVING

The 2016-18 PNG DHS also collected information on the total number of children ever born to women age 15-49. As expected, almost all women age 15-19 (90%) have never given birth. However, this proportion declines sharply to 6%-7% among women age 35-49, indicating that childbearing is almost universal (**Table 5.4**).

On average, women have given birth to one child by their early 20s, two children by their late 20s, three children by their early 30s, and almost four children by their late 30s. Women at the end of their reproductive years (age 45-49) have given birth to an average of 4.5 children.

In Papua New Guinea, about 5% of currently married women in their 40s have never given birth. Since voluntary childlessness is rare, this is often viewed as a measure of primary infertility or the inability to bear children (**Table 5.4**).

5.3 BIRTH INTERVALS

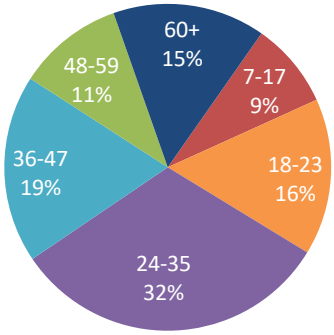
Median birth interval
Number of months since the preceding birth by which half of children are born.
Sample: Non-first births in the 5 years before the survey

Short birth intervals, particularly those less than 24 months, place newborns and their mothers at increased health risk. In Papua New Guinea, almost 1 in 4 births (24%) occur less than 24 months after a previous birth, whereas 32% occur 2-3 years after a previous birth and the remaining 44% occur 3 or more years after a previous birth (**Figure 5.3**). The median birth interval is 33.2 months, or almost 3 years (**Table 5.5**).

Trends: There has been a slight decline since 2006 in the prevalence of short birth intervals. The proportion of births occurring less than 24 months after a previous birth decreased from 27% in 2006 to 24% in 2016-18. The median interval between births increased from 28.7 months to 33.2 months over the same period.

Figure 5.3 **Birth intervals**

Percent distribution of non-first births by number of months since the preceding birth



Note: Data may not sum to 100% due to rounding.

Patterns by background characteristics

- Births to older women occur after longer intervals than births to younger women. The median birth interval among women age 40-49 is 43.7 months, as compared with 30.1 months among women age 20-29.
- As expected, the median birth interval is shorter when the previous child died (27.3 months) than when the previous child is still living (33.6 months) (**Table 5.5**).

5.4 INSUSCEPTIBILITY TO PREGNANCY

Postpartum amenorrhoea
The period of time after the birth of a child and before the resumption of menstruation.

Postpartum abstinence

The period of time after the birth of a child and before the resumption of sexual intercourse.

Postpartum insusceptibility

The period of time during which a woman is considered not at risk of pregnancy because she is postpartum amenorrhoeic and/or abstaining from sexual intercourse.

Sample: Women age 15-49

Median duration of postpartum amenorrhoea

Number of months after childbirth by which time half of women have begun menstruating.

Sample: Women who gave birth in the 3 years before the survey

Median duration of postpartum insusceptibility

Number of months after childbirth by which time half of women are no longer protected against pregnancy by either postpartum amenorrhoea or abstinence from sexual intercourse.

Sample: Women who gave birth in the 3 years before the survey

Postpartum amenorrhoea refers to the interval between the birth of a child and the resumption of menstruation. The length and intensity of breastfeeding influence the duration of amenorrhoea, which offers protection from conception. Postpartum abstinence refers to the period between childbirth and the time when a woman resumes sexual activity.

Among births in the 3 years preceding the survey, the median duration of postpartum amenorrhoea is 7.1 months, while the median duration of abstinence from sexual intercourse is 6.5 months. Overall, women are insusceptible to pregnancy after childbirth for a median duration of 14.7 months (**Table 5.6**).

Patterns by background characteristics

- Rural women have a longer median duration of postpartum insusceptibility than urban women (15.1 months and 12.0 months, respectively).

  The median duration of postpartum insusceptibility is relatively short among women in the Islands region (9.9 months) and those in the highest wealth quintile (6.6 months) (**Table 5.7**).

Menopause

Women are considered to have reached menopause if they are neither pregnant nor postpartum amenorrhoeic and have not had a menstrual period in the 6 months before the survey, if they report being menopausal or having had a hysterectomy, or if they have never menstruated.

Sample: Women age 30-49

Women who have reached menopause are no longer able to become pregnant. In Papua New Guinea, 10% of women age 30-49 are menopausal. The percentage of menopausal women increases with age, from 4% among those age 30-34 to 42% among those age 48-49 (**Table 5.8**).

5.5 Age at First Birth

Median age at first birth

Age by which half of women have had their first child.

Sample: Women age 25-49

The age at which childbearing commences is an important determinant of the overall level of fertility as well as the health and well-being of the mother and child. In Papua New Guinea, childbearing tends to start relatively late; the median age at first birth among women age 25-49 is 21.9 years. This means that half of women age 25-49 give birth for the first time before age 22 (**Table 5.9**).

Trends: Median age at first birth among women age 25-49 has increased since 2006, from 20.8 years to 21.9 years.

Patterns by background characteristics

- Median age at first birth does not vary strongly by background characteristics. It is slightly higher among urban women than rural women and shows a tendency to increase slightly with increasing education and household wealth (**Table 5.10**).
- By province, median age at first birth ranges from 20.5 years among women in Eastern Highlands to 23.0 years among women in East New Britain.

5.6 TEENAGE CHILDBEARING

Teenage childbearing

Percentage of women age 15-19 who have given birth or are pregnant with their first child.

Sample: Women age 15-19

The issue of adolescent fertility is important for both health and social reasons. Children born to very young mothers are at increased risk of sickness and death. Teenage mothers are more likely to experience adverse pregnancy outcomes and to be constrained in their ability to pursue educational opportunities than young women who delay childbearing.

Table 5.11 shows the percentage of women age 15-19 who had given birth or were pregnant with their first child at the time of the survey, according to background characteristics. Overall, 12% of women age 15-19 have begun childbearing (10% have had a live birth and 3% are pregnant with their first child).

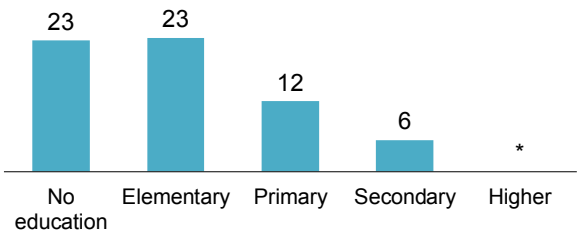
Trends: The percentage of teenagers who have given birth or are pregnant with their first child has remained more or less the same over the past decade (13% in 2006 and 12% in 2016-18).

Patterns by background characteristics

- The proportion of teenagers who have begun childbearing rises rapidly with age, from 3% at age 15 to 27% at age 19.
- Rural teenagers are more likely to have started childbearing than urban teenagers (13% versus 10%).
- Teenagers with a secondary education and those in the highest wealth quintile are less likely to have started childbearing than those with less education and those in the lower quintiles (**Figure 5.4**).

Figure 5.4 **Teenage pregnancy by education**

Percentage of women age 15-19 who have begun childbearing



Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

LIST OF TABLES

For more information on fertility levels and some of the determinants of fertility, see the following tables:

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- **Table 5.3.2 Trends in fertility rates: 2006 and 2016-18 surveys**
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Table 5.1 Current fertility

Age-specific and total fertility rates, the general fertility rate, and the crude birth rate for the 3 years preceding the survey, by residence, Papua New Guinea DHS 2016-18

Age group	Residence		Total
	Urban	Rural	
10-14	[0]	[1]	[1]
15-19	59	69	68
20-24	159	205	199
25-29	188	205	203
30-34	139	166	163
35-39	112	126	124
40-44	47	61	59
45-49	[5]	[26]	[23]
TFR (15-49)	3.5	4.3	4.2
GFR	119	146	142
CBR	28	29	29

Note: Age-specific fertility rates are per 1,000 women. Estimates in brackets are truncated. Rates are for the period 1-36 months preceding the interview. Rates for the 10-14 age group are based on retrospective data from women age 15-17.
TFR: Total fertility rate, expressed per woman
GFR: General fertility rate, expressed per 1,000 women age 15-44
CBR: Crude birth rate, expressed per 1,000 population

Table 5.2 Fertility by background characteristics

Total fertility rate for the 3 years preceding the survey, percentage of women age 15-49 currently pregnant, and mean number of children ever born to women age 40-49, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Total fertility rate	Percentage of women age 15-49 currently pregnant	Mean number of children ever born to women age 40-49
Residence			
Urban	3.5	4.4	4.0
Rural	4.3	5.2	4.5
Region			
Southern	4.5	4.8	4.5
Highlands	3.8	5.5	4.0
Momase	4.4	4.4	4.8
Islands	4.5	5.6	4.8
Education			
No education	4.6	5.6	4.4
Elementary	4.6	7.5	4.1
Primary	4.4	4.8	4.7
Secondary	3.8	4.3	4.2
Higher	3.1	8.0	3.4
Wealth quintile			
Lowest	5.0	7.0	4.8
Second	4.4	6.2	4.6
Middle	4.5	4.5	4.5
Fourth	4.2	5.0	4.4
Highest	3.2	3.4	4.0
Total	4.2	5.1	4.4

Note: Total fertility rates are for the period 1-36 months prior to the interview.

Table 5.3.1 Trends in age-specific fertility rates: 2016-18 survey

Age-specific fertility rates for 5-year periods preceding the survey, according to age group, Papua New Guinea DHS 2016-18

	Number of years preceding survey			
Age group	0-4	5-9	10-14	15-19
10-14	[1]	6	7	10
15-19	77	91	87	87
20-24	201	216	213	197
25-29	212	232	224	217
30-34	174	194	191	[192]
35-39	125	136	[153]	
40-44	59	[106]		
45-49	[26]			

Note: Age-specific fertility rates are per 1,000 women. Estimates in brackets are truncated. Rates exclude the month of the interview. For the 0-4 year period, rates for the 10-14 age group are based on retrospective data from women age 15-19.

Table 5.3.2 Trends in fertility rates: 2006 and 2016-18 surveys

Age-specific and total fertility rates, the general fertility rate, and the crude birth rate, Papua New Guinea DHS 2006 and Papua New Guinea DHS 2016-18

Age group	2006 PNG DHS	2016-18 PNG DHS
15-19	65	68
20-24	209	199
25-29	208	203
30-34	177	163
35-39	127	124
40-44	60	59
45-49	[31]	[23]
TFR (15-49)	4.4	4.2
GFR	148	142
CBR	32	29

Note: Age-specific fertility rates are per 1,000 women. Estimates in brackets are truncated. Rates are for the 60-month period preceding the 2006 survey and the period 1-36 months preceding the 2016-18 survey.
TFR: Total fertility rate, expressed per woman
GFR: General fertility rate, expressed per 1,000 women age 15-44
CBR: Crude birth rate, expressed per 1,000 population

Table 5.4 Children ever born and living

Percent distribution of all women and currently married women age 15-49 by number of children ever born, mean number of children ever born, and mean number of living children, according to age group, Papua New Guinea DHS 2016-18

	Number of children ever born														
Age	0	1	2	3	4	5	6	7	8	9	10+	Total	Number of women	Mean number of children ever born	Mean number of living children
ALL WOMEN															
15-19	90.4	7.9	1.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	2,945	0.12	0.11
20-24	44.1	30.4	16.3	7.1	1.8	0.2	0.0	0.0	0.0	0.0	0.0	100.0	2,759	0.93	0.89
25-29	15.9	22.3	24.4	20.2	10.8	4.0	1.5	0.8	0.2	0.0	0.0	100.0	2,543	2.10	2.00
30-34	11.3	11.2	16.8	20.9	19.0	11.4	6.0	2.5	0.8	0.1	0.1	100.0	2,180	3.01	2.85
35-39	6.2	7.5	10.3	18.5	19.2	16.7	11.2	6.7	2.2	1.1	0.5	100.0	2,059	3.90	3.66
40-44	6.4	5.3	8.9	14.0	17.5	17.8	13.2	9.1	3.6	2.9	1.4	100.0	1,484	4.36	4.08
45-49	6.7	4.6	9.4	11.8	15.3	16.8	16.7	8.3	5.7	3.1	1.7	100.0	1,228	4.53	4.21
Total	31.8	14.3	12.8	12.5	10.4	7.7	5.3	3.0	1.2	0.7	0.3	100.0	15,198	2.30	2.16
CURRENTLY MARRIED WOMEN															
15-19	47.5	40.1	11.3	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	403	0.66	0.61
20-24	17.7	41.7	25.3	11.7	3.1	0.3	0.1	0.0	0.0	0.0	0.0	100.0	1,594	1.42	1.36
25-29	9.7	22.4	25.3	22.5	12.5	4.6	1.8	1.0	0.2	0.0	0.0	100.0	2,110	2.33	2.21
30-34	7.7	10.8	15.9	21.9	20.7	12.6	6.6	2.8	0.8	0.1	0.1	100.0	1,878	3.21	3.04
35-39	4.3	6.0	10.1	18.5	19.2	17.6	12.7	7.6	2.5	1.3	0.3	100.0	1,764	4.10	3.86
40-44	5.1	4.2	7.4	14.3	17.5	18.9	14.1	10.0	3.9	3.1	1.6	100.0	1,273	4.57	4.26
45-49	4.8	3.9	9.5	11.2	16.2	15.8	18.1	8.7	6.2	3.6	2.0	100.0	1,029	4.73	4.40
Total	10.1	16.9	16.4	16.9	14.2	10.5	7.5	4.2	1.7	1.0	0.5	100.0	10,052	3.12	2.94

Table 5.5 Birth intervals

Percent distribution of non-first births in the 5 years preceding the survey by number of months since preceding birth, and median number of months since preceding birth, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Months since preceding birth						Total	Number of non-first births	Median number of months since preceding birth
	7-17	18-23	24-35	36-47	48-59	60+			
Mother's age									
15-19	20.0	35.2	38.5	0.7	3.0	2.6	100.0	56	21.5
20-29	10.2	19.6	36.4	17.7	9.2	6.8	100.0	2,966	30.1
30-39	7.6	13.8	29.5	19.0	11.3	18.8	100.0	3,407	35.6
40-49	5.4	7.3	24.5	21.5	12.3	29.1	100.0	907	43.7
Sex of preceding birth									
Male	8.0	15.5	31.4	18.5	11.0	15.6	100.0	3,909	33.6
Female	9.0	15.5	32.1	18.8	9.9	14.6	100.0	3,427	33.0
Survival of preceding birth									
Living	7.8	15.2	32.1	19.0	10.7	15.3	100.0	6,932	33.6
Dead	20.1	21.6	26.1	12.6	7.6	12.0	100.0	404	27.3
Birth order									
2-3	8.3	16.0	30.4	19.0	10.4	15.8	100.0	3,762	33.7
4-6	8.5	14.4	32.8	17.7	11.0	15.6	100.0	2,896	33.2
7+	9.5	17.1	35.3	20.5	8.9	8.8	100.0	678	31.5
Residence									
Urban	8.4	11.4	28.1	17.9	12.8	21.5	100.0	711	37.4
Rural	8.5	16.0	32.2	18.7	10.3	14.4	100.0	6,625	32.9
Region									
Southern	10.2	15.2	30.3	18.7	8.5	17.2	100.0	1,440	33.4
Highlands	8.1	14.9	33.0	18.0	11.2	14.7	100.0	2,789	33.3
Momase	8.0	15.6	31.2	20.0	10.3	14.9	100.0	2,027	33.6
Islands	8.2	17.2	31.7	17.6	11.8	13.5	100.0	1,080	32.2
Province									
Western	14.4	11.7	34.5	15.0	7.4	17.0	100.0	200	31.2
Gulf	12.8	14.5	29.6	19.0	8.4	15.7	100.0	166	32.9
Central	11.1	18.2	25.8	20.0	9.4	15.5	100.0	314	33.6
National Capital District	8.6	8.9	27.1	11.6	12.5	31.2	100.0	148	39.0
Milne Bay	6.5	14.8	31.7	22.3	8.0	16.8	100.0	406	34.5
Northern	10.9	20.0	32.9	18.0	6.0	12.2	100.0	206	29.8
Southern Highlands	8.6	17.0	34.2	21.4	11.2	7.6	100.0	533	32.2
Enga	3.3	14.4	31.1	19.9	12.9	18.4	100.0	246	36.6
Western Highlands	4.7	7.8	32.4	20.2	16.2	18.8	100.0	255	39.4
Chimbu	13.2	20.2	30.7	14.2	8.7	13.1	100.0	516	30.4
Eastern Highlands	6.7	9.3	37.2	15.6	11.6	19.6	100.0	587	35.3
Morobe	7.2	14.1	27.1	24.4	12.3	14.8	100.0	640	37.0
Madang	10.0	21.2	28.5	15.0	9.9	15.3	100.0	575	31.1
East Sepik	6.5	11.4	34.6	21.6	8.2	17.7	100.0	467	35.5
West Sepik	8.0	14.9	38.8	17.7	10.0	10.6	100.0	346	32.6
Manus	16.3	18.9	25.8	14.5	8.5	16.1	100.0	63	28.5
New Ireland	4.5	19.7	34.2	16.4	10.6	14.5	100.0	207	31.2
East New Britain	11.1	18.0	30.3	17.6	9.9	13.1	100.0	317	31.4
West New Britain	6.2	16.6	34.9	17.2	13.9	11.2	100.0	234	32.5
Autonomous Region of Bougainville	7.5	14.2	30.1	19.8	13.8	14.7	100.0	259	34.8
Hela	9.5	17.4	31.0	18.2	10.8	13.0	100.0	419	32.9
Jiwaka	5.9	16.9	30.3	19.8	9.7	17.5	100.0	233	34.4
Mother's education									
No education	7.3	14.6	35.1	18.4	11.4	13.3	100.0	2,067	33.3
Elementary	8.9	19.4	40.5	14.5	7.2	9.6	100.0	416	29.5
Primary	8.5	14.4	30.8	19.1	10.9	16.3	100.0	3,309	34.1
Secondary	10.3	17.6	28.2	18.2	9.6	16.0	100.0	1,314	32.2
Higher	7.7	21.1	20.5	23.1	8.3	19.2	100.0	230	37.0
Wealth quintile									
Lowest	8.5	16.6	34.4	19.6	9.4	11.4	100.0	1,669	32.6
Second	9.2	14.3	34.3	19.9	8.8	13.5	100.0	1,550	32.5
Middle	7.8	16.1	34.3	16.6	10.7	14.5	100.0	1,527	32.6
Fourth	8.0	15.5	29.5	19.6	11.8	15.7	100.0	1,411	34.5
Highest	9.1	14.9	24.1	17.0	12.4	22.5	100.0	1,179	37.5
Total	8.5	15.5	31.8	18.6	10.5	15.1	100.0	7,336	33.2

Note: First-order births are excluded. The interval for multiple births is the number of months since the preceding pregnancy that ended in a live birth.

Table 5.6 Postpartum amenorrhoea, abstinence, and insusceptibility

Percentage of births in the 3 years preceding the survey for which mothers are postpartum amenorrhoeic, abstaining, and insusceptible, according to number of months since birth, and median and mean durations, Papua New Guinea DHS 2016-18

	Percentage of births for which the mother is:			
Months since birth	Amenorrhoeic	Abstaining	Insusceptible[1]	Number of births
<2	83.2	86.3	94.9	340
2-3	73.4	69.2	85.6	299
4-5	64.7	55.7	77.9	292
6-7	46.3	50.7	66.9	343
8-9	42.5	36.9	57.4	356
10-11	44.0	39.4	62.5	320
12-13	31.7	30.2	45.9	309
14-15	35.7	42.6	54.6	335
16-17	26.6	34.4	46.7	297
18-19	23.6	24.7	35.3	323
20-21	21.1	26.3	36.5	280
22-23	17.0	20.9	31.0	272
24-25	9.5	20.2	25.0	320
26-27	11.1	22.7	27.1	377
28-29	8.0	18.6	21.4	295
30-31	10.3	21.7	25.9	313
32-33	7.7	13.2	18.3	329
34-35	7.6	17.3	20.3	296
Total	31.5	35.3	46.5	5,696
Median	7.1	6.5	14.7	na
Mean	12.3	13.6	17.7	na

Note: Estimates are based on status at the time of the survey.
na = Not applicable
[1] Includes births for which mothers are either still amenorrhoeic or still abstaining (or both) following birth

Table 5.7 Median duration of amenorrhoea, postpartum abstinence, and postpartum insusceptibility

Median number of months of postpartum amenorrhoea, postpartum abstinence, and postpartum insusceptibility following births in the 3 years preceding the survey, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Postpartum amenorrhoea	Postpartum abstinence	Postpartum insusceptibility[1]
Mother's age			
15-29	6.0	6.4	15.6
30-49	10.1	6.7	13.1
Residence			
Urban	5.6	5.2	12.0
Rural	7.3	6.6	15.1
Region			
Southern	5.1	6.5	14.4
Highlands	9.0	6.9	17.0
Momase	6.5	6.1	13.6
Islands	6.9	5.8	9.9
Mother's education			
No education	10.0	6.7	18.3
Elementary	(9.2)	(6.1)	(17.0)
Primary	7.5	8.1	15.2
Secondary	6.0	5.4	10.9
Higher	(5.1)	(5.1)	(6.0)
Wealth quintile			
Lowest	8.0	6.5	16.7
Second	14.8	8.1	18.3
Middle	10.8	8.3	16.7
Fourth	5.5	5.5	13.1
Highest	4.7	5.0	6.6
Total	7.1	6.5	14.7

Note: Medians are based on status at the time of the survey (current status). Figures in parentheses are based on 25-49 unweighted cases.
[1] Includes births for which mothers are either still amenorrhoeic or still abstaining (or both) following birth

Table 5.8 Menopause

Percentage of women age 30-49 who are menopausal, according to age, Papua New Guinea DHS 2016-18

Age	Percentage menopausal[1]	Number of women
30-34	3.7	2,180
35-39	4.3	2,059
40-41	7.9	674
42-43	12.2	557
44-45	14.6	562
46-47	26.7	439
48-49	41.6	481
Total	9.9	6,951

[1] Percentage of women (1) who are not pregnant, (2) who have had a birth in the past 5 years and are not postpartum amenorrhoeic, and (3) for whom one of the following additional conditions applies: (a) their last menstrual period occurred 6 or more months preceding the survey, (b) they declared that they are in menopause or have had a hysterectomy, or (c) they have never menstruated.

Table 5.9 Age at first birth

Percentage of women age 15-49 who gave birth by exact ages, percentage who have never given birth, and median age at first birth, according to current age, Papua New Guinea DHS 2016-18

	Percentage who gave birth by exact age					Percentage who have never given birth	Number of women	Median age at first birth
Current age	15	18	20	22	25			
15-19	0.6	na	na	na	na	90.4	2,945	a
20-24	2.8	16.6	35.5	na	na	44.1	2,759	a
25-29	4.0	17.2	35.1	53.9	75.5	15.9	2,543	21.6
30-34	4.6	16.5	33.1	49.2	72.4	11.3	2,180	22.1
35-39	3.4	15.4	34.3	51.0	71.3	6.2	2,059	21.9
40-44	3.2	16.9	35.1	52.0	74.8	6.4	1,484	21.8
45-49	3.7	16.9	31.3	48.1	68.7	6.7	1,228	22.3
20-49	3.6	16.6	34.3	na	na	17.7	12,253	a
25-49	3.8	16.6	34.0	51.1	72.9	10.1	9,494	21.9

na = Not applicable due to censoring
a = Omitted because less than 50% of women had a birth before reaching the beginning of the age group

Table 5.10 Median age at first birth

Median age at first birth among women age 25-49, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Women age 25-49
Residence	
Urban	22.2
Rural	21.8
Region	
Southern	21.5
Highlands	21.7
Momase	22.0
Islands	22.4
Province	
Western	21.2
Gulf	21.7
Central	22.2
National Capital District	22.2
Milne Bay	20.9
Northern	21.4
Southern Highlands	22.0
Enga	21.2
Western Highlands	22.8
Chimbu	22.1
Eastern Highlands	20.5
Morobe	22.4
Madang	21.4
East Sepik	21.8
West Sepik	22.4
Manus	21.8
New Ireland	22.0
East New Britain	23.0
West New Britain	22.2
Autonomous Region of Bougainville	22.5
Hela	22.4
Jiwaka	21.5
Education	
No education	21.7
Elementary	20.9
Primary	21.2
Secondary	22.7
Higher	24.7
Wealth quintile	
Lowest	21.8
Second	21.6
Middle	21.3
Fourth	22.0
Highest	22.7
Total	21.9

Table 5.11 Teenage pregnancy and motherhood

Percentage of women age 15-19 who have had a live birth or who are pregnant with their first child, and percentage who have begun childbearing, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage of women age 15-19 who:		Percentage who have begun childbearing	Number of women
	Have had a live birth	Are pregnant with first child		
Age				
15-17	4.0	1.7	5.7	1,714
15	1.7	1.1	2.8	493
16	2.1	1.3	3.4	617
17	7.7	2.7	10.4	604
18	12.1	3.0	15.2	624
19	23.1	4.0	27.1	607
Residence				
Urban	8.0	1.8	9.8	416
Rural	9.9	2.6	12.5	2,529
Region				
Southern	10.3	2.0	12.3	590
Highlands	10.5	2.6	13.1	1,255
Momase	9.7	2.8	12.5	661
Islands	6.1	2.4	8.5	439
Province				
Western	7.4	0.8	8.2	61
Gulf	9.4	3.4	12.8	68
Central	16.0	0.5	16.5	107
National Capital District	3.6	0.7	4.3	114
Milne Bay	13.4	3.6	17.0	132
Northern	10.1	2.8	12.9	108
Southern Highlands	16.8	2.7	19.5	219
Enga	9.5	4.2	13.7	96
Western Highlands	6.2	1.8	8.0	167
Chimbu	10.2	3.9	14.0	262
Eastern Highlands	12.8	1.2	13.9	240
Morobe	14.5	4.4	18.9	225
Madang	10.8	3.9	14.7	158
East Sepik	2.9	0.6	3.4	176
West Sepik	9.0	1.4	10.3	103
Manus	13.1	1.9	15.0	25
New Ireland	2.7	0.8	3.6	69
East New Britain	5.4	0.9	6.3	119
West New Britain	9.5	4.2	13.6	108
Autonomous Region of Bougainville	4.2	3.4	7.6	118
Hela	0.1	2.3	2.4	179
Jiwaka	20.1	2.3	22.4	91
Education				
No education	21.3	1.5	22.8	291
Elementary	21.9	1.2	23.2	125
Primary	9.1	3.1	12.2	1,823
Secondary	4.1	1.4	5.5	703
Higher	*	*	*	2
Wealth quintile				
Lowest	13.4	2.2	15.6	520
Second	8.4	2.7	11.2	517
Middle	13.5	2.3	15.8	559
Fourth	9.6	3.6	13.2	628
Highest	4.8	1.6	6.4	721
Total	9.6	2.5	12.1	2,945

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Table 5.12 Sexual and reproductive health behaviours before age 15

Among women and men age 15-19, percentage who initiated sexual intercourse, were married, and had a live birth/fathered a child before age 15, according to sex, Papua New Guinea DHS 2016-18

Sex	Had sexual intercourse before age 15	Married before age 15	Gave birth/fathered a child before age 15	Number
Women	4.0	3.6	0.6	2,945
Men	3.5	0.0	0.0	1,469

FERTILITY PREFERENCES 6

Key Findings

- ***Limiting childbearing:*** Almost half (46%) of currently married women age 15-49 do not want another child or have been sterilised. Generally, women are more likely than men to want no more children, no matter how many children they already have. Overall, 40% of married men want to limit childbearing.
- ***Ideal family size:*** Women consider 3.0 children to be ideal on average, while men prefer 3.6 children.
- ***Unwanted births:*** Seven in 10 births were wanted at the time of conception, while 11% were mistimed and 17% were unwanted.
- ***Wanted births:*** Women are giving birth to over one child more than they want; the actual fertility rate (4.2) exceeds the wanted fertility rate (3.0) by 1.2 children.

Information on fertility preferences can help family planning programme planners assess the desire for children, the extent of mistimed and unwanted pregnancies, and the demand for contraception to space or limit births. The underlying rationale of most family planning programmes is to give couples the freedom, rights, and ability to bear the number of children they want and to achieve the spacing of births they prefer. Data on fertility preferences may suggest the direction that fertility patterns will take in the future.

This chapter presents information on whether and when married women and men want more children, ideal family size, whether the last birth was wanted, and the theoretical fertility rate if all unwanted births were prevented.

6.1 DESIRE FOR ANOTHER CHILD

Desire for another child

Women and men were asked whether they wanted more children and, if so, how long they would prefer to wait before the next child. Women and men who are sterilised are assumed not to want any more children.

Sample: Currently married women and men age 15-49

Just over one quarter of currently married women age 15-49 want to have another child; 10% of these women want to have another child within 2 years, 16% want to wait at least 2 years, and 2% are undecided on when they want another child. Almost half of women want to limit childbearing: 46% of currently married women want no more children or are sterilised. Overall, 40% of currently married men age 15-49 want no more children or are sterilised (**Table 6.1**).

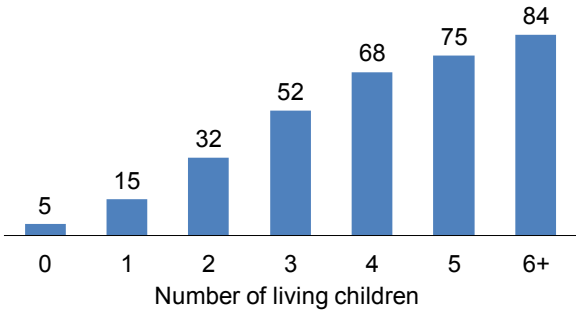
Trends: The percentage of currently married women who want no more children (including women who are sterilised) has decreased slightly since 2006, from 48% to 46%. The proportion of married men who want no more children has also declined, from 42% to 40%.

Patterns by background characteristics

- Fertility preferences are closely related to the number of children respondents already have. The more children a woman has, the higher the likelihood that she does not want another child. Eighty-four percent of women with six or more children want no more children, as compared with 5% of women with no children (**Figure 6.1**).
- Women in urban areas are more likely to want to limit childbearing than women in rural areas (51% and 46%, respectively). The reverse is true for men (38% and 40%, respectively) (**Tables 6.2.1** and **6.2.2**).

Figure 6.1 **Desire to limit childbearing by number of living children**

*Percentage of currently married women age 15-49 who want no more children**



* Women who are sterilised or whose husband has been sterilised are considered to want no more children.

- Regional differences in the desire to limit childbearing are small with the exception of Highlands, where the proportions of both women and men who want no more children are particularly low. For example, only 35% of married women in Highlands want to stop childbearing, compared with 54%-55% of women in the other three regions.
- The percentage of women who want no more children is lowest among those with a higher education and those in the highest wealth quintile.

6.2 IDEAL FAMILY SIZE

Ideal family size

Respondents with no children were asked "If you could choose exactly the number of children to have in your whole life, how many would that be?" Respondents who had children were asked "If you could go back to the time when you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be?"

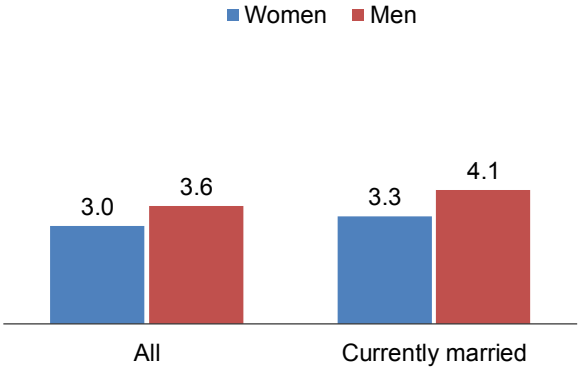
Sample: All women and men age 15-49

On average, men in Papua New Guinea want to have more children (3.6) than women (3.0) (**Table 6.3**). The ideal family size is larger among currently married women and men than among women and men overall (**Figure 6.2**). More than one-third of women (37%) consider four or more children to be ideal, and about the same proportion (38%) consider two or three children ideal. Interestingly, 9% of women say they ideally would like no children.

Trends: Mean ideal number of children has decreased considerably since 2006, from 3.6 to 3.0 among women and from 4.0 to 3.6 among men.

Figure 6.2 **Ideal family size**

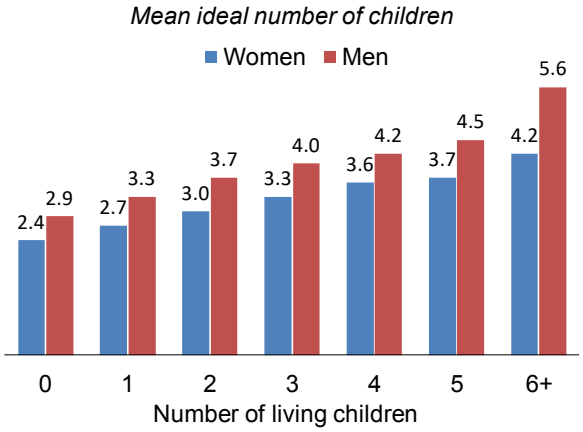
Mean ideal number of children among women and men age 15-49



Patterns by background characteristics

- The more children respondents already have, the more children they consider ideal. For example, on average, women with no children consider 2.4 children to be ideal. In contrast, women who have six or more children consider 4.2 children to be ideal (**Table 6.3** and **Figure 6.3**). This is partly due to the fact that people who want more children tend to have them; however, it could also be due to the fact that people may rationalise their ideal family size so that as the actual number of children increases, their preferred family size also increases. Nevertheless, **Table 6.3** indicates sizeable levels of unwanted fertility. Among women with five and six or more living children, well over half say that if they could start over and choose the number of children to have, they would have fewer than the number they actually have.

Figure 6.3 **Ideal family size by number of living children**



- Men consistently have slightly higher ideal family sizes than women, regardless of the number of children they already have **(Figure 6.3)**.

- Mean ideal number of children is lower among younger women than older women, with a range from 2.3 children among women age 15-19 to 3.8 among women age 45-49 (**Table 6.4**).

6.3 Fertility Planning Status

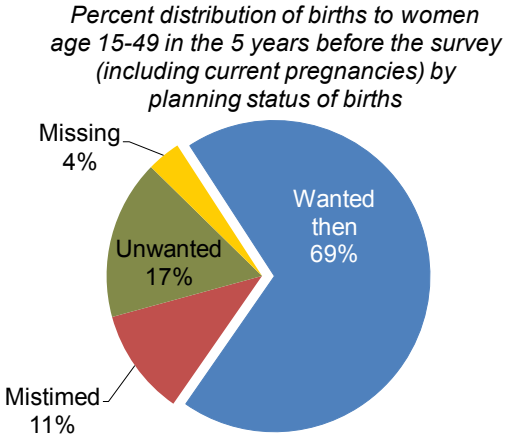
Planning status of birth

Women reported whether their most recent birth was wanted at the time (planned birth), at a later time (mistimed birth), or not at all (unwanted birth).

Sample: Current pregnancies and births in the 5 years before the survey to women age 15-49

In Papua New Guinea, a large majority of births were wanted at the time of conception (69%), while 11% were mistimed (that is, wanted at a later date). One in six births (17%) were not wanted at all (**Table 6.5** and **Figure 6.4**).

Figure 6.4 **Fertility planning status**



Patterns by background characteristics

- The more children a woman has, the more likely it is that a birth was unwanted. Only 8% of first births were unwanted, as compared with 27% of fourth- or higher-order births.

- In general, the likelihood of unwanted births increases with mother's age. Eleven percent of births to women less than age 25 were unwanted, compared with 29% of births to women age 35-44.

6.4 WANTED FERTILITY RATES

Unwanted birth

Any birth in excess of the number of children a woman reported as her ideal number.

Wanted birth

Any birth fewer than or equal to the number of children a woman reported as her ideal number.

Wanted fertility rate

The average number of children a woman would have by the end of her childbearing years if she bore children at the current age-specific fertility rates, excluding unwanted births.

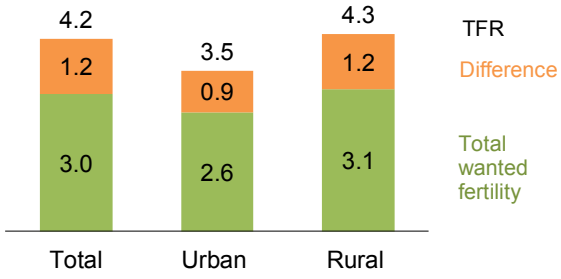
Sample: Women age 15-49

The wanted fertility rate measures the potential demographic impact of fertility that would have prevailed in the 3 years preceding the survey if all unwanted births were prevented. It is calculated in the same manner as the total fertility rate, except that only wanted births are included. A birth is considered wanted if the number of living children at the time of conception is fewer than the ideal number of children reported by the respondent.

The wanted fertility rate is 3.0 children, as compared with the actual total fertility rate of 4.2 children. In other words, on average, women in Papua New Guinea have over one child more than they want (**Table 6.6** and **Figure 6.5**).

***Figure 6.5* Wanted and actual fertility by residence**

Wanted and actual number of children per woman



Trends: The total wanted fertility rate has remained constant at 3.0 since 2006. However, the actual total fertility rate has declined, and thus the gap between wanted and actual fertility has decreased slightly.

Patterns by background characteristics

- The gap between wanted and actual fertility is larger for women in rural areas (1.2 children) than women in urban areas (0.9 children) (**Figure 6.5**).
- The gap between wanted and actual fertility is largest in the Islands region (1.7 children) and smallest in the Highlands region (0.8 children).

LIST OF TABLES

For more information on fertility preferences, see the following tables:

- **Table 6.1 Fertility preferences by number of living children**
- **Table 6.2.1 Desire to limit childbearing: Women**
- **Table 6.2.2 Desire to limit childbearing: Men**
- **Table 6.3 Ideal number of children by number of living children**
- **Table 6.4 Mean ideal number of children according to background characteristics**
- **Table 6.5 Fertility planning status**
- **Table 6.6 Wanted fertility rates**

Table 6.1 Fertility preferences by number of living children

Percent distribution of currently married women and currently married men age 15-49 by desire for children, according to number of living children, Papua New Guinea DHS 2016-18

Desire for children	Number of living children							Total
	0	1	2	3	4	5	6+	
				WOMEN[1]				
Have another soon[2]	41.0	16.5	8.2	7.3	2.7	1.3	0.5	10.0
Have another later[3]	7.7	37.2	27.7	14.6	5.5	3.0	1.6	16.3
Have another, undecided when	2.8	4.2	2.7	1.8	0.6	0.7	0.1	2.0
Undecided	13.6	14.8	17.0	14.7	13.8	9.7	5.9	13.3
Want no more	4.1	14.4	27.8	41.5	53.3	57.7	66.4	37.4
Sterilised[4]	0.4	0.5	4.4	10.3	14.6	17.2	17.1	8.8
Declared infecund	24.1	6.8	4.0	2.8	4.1	4.0	2.8	5.9
Missing	6.2	5.7	8.1	7.0	5.5	6.4	5.4	6.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	885	1,861	1,724	1,814	1,454	1,052	1,262	10,052
				MEN[5]				
Have another soon[2]	49.6	24.5	21.3	14.4	6.5	6.4	4.5	16.8
Have another later[3]	10.4	46.9	37.5	26.4	12.5	7.8	7.5	23.3
Have another, undecided when	4.0	4.0	4.6	5.2	1.2	1.5	0.2	3.1
Undecided	12.5	10.1	8.3	10.6	13.3	10.7	10.0	10.6
Want no more	5.0	8.1	23.0	34.2	57.5	66.7	69.8	37.9
Sterilised[4]	1.6	0.7	1.3	3.3	2.1	1.8	3.3	2.1
Declared infecund	13.4	2.0	0.7	1.0	1.1	1.1	0.4	2.1
Missing	3.5	3.6	3.3	4.7	5.8	4.0	4.2	4.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	341	626	674	718	558	457	573	3,947

[1] The number of living children includes the current pregnancy.
[2] Wants next birth within 2 years
[3] Wants to delay next birth for 2 or more years
[4] Includes both female and male sterilisation
[5] The number of living children includes one additional child if the respondent's wife is pregnant (or if any wife is pregnant for men with more than one current wife).

Table 6.2.1 Desire to limit childbearing: Women

Percentage of currently married women age 15-49 who want no more children, by number of living children, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
Residence								
Urban	5.5	20.9	38.3	65.6	79.9	87.0	92.0	51.4
Rural	4.5	14.0	31.3	49.8	66.3	73.4	82.8	45.5
Region								
Southern	10.8	27.2	37.7	61.4	76.2	80.3	83.9	55.1
Highlands	3.2	8.3	22.4	40.1	60.8	62.3	78.5	35.0
Momase	4.7	19.2	41.3	61.3	67.5	82.2	87.9	53.7
Islands	2.5	13.6	38.1	60.2	76.9	84.0	84.0	53.6
Education								
No education	5.0	12.9	28.8	43.1	61.8	63.7	80.7	43.2
Elementary	(3.8)	12.5	35.0	53.1	58.9	74.4	88.9	49.7
Primary	5.4	17.0	35.3	55.9	69.8	79.6	83.9	50.8
Secondary	2.6	16.2	33.0	56.0	76.2	85.4	87.3	42.8
Higher	(7.0)	3.3	20.3	39.4	(80.5)	(60.9)	*	28.0
Wealth quintile								
Lowest	7.1	11.5	29.4	44.0	61.1	68.6	80.7	44.2
Second	4.8	16.7	29.3	53.8	66.7	71.4	82.7	47.0
Middle	3.9	15.8	37.7	48.0	70.3	73.6	80.3	47.1
Fourth	3.6	18.2	35.4	57.7	68.9	74.6	88.2	50.1
Highest	3.3	12.8	28.5	54.1	73.5	86.8	87.7	42.5
Total	4.6	14.9	32.2	51.8	67.9	74.9	83.5	46.2

Note: Women who have been sterilised or whose husband has been sterilised are considered to want no more children. Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] The number of living children includes the current pregnancy.

Table 6.2.2 Desire to limit childbearing: Men

Percentage of currently married men age 15-49 who want no more children, by number of living children, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
Residence								
Urban	5.8	10.4	22.8	48.5	61.7	84.0	61.0	37.7
Rural	6.8	8.6	24.5	36.3	59.4	66.9	74.3	40.2
Region								
Southern	7.0	10.9	32.4	55.4	68.0	73.4	73.3	46.7
Highlands	5.7	6.4	19.6	28.5	47.5	51.9	59.2	30.5
Momase	9.3	7.3	21.6	33.2	65.5	80.0	85.9	43.8
Islands	3.0	15.8	32.8	47.0	67.7	80.2	83.0	49.4
Education								
No education	(3.1)	7.1	24.2	31.1	46.6	70.2	76.9	37.4
Elementary	*	*	(41.3)	(34.6)	(77.3)	*	(72.1)	51.4
Primary	9.9	11.1	29.8	42.3	59.5	68.7	75.0	46.0
Secondary	3.5	8.8	17.0	35.8	55.3	62.3	67.7	29.3
Higher	(8.0)	1.7	15.7	(25.2)	(78.9)	(86.9)	(61.8)	38.7
Wealth quintile								
Lowest	9.7	8.5	24.6	31.0	52.2	68.3	71.1	40.0
Second	9.3	5.3	26.1	40.8	57.8	63.2	75.7	39.1
Middle	(1.5)	9.2	31.6	37.1	59.0	63.5	77.4	42.4
Fourth	9.7	15.2	30.4	49.2	63.8	75.8	77.5	48.2
Highest	3.4	8.1	12.6	30.4	66.6	74.7	59.6	30.5
Total	6.6	8.9	24.3	37.5	59.7	68.5	73.1	39.9

Note: Men who have been sterilised or who state in response to the question about desire for children that their wife has been sterilised are considered to want no more children. Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] The number of living children includes one additional child if the respondent's wife is pregnant (or if any wife is pregnant for men with more than one current wife).

Table 6.3 Ideal number of children by number of living children

Percent distribution of women and men age 15-49 by ideal number of children, and mean ideal number of children for all respondents and for currently married respondents, according to number of living children, Papua New Guinea DHS 2016-18

Ideal number of children	Number of living children							Total
	0	1	2	3	4	5	6+	
				WOMEN[1]				
0	13.8	5.6	4.9	6.1	7.8	10.6	10.3	9.1
1	4.0	8.2	2.8	2.0	1.3	0.9	0.8	3.4
2	29.4	29.7	26.9	14.3	10.1	8.2	5.5	21.4
3	16.5	20.9	18.4	25.6	8.8	11.0	9.0	16.7
4	16.2	18.2	26.2	27.5	44.2	22.7	22.8	23.4
5	3.3	4.5	6.1	9.1	9.0	19.2	8.8	6.9
6+	1.7	2.5	3.3	4.7	7.6	12.8	27.9	6.2
Non-numeric responses	15.1	10.3	11.4	10.8	11.2	14.7	15.0	12.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	4,720	2,343	2,041	2,000	1,603	1,149	1,342	15,198
Mean ideal number of children for:[2]								
All women	2.4	2.7	3.0	3.3	3.6	3.7	4.2	3.0
Number of women	4,009	2,102	1,808	1,784	1,423	980	1,141	13,246
Currently married women	2.7	2.8	3.1	3.3	3.6	3.7	4.2	3.3
Number of currently married women	790	1,685	1,521	1,618	1,281	897	1,066	8,859
				MEN[3]				
0	13.3	4.4	4.3	3.8	4.6	6.5	8.1	8.9
1	2.0	3.9	1.3	0.8	0.8	0.3	0.5	1.7
2	19.3	22.8	19.1	6.7	4.7	5.1	1.7	14.8
3	21.1	22.5	16.0	19.7	12.2	7.2	3.6	17.6
4	20.3	27.2	27.0	31.7	40.4	22.5	15.4	24.2
5	8.6	10.1	16.8	20.7	12.9	27.2	9.1	12.4
6+	5.6	5.8	9.8	9.7	17.5	22.7	49.5	12.0
Non-numeric responses	9.7	3.2	5.6	6.9	7.1	8.5	12.2	8.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	3,430	760	723	778	584	467	591	7,333
Mean ideal number of children for:[2]								
All men	2.9	3.3	3.7	4.0	4.2	4.5	5.6	3.6
Number of men	3,095	735	683	724	542	428	519	6,727
Currently married men	3.4	3.2	3.7	3.9	4.2	4.6	5.6	4.1
Number of currently married men	322	604	637	665	520	417	501	3,668

[1] The number of living children includes the current pregnancy.
[2] Means are calculated excluding respondents who gave non-numeric responses.
[3] The number of living children includes one additional child if the respondent's wife is pregnant (or if any wife is pregnant for men with more than one current wife).

Table 6.4 Mean ideal number of children according to background characteristics

Mean ideal number of children for all women age 15-49, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Mean	Number of women[1]
Age		
15-19	2.3	2,438
20-24	2.7	2,436
25-29	3.0	2,229
30-34	3.3	1,937
35-39	3.6	1,825
40-44	3.4	1,314
45-49	3.8	1,067
Residence		
Urban	2.8	1,912
Rural	3.1	11,335
Region		
Southern	2.9	2,739
Highlands	3.4	4,916
Momase	2.9	3,580
Islands	2.7	2,011
Province		
Western	3.1	316
Gulf	2.7	259
Central	3.4	522
National Capital District	3.1	500
Milne Bay	2.7	753
Northern	2.6	390
Southern Highlands	3.2	744
Enga	4.2	383
Western Highlands	3.4	563
Chimbu	3.4	813
Eastern Highlands	3.0	1,200
Morobe	2.7	1,464
Madang	3.0	916
East Sepik	2.9	709
West Sepik	2.8	491
Manus	2.7	131
New Ireland	2.6	357
East New Britain	3.0	539
West New Britain	2.9	450
Autonomous Region of Bougainville	2.5	535
Hela	4.1	676
Jiwaka	2.8	538
Education		
No education	3.3	2,770
Elementary	3.0	569
Primary	2.9	6,152
Secondary	2.9	3,212
Higher	3.4	544
Wealth quintile		
Lowest	3.3	2,184
Second	3.1	2,358
Middle	3.0	2,524
Fourth	2.9	2,871
Highest	3.0	3,309
Total	3.0	13,246

[1] Number of women who gave a numeric response

Table 6.5 Fertility planning status

Percent distribution of births to women age 15-49 in the 5 years preceding the survey (including current pregnancies), by planning status of the birth, according to birth order and mother's age at birth, Papua New Guinea DHS 2016-18

Birth order and mother's age at birth	Planning status of birth				Total	Number of births
	Wanted then	Wanted later	Wanted no more	Missing		
Birth order						
1	74.3	15.1	7.5	3.1	100.0	2,651
2	72.6	12.8	10.5	4.1	100.0	2,179
3	69.7	11.2	15.1	4.0	100.0	1,860
4+	62.8	7.2	27.0	3.1	100.0	3,845
Mother's age at birth						
<20	69.4	15.5	11.1	4.0	100.0	1,202
20-24	69.6	15.8	11.0	3.6	100.0	2,948
25-29	71.6	10.6	14.3	3.6	100.0	2,741
30-34	69.0	6.7	21.1	3.2	100.0	1,951
35-39	62.3	5.7	29.0	3.0	100.0	1,190
40-44	62.7	5.7	28.6	2.9	100.0	409
45-49	69.7	0.7	23.8	5.8	100.0	95
Total	68.9	11.1	16.6	3.5	100.0	10,535

Table 6.6 Wanted fertility rates

Total wanted fertility rates and total fertility rates for the 3 years preceding the survey, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Total wanted fertility rate	Total fertility rate
Residence		
Urban	2.6	3.5
Rural	3.1	4.3
Region		
Southern	3.2	4.5
Highlands	3.0	3.8
Momase	3.0	4.4
Islands	2.8	4.5
Province		
Western	3.5	4.7
Gulf	3.3	5.3
Central	4.0	5.2
National Capital District	2.6	3.1
Milne Bay	3.2	4.5
Northern	2.7	4.5
Southern Highlands	3.3	3.8
Enga	3.8	4.2
Western Highlands	2.7	3.1
Chimbu	3.3	4.0
Eastern Highlands	2.3	3.6
Morobe	2.1	3.9
Madang	3.3	4.4
East Sepik	3.8	4.7
West Sepik	3.7	5.7
Manus	3.0	4.2
New Ireland	2.5	4.7
East New Britain	3.1	4.8
West New Britain	2.9	4.3
Autonomous Region of Bougainville	2.8	4.5
Hela	3.4	3.9
Jiwaka	2.5	3.5
Education		
No education	3.5	4.6
Elementary	3.1	4.6
Primary	3.1	4.4
Secondary	2.6	3.8
Higher	2.7	3.1
Wealth quintile		
Lowest	3.6	5.0
Second	3.2	4.4
Middle	3.1	4.5
Fourth	2.9	4.2
Highest	2.4	3.2
Total	3.0	4.2

Note: Rates are calculated based on births to women age 15-49 in the period 1-36 months preceding the survey. The total fertility rates are the same as those presented in Table 5.2.

FAMILY PLANNING 7

Key Findings

- ***Contraceptive use:*** Contraceptive use among currently married women has increased in the past decade, from 32% in 2006 to 37% in 2016-18. Use of modern methods has increased over the same period, from 24% to 31%.
- ***Methods used:*** Among currently married women, the most widely used contraceptive methods are injectables and implants (each used by 9%) and female sterilisation (used by 8%).
- ***Sources of modern methods:*** Almost 9 in 10 users of modern contraceptive methods obtained their method from a public (government) source; only 5% obtained it from private medical sector sources.
- ***Contraceptive discontinuation:*** In the 5 years preceding the survey, only 16% of all new contraceptive users discontinued use of their method within 12 months; 4% switched to another method.
- ***Unmet need for family planning:*** One quarter of currently married women (26%) have an unmet need for family planning.
- ***Percentage of demand for family planning satisfied:*** Over half (59%) of currently married women have their demand for family planning satisfied.

Couples can use family planning methods to limit or space the number of children they have. This chapter presents information on knowledge, use, and sources of contraceptive methods; informed decision making about use; and reasons for discontinuing use. It also examines knowledge of women's ovulatory cycle, need for family planning, and the demand for family planning that is satisfied. In addition, it provides information on whether nonusers are discussing family planning with health providers.

Use of contraception helps women avoid unplanned or unwanted pregnancies and prevent unsafe abortions. Additionally, contraceptive use helps women space the births of their children, which benefits the health of the mother and child. Although information is presented here for both women and men, the focus is mostly on women.

Family planning is known to be one of the most effective public health interventions. In 2009, to alleviate the high maternal mortality ratio reported in the 2006 PNG DHS, the NDOH ministerial task force on maternal health recommended the formulation of the National Family Planning Policy 2014; it also recommended a re-emphasis on family planning in the National Population Policy 2015-2024 (Department of National Planning and Monitoring 2014).

7.1 CONTRACEPTIVE KNOWLEDGE AND USE

Knowledge of contraceptive methods is widespread in Papua New Guinea, with 88% of currently married women and 92% of currently married men age 15-49 knowing at least one method of contraception. The methods most widely known among currently married women are injectables (78%), male condoms (76%), the pill (75%), and implants (72%). Among men, the most widely known method by far is the male condom (86%). Men are more likely to know about traditional methods than women (72% and 67%, respectively). On average, women know 6.4 contraceptive methods and men know 6.0 methods (**Table 7.1**).

Sexually active unmarried women and men are slightly more likely to have heard of contraceptive methods than currently married respondents and respondents overall. For example, sexually active unmarried women know an average of 6.8 methods, as compared with 6.4 among currently married women and 6.0 among women overall.

Among both married women and married men, awareness of at least one contraceptive method is higher in urban areas than in rural areas. Knowledge generally increases with age among women; among men, those age 20-24 are more knowledgeable than those age 25-39. Awareness of at least one method increases with increasing education and household wealth (**Table 7.2**).

Contraceptive prevalence rate

Percentage of women who use any contraceptive method.

Sample: All women age 15-49, currently married women age 15-49, and sexually active unmarried women age 15-49

Modern methods

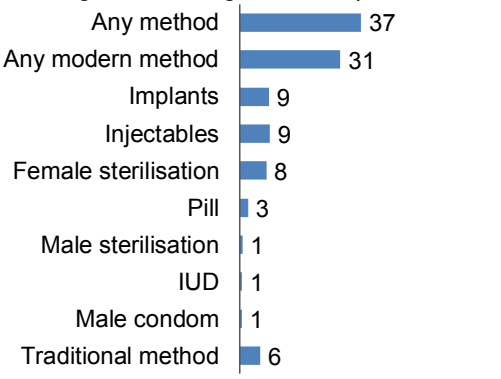
Include male and female sterilisation, injectables, intrauterine devices (IUDs), contraceptive pills, implants, and female and male condoms

The contraceptive prevalence rate among currently married women age 15-49 is 37%, with 31% of women using modern methods and 6% using traditional methods. Among married women, the most popular methods are injectables and implants (each used by 9%), followed by female sterilisation (used by 8%) (**Table 7.3** and **Figure 7.1**).

Sexually active unmarried women are half as likely as currently married women to use a method of contraception. Eighteen percent of sexually active unmarried women use a contraceptive method, with 16% using a modern method. The most popular methods among these women are implants (6%) and male condoms (4%) (**Table 7.3**).

Figure 7.1 **Contraceptive use**

Percentage of curently married women age 15-49 using a contraceptive method



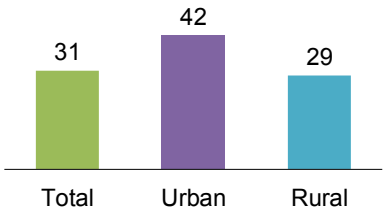
Trends: Contraceptive use among currently married women has increased over the last decade, from 32% in 2006 to 37% in 2016-18. Use of modern methods has increased as well, from 24% to 31%. Use of traditional methods has declined slightly, from 8% to 6%.

Patterns by background characteristics

- The contraceptive prevalence rate among married women varies with age, rising from 18% among women age 15-19 to a peak of 42% among women age 30-39 before declining to 33% among women age 45-49 (**Table 7.3**).
- As expected, the more children women already have, the more likely they are to use contraception. For example, only 7% of married women with no children are currently using any method of contraception, as compared with 45% of those with three or more children (**Table 7.4**).
- Women in urban areas are more likely to use a contraceptive method than women in rural areas (50% and 35%, respectively). Forty-two percent of urban women and 29% of rural women use a modern method (**Figure 7.2**).
- Use of contraception is highest among currently married women in the Southern (49%) and Islands (47%) regions; 41% of women in the Southern region opt for modern methods, as opposed to 31% in the Islands region.
- The percentage of currently married women using a contraceptive method increases from 24% among those with no education to 36% among those with an elementary education, peaks at 46% among those with a secondary education, and then drops to 42% among those with a higher education.

***Figure 7.2* Use of modern methods by residence**

Percentage of currently married women age 15-49



- Women in the highest wealth quintile are twice as likely as those in the lowest quintile to use a method of contraception (46% versus 23%).

7.2 Knowledge of Women's Fertile Period

Successful use of natural family planning methods depends largely on an understanding of when during the menstrual cycle a woman is most likely to conceive. All women in the survey were asked about their knowledge of the fertile period. Specifically, they were asked whether there are certain days between two menstrual periods when a woman is more likely to become pregnant if she has sexual intercourse. Those who said yes were further asked whether this time is just before the period begins, during the period, right after the period ends, or halfway between the two periods.

Only 22% of all women age 15-49 in Papua New Guinea correctly state that the fertile time in a woman's menstrual cycle is halfway between two periods. Twenty-eight percent of women say they do not know when the fertile time is, 17% report that there is no specific fertile time, and another 17% say that the fertile time is just before the menstrual period begins (**Table 7.5**). The small number of women who are using the rhythm method/periodic abstinence are much more likely than women overall to know that the fertile time is halfway between two menstrual periods (41%). Nevertheless, even among rhythm method users, there is much confusion about the fertile time, with one-fifth saying that they do not know when the fertile time is or that there is no specific time.

Correct knowledge of the most fertile time in a woman's ovulatory cycle is higher among women age 45-49 (28%) than among younger women (**Table 7.6**).

7.3 Timing of Female Sterilisation

Given the importance of female sterilisation as a means of preventing unwanted pregnancies among women in high-risk groups, it is useful to obtain information on the age at which women undergo the procedure. In Papua New Guinea, 6% of women overall and 8% of currently married women are sterilised

(**Table 7.3**). **Table 7.7** shows that 35% of sterilised women underwent the procedure at age 30-34, while 27% were sterilised at age 25-29. The median age at sterilisation is 31.3 years.

7.4 Source of Modern Contraceptive Methods

Source of modern contraceptives

The place where the modern method currently being used was obtained the last time it was acquired.

Sample: Women age 15-49 currently using a modern contraceptive method

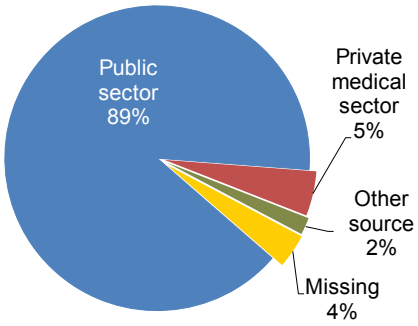
Information on current sources of modern contraceptive methods is important for family planners and programme implementers. Eighty-nine percent of women using a modern contraceptive obtained it from a public (government) source, while only 5% obtained it from the private medical sector (**Table 7.8** and **Figure 7.3**).

Nine in 10 women using the two most popular contraceptive methods—injectables and implants—obtained them from a public sector source. Government health centres are the main source for both methods, followed by government hospitals.

Almost all users of female sterilisation obtained their method from a public sector source (95%), primarily a government hospital.

***Figure 7.3* Source of modern contraceptive methods**

Percent distribution of current users of modern methods age 15-49 by most recent source of method



Pill users are also supplied overwhelmingly through the public sector (89%), mainly government health centres and community aid/health posts.

7.5 Informed Choice

Informed choice

Informed choice indicates that women were informed about their method's side effects, about what to do if they experience side effects, and about other methods they could use.

Sample: Women age 15-49 who are currently using selected modern contraceptive methods and who started the last episode of use within the 5 years before the survey

Only about half (52%) of current users of modern contraceptive methods say they were informed of potential side effects or problems associated with the method they are using; 43% were told what to do if they experienced side effects, and 70% were informed of other methods they could use. Overall, only 37% of women currently using modern contraceptives were informed about all three issues (**Table 7.9**).

7.6 Discontinuation of Contraceptives

Contraceptive discontinuation rate

Percentage of contraceptive use episodes discontinued within 12 months.

Sample: Episodes of contraceptive use in the 5 years before the survey experienced by women who are currently age 15-49 (one woman may contribute more than one episode)

Among women age 15-49 who began using a contraceptive method in the 5 years preceding the survey, 16% discontinued the method within 12 months (**Table 7.10**). In 4% of episodes, the woman switched to another method. Discontinuation rates are relatively high for the pill and withdrawal (around 30% for each). It is encouraging, however, that discontinuation rates are very low for two of the most widely used methods: female sterilisation (less than 1%) and implants (3%) (**Figure 7.4**).

***Figure 7.4* Contraceptive discontinuation rates**

Percentage of contraceptive episodes discontinued within 12 months among women age 15-49

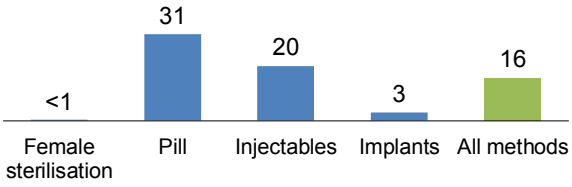


Table 7.11 shows that the most common reason for discontinuing a method is the desire to become pregnant (17%), followed by method failure (12%). Other notable reasons for discontinuation include method-related side effects or health concerns and desire for a more effective method (8% each). Analysis of these results is hampered by the fact that information as to the reason for discontinuing the method is missing for 41% of discontinuations.

7.7 Demand for Family Planning

Unmet need for family planning

Proportion of women who (1) are not pregnant and not postpartum amenorrhoeic and are considered fecund and want to postpone their next birth for 2 or more years or stop childbearing altogether but are not using a contraceptive method, or (2) have a mistimed or unwanted current pregnancy, or (3) are postpartum amenorrhoeic and their most recent birth in the last 2 years was mistimed or unwanted.

Sample: All women age 15-49, currently married women age 15-49, and sexually active unmarried women age 15-49

Demand for family planning:

Unmet need for family planning
+ current contraceptive use (any method)

Proportion of demand satisfied:

$$\frac{\text{Current contraceptive use (any method)}}{\text{Unmet need + current contraceptive use (any method)}}$$

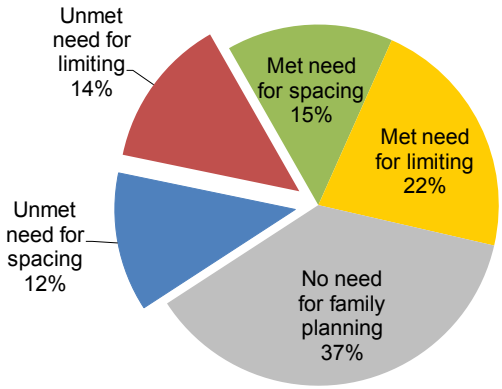
Proportion of demand satisfied by modern methods:

$$\frac{\text{Current contraceptive use (any modern method)}}{\text{Unmet need + current contraceptive use (any method)}}$$

Table 7.12.1 presents data on unmet need, met need, and total demand for family planning among currently married women. These indicators help evaluate the extent to which family planning programmes in Papua New Guinea meet the demand for services. Twenty-six percent of currently married women have an unmet need for family planning services. Thirty-seven percent of married women are currently using a contraceptive method (**Figure 7.5**). Therefore, 63% of married women have a demand for family planning. At present, 59% of the potential demand for family planning is being met. Thus, if all married women who said they want to space or limit their children were to use family planning methods, the contraceptive prevalence rate would increase from 37% to 63%.

Figure 7.5 Demand for family planning

Percent distribution of currently married women age 15-49 by need for family planning

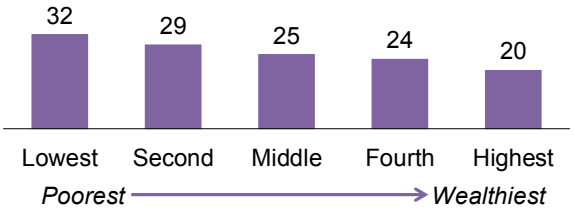


Patterns by background characteristics

- Unmet need for family planning is highest in the Momase region (30%).
- Unmet need for family planning is higher in rural than urban areas.
- Unmet need for family planning decreases with increasing wealth, from 32% among women in the lowest wealth quintile to 20% among those in the highest quintile (**Figure 7.6**).
- Unmet need is lower among women overall than among currently married women (19% versus 26%); however, unmet need is relatively high among the small number of sexually active unmarried women (65%) (**Table 7.12.2**).

Figure 7.6 Unmet need by household wealth

Percentage of currently married women age 15-49 with unmet need



7.8 Decision Making about Family Planning

The survey collected information regarding decision making about family planning. Sixty percent of currently married women age 15-49 who are using a family planning method report that the decision to use the method was made jointly with their husband, 23% say that they made their own decision, and 13% report that their husband mainly made the decision (**Table 7.13**). Joint decision making is the norm regardless of background characteristics.

It is interesting that decisions not to use family planning are much less likely to be made jointly than decisions to use family planning; such decisions are almost equally likely to be made by the wife alone as they are to be made jointly. Among currently married women age 15-49 who are not using a family planning method, 36% say they made the decision not to use family planning jointly with their husband, 32% say they decided themselves, and 12% say their husband made the decision.

The percentage of women who report that the decision to use family planning was made jointly with their husband is highest in East Sepik (80%), the percentage who say that their husband mainly made the decision is highest in West Sepik (26%), and the percentage who say that they made their own decision is highest in Manus (36%) (**Table 7.13**).

7.9 Future Use of Contraception

The survey also collected information on nonusers' intent to use contraception in the future. **Table 7.14** shows that 34% of currently married women age 15-49 who are not using contraception intend to use family planning at some time in the future, whereas 17% are unsure if they will do so. Forty-three percent of women who are not using contraceptive methods say they do not intend to use family planning in the future.

7.10 Exposure to Family Planning Messages in the Media

Table 7.15 shows that exposure to family planning messages in the media is not widespread. Newspapers and magazines are the most common sources of family planning messages among women and men age 15-49 in the past few months (14% and 23%, respectively). Thirteen percent of women and 19% of men reported hearing a family planning message on the radio, and 9% of women and 12% of men reported seeing a message on television. Eighty percent of women and 69% of men have had no recent exposure to family planning messages through any of these mass media.

Patterns by background characteristics

- Exposure to family planning messages through all three types of media is considerably higher in urban than rural areas. For example, only 11% of rural women have seen a family planning message in a newspaper or magazine in the past few months, as compared with 37% of urban women.
- Among both women and men, exposure to family planning messages increases dramatically with increasing education and household wealth. For instance, the proportion of women who read a message in a newspaper or magazine increases from less than 1% among those with no education to 59% among those with a higher education.

7.11 Contact of Nonusers with Family Planning Providers

Contact of nonusers with family planning providers

Respondent discussed family planning in the 12 months before the survey with a fieldworker or during a visit to a health facility.

Sample: Women age 15-49 who are not currently using any contraceptive methods

Women age 15-49 who were not using contraception were asked if they had discussed family planning with a health care worker in the 12 months before the survey. **Table 7.16** shows that only 8% of women not using contraception were visited by a fieldworker who discussed family planning; 11% went to a health facility and discussed family planning, while 26% visited a health facility but did not discuss family planning. Overall, 85% of women who are not using a contraceptive method said they did not discuss family planning either with a fieldworker or at a health facility in the 12 months before the survey.

Patterns by background characteristics

- The percentage of women who did not discuss family planning either with a fieldworker or at a health facility is highest among those age 15-19 (93%).
- The percentage of women who did not discuss family planning with a fieldworker or at a health facility decreases with increasing education, from 91% among those with no education to 72% among those with a higher education.

7.12 KNOWLEDGE OF FAMILY PLANNING POLICY

Awareness of the government's family planning policies is important in identifying the strengths and weaknesses of family planning information campaigns. Information about awareness of such policies enables planners to develop suitable programme strategies in order to achieve the government's family planning goals. In the survey, both women and men were asked whether they were aware that (1) their government encourages men and women to plan their families and (2) men and women do not require consent from their partner to use family planning.

Table 7.17 shows that about 6 in 10 women (59%) and men (61%) know that the government encourages family planning. Awareness that consent from one's partner is not required to use family planning is less common (45% of women and 32% of men).

Patterns by background characteristics

- Awareness of government family planning policies is greater among urban than rural residents.
- Among both women and men, awareness that the government encourages family planning and that partner consent is not required to use family planning increases dramatically with increasing education and household wealth. For example, the proportion of women who are aware that the government encourages family planning increases from 34% among those with no education to 93% among those with a higher education.

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Table 7.1 Knowledge of contraceptive methods

Percentage of all respondents, currently married respondents, and sexually active unmarried respondents age 15-49 who know any contraceptive method, by specific method, Papua New Guinea DHS 2016-18

	Women			Men		
Method	All women	Currently married women	Sexually active unmarried women[1]	All men	Currently married men	Sexually active unmarried men[1]
Any method	83.8	87.6	90.0	88.9	91.5	96.3
Any modern method	82.4	86.0	89.4	87.5	89.4	96.0
Female sterilisation	62.6	67.0	74.2	50.8	58.1	53.1
Male sterilisation	45.2	48.9	52.3	41.1	46.4	45.4
Pill	70.0	75.1	75.5	55.7	62.0	66.7
IUD/loop	38.1	41.4	43.1	26.7	32.0	30.1
Injectables	73.1	78.1	81.6	51.2	59.0	59.8
Implants	67.2	71.6	80.2	38.4	47.1	40.8
Male condom	72.9	75.6	85.9	85.0	86.4	95.8
Female condom	56.0	58.6	65.4	65.8	68.3	82.9
Other modern method	0.9	0.6	1.5	1.5	1.8	1.2
Any traditional method	61.0	66.6	66.7	63.3	71.9	80.5
Ovulation/periodic abstinence	50.1	54.6	51.4	44.8	53.0	55.3
Withdrawal	43.5	49.8	54.9	52.9	60.3	71.0
Other traditional method	17.7	20.4	16.3	16.8	21.0	20.3
Mean number of methods known by respondents 15-49	6.0	6.4	6.8	5.3	6.0	6.2
Number of respondents	15,198	10,052	259	7,333	3,947	514

[1] Had last sexual intercourse within 30 days preceding the survey

Table 7.2 Knowledge of contraceptive methods according to background characteristics

Percentage of currently married women and currently married men age 15-49 who have heard of at least one contraceptive method and who have heard of at least one modern method, by background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Women			Men		
	Heard of any method	Heard of any modern method[1]	Number	Heard of any method	Heard of any modern method[1]	Number
Age						
15-19	78.8	77.3	403	(80.3)	(75.8)	21
20-24	86.1	84.9	1,594	93.8	90.2	292
25-29	86.7	85.3	2,110	89.3	88.0	695
30-34	88.5	86.3	1,878	89.5	86.9	825
35-39	88.0	86.7	1,764	91.8	90.2	848
40-44	89.6	87.7	1,273	94.1	92.1	687
45-49	90.5	88.4	1,029	92.5	90.5	580
Residence						
Urban	98.4	98.1	1,200	98.2	97.6	440
Rural	86.1	84.3	8,852	90.6	88.4	3,507
Region						
Southern	90.6	88.9	1,867	94.5	93.4	780
Highlands	82.4	81.1	4,189	88.3	84.9	1,543
Momase	88.8	87.1	2,630	91.5	90.6	1,100
Islands	97.2	94.7	1,366	96.1	94.5	526
Province						
Western	91.0	88.3	224	89.4	89.2	91
Gulf	73.5	70.6	184	89.3	88.6	76
Central	88.8	88.1	374	88.5	87.4	144
National Capital District	98.8	98.5	307	98.6	97.5	117
Milne Bay	94.1	91.7	516	99.1	97.5	234
Northern	88.1	86.2	263	96.3	95.1	118
Southern Highlands	70.1	69.4	732	83.6	82.2	276
Enga	76.8	76.0	404	77.9	67.3	164
Western Highlands	86.3	83.9	499	98.6	98.3	192
Chimbu	87.6	85.9	634	84.1	81.0	211
Eastern Highlands	96.1	94.9	922	99.1	95.0	306
Morobe	97.1	96.8	1,013	96.5	96.5	406
Madang	84.3	83.9	708	88.8	87.9	308
East Sepik	84.7	83.0	534	92.6	92.6	205
West Sepik	80.4	72.9	374	83.9	79.4	180
Manus	98.0	98.0	83	97.9	97.9	32
New Ireland	99.4	99.1	241	97.1	96.3	81
East New Britain	98.1	97.1	362	97.9	96.9	134
West New Britain	94.9	88.8	344	96.5	94.6	136
Autonomous Region of Bougainville	97.0	94.1	336	93.0	90.3	142
Hela	61.8	60.5	566	77.9	74.4	219
Jiwaka	93.7	93.0	433	93.1	90.9	175
Education						
No education	71.7	68.4	2,808	74.9	69.5	623
Elementary	89.2	87.4	465	89.1	84.5	164
Primary	91.9	90.7	4,381	92.8	91.1	1,857
Secondary	97.8	97.3	2,021	97.5	96.8	1,056
Higher	99.2	99.2	377	98.7	98.3	248
Wealth quintile						
Lowest	71.4	68.1	1,933	77.8	73.3	824
Second	82.3	80.5	1,946	88.2	85.6	783
Middle	89.1	87.5	2,021	95.6	93.8	817
Fourth	95.4	94.5	2,042	97.8	97.3	732
Highest	98.3	97.7	2,110	98.7	98.2	791
Total	87.6	86.0	10,052	91.5	89.4	3,947

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] Female sterilisation, male sterilisation, pill, IUD/loop, injectables, implants, male condom, female condom, and other modern methods

Table 7.3 Current use of contraception by age

Percent distribution of all women, currently married women, and sexually active unmarried women age 15-49 by contraceptive method currently used, according to age, Papua New Guinea DHS 2016-18

			Modern method										Traditional method					
Age	Any method	Any modern method	Female sterili-sation	Male sterili-sation	Pill	IUD/loop	Injectables	Implants	Male condom	Female condom	Other	Any tradi-tional method	Ovulation/ periodic abstinence	With-drawal	Other	Not currently using	Total	Number of women
ALL WOMEN																		
15-19	4.0	3.4	0.0	0.0	0.2	0.0	1.1	1.6	0.4	0.0	0.0	0.6	0.4	0.1	0.1	96.0	100.0	2,945
20-24	21.1	17.8	0.4	0.0	2.5	0.4	5.5	7.2	0.8	1.0	0.0	3.3	1.3	1.3	0.7	78.9	100.0	2,759
25-29	32.7	27.9	2.5	0.3	2.9	0.9	10.3	10.5	0.6	0.0	0.0	4.8	2.7	1.0	1.1	67.3	100.0	2,543
30-34	38.8	31.7	6.6	0.9	2.7	0.5	10.5	9.9	0.6	0.0	0.0	7.1	4.2	1.4	1.5	61.2	100.0	2,180
35-39	38.4	32.4	11.9	1.0	1.6	0.7	8.2	8.5	0.7	0.0	0.0	6.0	3.0	1.5	1.4	61.6	100.0	2,059
40-44	36.7	30.5	16.0	1.2	1.0	0.3	6.4	5.0	0.4	0.0	0.1	6.2	3.2	1.0	2.0	63.3	100.0	1,484
45-49	29.2	23.0	14.5	1.6	0.7	0.7	2.4	2.6	0.3	0.0	0.1	6.2	2.7	1.0	2.5	70.8	100.0	1,228
Total	26.8	22.3	5.8	0.6	1.7	0.5	6.4	6.7	0.6	0.2	0.0	4.5	2.3	1.0	1.1	73.2	100.0	15,198
CURRENTLY MARRIED WOMEN																		
15-19	18.4	16.5	0.1	0.0	1.3	0.0	6.2	8.7	0.3	0.0	0.0	1.9	1.1	0.6	0.2	81.6	100.0	403
20-24	29.7	24.9	0.5	0.0	4.0	0.7	8.8	10.1	0.8	0.0	0.0	4.8	1.9	2.1	0.8	70.3	100.0	1,594
25-29	36.9	31.5	3.0	0.3	3.4	1.1	11.9	11.3	0.5	0.0	0.0	5.4	3.0	1.2	1.2	63.1	100.0	2,110
30-34	42.2	34.3	7.2	1.0	3.0	0.6	11.3	10.6	0.6	0.0	0.0	7.9	4.6	1.6	1.6	57.8	100.0	1,878
35-39	42.3	35.6	13.4	1.1	1.8	0.7	9.1	8.7	0.8	0.0	0.0	6.7	3.4	1.7	1.6	57.7	100.0	1,764
40-44	38.5	31.5	15.2	1.4	1.1	0.3	7.4	5.5	0.3	0.1	0.1	6.9	3.5	1.2	2.2	61.5	100.0	1,273
45-49	32.7	25.6	16.0	1.9	0.9	0.7	2.6	2.9	0.4	0.0	0.1	7.2	3.1	1.2	2.9	67.3	100.0	1,029
Total	36.7	30.5	8.0	0.8	2.5	0.7	9.1	8.8	0.6	0.0	0.0	6.2	3.2	1.5	1.6	63.3	100.0	10,052
SEXUALLY ACTIVE UNMARRIED WOMEN[1]																		
15-19	15.4	13.1	0.0	0.0	0.0	0.0	0.0	4.9	6.8	1.5	0.0	2.3	0.7	1.6	0.0	84.6	100.0	81
20-24	16.8	15.2	0.0	0.0	0.0	0.0	3.8	4.8	4.1	2.6	0.0	1.6	1.1	0.6	0.0	83.2	100.0	94
25+	22.4	18.6	6.9	0.0	0.9	0.0	1.7	7.5	1.6	0.0	0.0	3.7	1.8	1.7	0.3	77.6	100.0	84
Total	18.2	15.7	2.2	0.0	0.3	0.0	1.9	5.7	4.1	1.4	0.0	2.5	1.2	1.3	0.1	81.8	100.0	259

Note: If more than one method is used, only the most effective method is considered in this tabulation.
[1] Women who have had sexual intercourse within 30 days preceding the survey

Table 7.4 Current use of contraception according to background characteristics

Percent distribution of currently married and sexually active unmarried women age 15-49 by contraceptive method currently used, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Any method	Any modern method	Modern method									Any tradi-tional method	Traditional method			Not currently using	Total	Number of women
			Female sterilisation	Male sterilisation	Pill	IUD/loop	Injectables	Implants	Male condom	Female condom	Other		Ovulation/ periodic abstinence	Withdrawal	Other			
								CURRENTLY MARRIED WOMEN										
Number of living children																		
0	6.9	4.6	0.4	0.0	0.7	0.0	0.7	1.9	0.8	0.1	0.0	2.3	1.1	0.7	0.5	93.1	100.0	1,086
1-2	33.3	26.9	2.2	0.3	3.4	0.7	10.3	9.3	0.7	0.0	0.0	6.4	3.5	1.7	1.2	66.7	100.0	3,508
3-4	45.1	38.3	11.5	0.9	2.8	0.9	10.5	11.2	0.3	0.0	0.1	6.8	3.8	1.5	1.5	54.9	100.0	3,221
5+	44.5	37.4	15.7	2.0	1.5	0.6	9.0	7.9	0.5	0.0	0.1	7.1	2.8	1.6	2.6	55.5	100.0	2,238
Residence																		
Urban	50.2	41.5	14.4	1.2	3.5	0.4	11.1	9.6	1.2	0.1	0.0	8.7	5.1	3.2	0.5	49.8	100.0	1,200
Rural	34.9	29.0	7.1	0.8	2.4	0.7	8.8	8.7	0.5	0.0	0.0	5.9	2.9	1.3	1.7	65.1	100.0	8,852
Region																		
Southern	48.9	41.1	12.0	0.7	2.5	0.5	12.3	12.1	0.8	0.0	0.1	7.8	3.4	1.8	2.6	51.1	100.0	1,867
Highlands	27.5	25.0	5.8	1.1	2.3	1.0	8.6	5.6	0.5	0.0	0.0	2.5	1.3	0.8	0.4	72.5	100.0	4,189
Momase	37.3	31.6	5.6	0.7	3.6	0.5	9.4	11.4	0.3	0.0	0.0	5.7	1.9	1.5	2.2	62.7	100.0	2,630
Islands	47.2	30.7	13.7	0.3	1.2	0.2	5.4	9.1	0.7	0.0	0.0	16.5	11.1	3.0	2.4	52.8	100.0	1,366
Province																		
Western	63.3	47.8	9.5	1.1	7.4	0.2	19.2	10.4	0.1	0.0	0.0	15.5	10.6	1.4	3.5	36.7	100.0	224
Gulf	35.2	33.1	8.2	0.4	1.4	1.1	9.6	10.9	0.4	0.0	1.0	2.2	1.1	0.1	0.9	64.8	100.0	184
Central	38.6	36.9	7.4	0.9	1.2	1.0	12.2	13.9	0.4	0.0	0.0	1.7	0.6	0.7	0.3	61.4	100.0	374
National Capital District	57.4	46.4	19.8	1.4	4.6	0.4	10.7	8.4	1.0	0.0	0.0	11.1	7.1	3.5	0.5	42.6	100.0	307
Milne Bay	53.6	44.0	13.7	0.4	1.2	0.0	11.7	15.2	1.7	0.0	0.0	9.7	2.4	2.3	5.0	46.4	100.0	516
Northern	41.4	35.0	11.0	0.0	0.7	1.0	11.4	10.3	0.5	0.2	0.0	6.4	0.5	2.0	3.9	58.6	100.0	263
Southern Highlands	16.9	16.1	1.7	0.0	1.4	0.0	9.7	2.9	0.3	0.0	0.0	0.9	0.4	0.4	0.0	83.1	100.0	732
Enga	14.5	13.8	5.4	0.0	0.8	0.2	3.7	2.2	1.3	0.0	0.2	0.7	0.1	0.6	0.0	85.5	100.0	404
Western Highlands	24.5	24.0	3.5	0.1	2.1	0.5	11.0	6.9	0.0	0.0	0.0	0.5	0.5	0.0	0.0	75.5	100.0	499
Chimbu	42.2	35.7	18.0	0.1	0.5	0.0	7.4	9.2	0.5	0.0	0.0	6.5	3.4	1.9	1.2	57.8	100.0	634
Eastern Highlands	42.5	37.8	4.9	4.8	6.1	3.4	9.6	8.2	0.7	0.0	0.0	4.7	2.8	1.3	0.6	57.5	100.0	922
Morobe	39.0	34.1	6.2	1.1	6.7	0.1	8.1	11.1	0.8	0.0	0.0	5.0	1.3	2.6	1.1	61.0	100.0	1,013
Madang	40.0	34.6	4.3	1.0	1.5	0.9	9.5	17.4	0.0	0.1	0.0	5.4	3.3	1.3	0.8	60.0	100.0	708
East Sepik	28.2	23.3	7.3	0.3	2.3	0.0	7.4	5.8	0.0	0.0	0.2	4.9	1.8	0.8	2.3	71.8	100.0	534
West Sepik	40.4	31.1	4.0	0.0	1.2	1.4	15.3	9.1	0.0	0.0	0.0	9.4	1.3	0.4	7.7	59.6	100.0	374
Manus	42.5	38.4	14.6	1.5	1.8	0.0	7.2	12.5	0.7	0.0	0.0	4.1	2.3	1.2	0.6	57.5	100.0	83
New Ireland	48.9	39.6	21.9	0.3	0.0	0.0	4.9	11.9	0.3	0.0	0.2	9.3	6.4	0.1	2.7	51.1	100.0	241
East New Britain	43.9	32.5	15.4	0.1	0.9	0.0	5.8	9.3	1.1	0.0	0.0	11.4	6.6	2.4	2.4	56.1	100.0	362
West New Britain	55.1	29.7	9.8	0.6	3.1	0.5	7.3	8.2	0.2	0.0	0.0	25.4	16.4	6.5	2.5	44.9	100.0	344

Continued...

Table 7.4—*Continued*

Background characteristic	Any method	Any modern method	Modern method									Any traditional method	Traditional method			Not currently using	Total	Number of women
			Female sterilisation	Male sterilisation	Pill	IUD/loop	Injectables	Implants	Male condom	Female condom	Other		Ovulation/ periodic abstinence	Withdrawal	Other			
Autonomous Region of Bougainville	42.7	21.7	9.8	0.0	0.3	0.1	3.2	6.9	1.2	0.0	0.0	21.0	15.9	2.6	2.5	57.3	100.0	336
Hela	13.3	12.9	0.9	0.0	0.7	0.6	6.8	3.1	0.9	0.0	0.0	0.4	0.0	0.0	0.4	86.7	100.0	566
Jiwaka	26.4	24.7	6.4	0.4	1.9	1.2	10.5	4.3	0.0	0.0	0.0	1.7	0.3	1.0	0.4	73.6	100.0	433
Education																		
No education	24.2	19.5	4.4	1.5	1.4	0.6	5.7	5.7	0.1	0.0	0.0	4.7	1.6	0.9	2.2	75.8	100.0	2,808
Elementary	35.5	31.1	8.0	0.6	1.0	0.5	12.5	7.4	1.1	0.0	0.0	4.4	1.5	1.7	1.2	64.5	100.0	465
Primary	40.2	34.2	9.8	0.6	3.1	0.7	9.7	9.5	0.6	0.0	0.1	6.0	3.0	1.5	1.6	59.8	100.0	4,381
Secondary	45.9	37.5	9.2	0.6	2.4	0.8	11.1	12.5	0.9	0.0	0.0	8.4	5.0	2.4	1.0	54.1	100.0	2,021
Higher	41.6	30.6	6.3	0.4	6.0	0.3	11.1	5.7	0.9	0.0	0.0	11.0	9.8	1.1	0.0	58.4	100.0	377
Wealth quintile																		
Lowest	23.2	18.5	3.5	0.9	1.8	0.4	5.8	6.0	0.1	0.0	0.0	4.7	1.6	1.1	2.0	76.8	100.0	1,933
Second	31.2	26.4	4.0	1.2	2.6	0.6	9.0	8.6	0.4	0.0	0.0	4.8	1.8	0.8	2.1	68.8	100.0	1,946
Middle	36.4	30.0	8.0	0.7	1.7	0.5	9.7	9.1	0.3	0.0	0.1	6.4	3.1	1.5	1.7	63.6	100.0	2,021
Fourth	45.2	38.0	11.3	0.7	3.4	0.9	10.9	9.8	0.9	0.0	0.1	7.2	4.1	1.8	1.2	54.8	100.0	2,042
Highest	46.3	38.4	12.5	0.8	3.0	1.0	9.7	10.3	1.0	0.0	0.0	7.9	5.0	2.1	0.7	53.7	100.0	2,110
Total	36.7	30.5	8.0	0.8	2.5	0.7	9.1	8.8	0.6	0.0	0.0	6.2	3.2	1.5	1.6	63.3	100.0	10,052
SEXUALLY ACTIVE UNMARRIED WOMEN[1]																		
Residence																		
Urban	38.1	27.0	5.6	0.0	0.0	0.0	1.1	5.7	10.9	3.7	0.0	11.1	5.8	4.7	0.6	61.9	100.0	43
Rural	14.2	13.4	1.6	0.0	0.4	0.4	2.1	5.7	2.8	0.9	0.0	0.8	0.3	0.6	0.0	85.8	100.0	216
Total	18.2	15.7	2.2	0.0	0.3	0.3	1.9	5.7	4.1	1.4	0.0	2.5	1.2	1.3	0.1	81.8	100.0	259

Note: If more than one method is used, only the most effective method is considered in this tabulation.
[1] Women who have had sexual intercourse within 30 days preceding the survey

Table 7.5 Knowledge of fertile period

Percent distribution of rhythm users and all women age 15-49 by knowledge of the fertile period during the ovulatory cycle, Papua New Guinea DHS 2016-18

Perceived fertile period	Users of rhythm method	All women
Just before her menstrual period begins	14.6	16.5
During her menstrual period	2.7	2.8
Right after her menstrual period has ended	20.7	13.6
Halfway between two menstrual periods	40.5	21.8
Other	0.3	0.3
No specific time	7.2	16.9
Don't know	13.2	27.6
Missing	0.7	0.5
Total	100.0	100.0
Number of women	348	15,198

Table 7.6 Knowledge of fertile period by age

Percentage of women age 15-49 with correct knowledge of the fertile period during the ovulatory cycle, according to age, Papua New Guinea DHS 2016-18

Age	Percentage with correct knowledge of the fertile period	Number of women
15-19	11.5	2,945
20-24	23.8	2,759
25-29	22.7	2,543
30-34	22.4	2,180
35-39	26.1	2,059
40-44	24.2	1,484
45-49	28.3	1,228
Total	21.8	15,198

Note: Correct knowledge of the fertile period is defined as "halfway between two menstrual periods."

Table 7.7 Timing of sterilisation

Percent distribution of sterilised women age 15-49 by age at the time of sterilisation and median age at sterilisation, according to the number of years since the operation, Papua New Guinea DHS 2016-18

	Age at time of sterilisation								
Years since operation	<25	25-29	30-34	35-39	40-44	45-49	Total	Number of women	Median age[1]
<2	5.3	27.5	29.4	25.1	8.6	4.1	100.0	146	32.5
2-3	7.5	19.7	47.4	15.4	7.6	2.5	100.0	160	32.4
4-5	5.9	26.6	21.2	29.4	17.0	0.0	100.0	105	32.5
6-7	9.8	23.0	30.4	25.9	10.9	0.0	100.0	123	32.3
8-9	11.7	21.6	41.9	23.6	1.2	0.0	100.0	92	32.2
10+	20.8	35.9	34.8	8.6	0.0	0.0	100.0	256	a
Total	11.5	27.1	34.7	19.0	6.5	1.1	100.0	881	31.3

a = Not calculated due to censoring
[1] Median age at sterilisation is calculated only for women sterilised before age 40 to avoid problems of censoring.

Table 7.8 Source of modern contraception methods

Percent distribution of users of modern contraceptive methods age 15-49 by most recent source of method, according to method, Papua New Guinea DHS 2016-18

Source	Female sterilisation	Male sterilisation	IUD/loop	Injectables	Implants	Pills	Male condom	Total
Public sector	94.5	94.7	82.3	89.7	88.5	88.5	62.7	89.0
Government hospital	86.2	66.6	49.6	19.9	26.5	8.7	26.1	40.0
Government health centre	6.7	22.0	11.0	33.1	27.4	35.0	14.6	23.2
Government health sub-centre	0.0	0.0	0.0	9.9	7.3	9.0	7.5	5.9
Community aid/health post	0.0	0.0	15.5	17.2	6.1	19.6	4.9	8.7
Family planning clinic	0.9	1.6	0.0	3.4	6.1	6.2	1.4	3.6
Mobile clinic	0.1	2.4	0.0	0.8	3.1	1.4	2.5	1.4
Patrol clinic	0.0	0.0	0.0	0.4	4.6	0.0	3.3	1.6
Community-based distributor	0.0	0.0	0.9	0.2	0.4	4.9	0.9	0.6
Other public sector	0.5	2.1	5.2	4.7	6.8	3.7	1.4	4.0
Private medical sector	2.4	1.1	3.7	6.4	5.4	5.8	4.0	4.7
Private hospital/clinic	1.8	1.1	2.1	4.6	3.2	3.6	2.2	3.2
Pharmacy	0.0	0.0	0.0	0.2	0.0	1.5	1.9	0.2
Private doctor	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Other	0.6	0.0	1.6	1.5	2.2	0.7	0.0	1.3
Other source	0.0	0.0	0.0	0.3	0.0	0.8	26.4	0.8
Shop	0.0	0.0	0.0	0.0	0.0	0.0	10.1	0.2
Friend/relative	0.0	0.0	0.0	0.3	0.0	0.8	16.3	0.6
Other	0.8	3.1	2.3	0.2	1.3	1.5	2.8	1.0
Don't know	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Missing	2.1	1.1	11.7	3.3	4.8	3.3	4.1	3.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	881	84	71	968	1,011	263	84	3,396

Note: Total includes other modern methods.

Table 7.9 Informed choice

Among current users of modern methods age 15-49 who started the last episode of use within the 5 years preceding the survey, percentage who were informed about possible side effects or problems of that method, percentage who were informed about what to do if they experienced side effects, percentage who were informed about other methods they could use, and percentage who were informed of all three, according to method and initial source, Papua New Guinea DHS 2016-18

	Among women who started last episode of modern contraceptive method within 5 years preceding the survey:				
Method/source	Percentage who were informed about side effects or problems of method used	Percentage who were informed about what to do if they experienced side effects	Percentage who were informed by a health or family planning worker of other methods that could be used	Percentage who were informed of all three (method information index)	Number of women
Method					
Female sterilisation	63.7	57.5	59.2	42.2	362
IUD/loop	(34.7)	(31.3)	(82.5)	(28.3)	44
Injectables	47.2	37.8	69.1	35.6	857
Implants	56.2	44.9	73.7	39.4	976
Pill	41.4	29.3	73.0	26.7	235
Initial source of method[1]					
Public sector	53.7	43.6	71.3	37.8	2,241
Government hospital	63.9	56.8	75.4	48.1	801
Government health centre	50.9	38.5	71.3	35.0	692
Government sub-health centre	54.2	43.3	69.7	36.5	182
Community aid/health post	36.3	24.9	61.0	21.5	250
Family planning clinic	39.9	33.3	79.0	31.3	99
Mobile clinic	59.0	39.7	70.2	35.5	46
Patrol clinic	(59.8)	(41.9)	(68.3)	(25.8)	46
Church hospital/health centre	45.7	36.3	60.3	30.1	83
Other	(43.9)	(34.5)	(67.4)	(34.1)	43
Private medical sector	60.8	48.9	85.2	46.1	124
Private hospital/clinic	66.5	50.6	88.5	49.5	85
Other private	(48.8)	(45.2)	(78.1)	(39.0)	40
Other	*	*	*	*	21
Missing	7.3	6.0	15.1	5.9	87
Total	52.4	42.6	70.1	37.1	2,474

Note: Table includes users of only the methods listed individually. Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Source at start of current episode of use

Table 7.10 Twelve-month contraceptive discontinuation rates

Among episodes of contraceptive use experienced within the 5 years preceding the survey, percentage of episodes discontinued within 12 months, according to reason for discontinuation and specific method, Papua New Guinea DHS 2016-18

Method	Method failure	Desire to become pregnant	Other fertility-related reasons[1]	Side effects/ health concerns	Wanted more effective method	Other method-related reasons[2]	Other reasons	Reason missing	Any reason[3]	Switched to another method[4]	Number of episodes of use[5]
Female sterilisation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	375
Injectables	0.8	3.2	0.2	3.3	2.1	0.7	1.2	8.1	19.7	3.1	1,262
Implants	0.2	0.4	0.0	0.6	0.1	0.1	0.3	1.4	3.1	0.9	1,011
Pill	2.0	2.1	1.5	2.9	4.0	4.0	2.9	11.6	31.1	12.0	469
Male condom	(1.8)	(5.2)	(2.6)	(0.0)	(3.2)	(3.2)	(4.8)	(9.4)	(30.3)	(9.8)	142
Rhythm	3.3	0.7	0.2	0.2	3.2	0.0	1.3	10.3	19.0	5.5	518
Withdrawal	10.7	2.2	0.6	0.3	1.0	0.4	2.6	12.0	29.8	3.0	295
Other[6]	1.8	0.5	0.0	0.4	0.0	0.9	0.3	4.4	8.3	0.5	289
All methods	1.8	1.6	0.4	1.5	1.6	0.8	1.2	6.5	15.5	3.6	4,362

Note: Figures are based on life table calculations using information on episodes of use that occurred 3-62 months preceding the survey. Figures in parentheses are based on 125 to 249 exposed women in any month up to month 12.
[1] Includes infrequent sex/husband away, difficult to get pregnant/menopausal, and marital dissolution/separation
[2] Includes lack of access/too far, costs too much, and inconvenient to use
[3] Reasons for discontinuation are mutually exclusive and add to the total given in this column.
[4] A woman is considered to have switched to another method if she used a different method in the month following discontinuation or if she gave "wanted a more effective method" as the reason for discontinuation and started another method within 2 months of discontinuation.
[5] All episodes of use that occurred within the 5 years preceding the survey are included. Episodes of use include both episodes that were discontinued during the period of observation and episodes that were not discontinued during the period of observation.
[6] Includes male sterilisation, IUD/loop, female condom, other modern methods, and other traditional methods

Table 7.11 Reasons for discontinuation

Percent distribution of discontinuations of contraceptive methods in the 5 years preceding the survey by main reason stated for discontinuation, according to specific method, Papua New Guinea DHS 2016-18

Reason	Injectables	Implants	Pill	Male condom	Rhythm	Withdrawal	Other[1]	All methods
Became pregnant while using	5.2	3.7	8.9	17.5	17.2	22.3	18.9	11.5
Wanted to become pregnant	19.5	22.9	15.7	19.0	15.5	13.3	16.9	17.3
Husband/partner disapproved	1.0	0.1	0.3	1.9	1.9	3.8	0.9	1.4
Wanted a more effective method	11.2	0.4	7.8	4.7	6.5	4.1	3.7	7.5
Side effects/health concerns	12.2	21.0	7.8	0.0	1.3	2.1	3.8	7.6
Lack of access/too far	2.8	0.8	7.8	5.5	0.0	0.4	1.4	2.8
Cost too much	0.5	0.0	0.0	1.1	0.0	0.0	0.0	0.2
Inconvenient to use	0.4	1.0	1.0	1.8	0.2	0.0	2.4	0.6
Up to God/fatalistic	0.1	0.0	0.0	0.0	1.6	0.0	0.0	0.3
Difficult to get pregnant/menopausal	0.1	0.0	0.0	0.0	0.0	0.3	0.0	0.1
Infrequent sex/husband away	0.9	1.1	0.9	10.3	1.0	6.0	2.0	2.1
Marital dissolution/separation	0.8	0.0	1.0	1.1	0.1	0.0	1.2	0.6
Other	3.4	1.9	2.8	5.4	1.6	1.9	1.3	2.7
Don't know	4.7	3.5	2.9	13.5	3.5	4.1	4.7	4.5
Missing	37.1	43.4	43.1	18.2	49.7	41.7	42.9	40.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of discontinuations	707	115	355	100	378	258	90	2,002

[1] Includes female sterilisation, male sterilisation, IUD/loop, female condom, other modern methods, and other traditional methods

Table 7.12.1 Need and demand for family planning among currently married women

Percentage of currently married women age 15-49 with unmet need for family planning, percentage with met need for family planning, total demand for family planning, and percentage of the demand for family planning that is satisfied, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Unmet need for family planning			Met need for family planning (currently using)			Total demand for family planning[1]			Number of women	Percentage of demand satisfied[2]	Percentage of demand satisfied by modern methods[3]
	For spacing	For limiting	Total	For spacing	For limiting	Total	For spacing	For limiting	Total			
Age												
15-19	24.5	7.7	32.2	14.9	3.5	18.4	39.5	11.2	50.6	403	36.4	32.6
20-24	24.9	8.7	33.6	21.9	7.8	29.7	46.7	16.6	63.3	1,594	46.9	39.3
25-29	15.7	10.7	26.4	22.5	14.4	36.9	38.3	25.1	63.3	2,110	58.3	49.8
30-34	10.5	14.5	25.1	16.8	25.4	42.2	27.4	39.9	67.3	1,878	62.7	51.0
35-39	8.1	17.1	25.2	10.9	31.4	42.3	19.0	48.4	67.4	1,764	62.7	52.7
40-44	3.7	20.3	24.0	5.8	32.6	38.5	9.6	52.9	62.5	1,273	61.6	50.5
45-49	2.7	12.4	15.1	2.5	30.2	32.7	5.3	42.6	47.9	1,029	68.4	53.4
Residence												
Urban	10.5	10.8	21.3	19.5	30.6	50.2	30.0	41.4	71.5	1,200	70.2	58.0
Rural	12.6	13.8	26.5	14.2	20.7	34.9	26.9	34.5	61.4	8,852	56.9	47.3
Region												
Southern	10.4	13.9	24.3	19.6	29.3	48.9	30.0	43.2	73.2	1,867	66.8	56.1
Highlands	13.9	10.1	24.0	12.6	15.0	27.5	26.4	25.1	51.5	4,189	53.5	48.5
Momase	12.2	17.7	29.9	14.0	23.3	37.3	26.2	41.0	67.2	2,630	55.5	47.0
Islands	10.9	15.0	26.0	17.1	30.1	47.2	28.0	45.2	73.2	1,366	64.5	42.0
Province												
Western	9.4	11.0	20.4	24.8	38.5	63.3	34.3	49.5	83.7	224	75.6	57.1
Gulf	11.6	17.1	28.8	18.5	16.7	35.2	30.1	33.9	64.0	184	55.0	51.7
Central	11.9	15.7	27.5	19.4	19.1	38.6	31.3	34.8	66.1	374	58.3	55.8
National Capital District	11.6	7.0	18.6	27.0	30.4	57.4	38.6	37.4	76.0	307	75.5	61.0
Milne Bay	8.0	16.1	24.1	16.2	37.5	53.6	24.2	53.5	77.7	516	69.0	56.6
Northern	11.5	15.7	27.2	14.1	27.3	41.4	25.6	43.0	68.6	263	60.3	51.0
Southern Highlands	17.0	10.6	27.6	8.9	8.1	16.9	25.8	18.7	44.5	732	38.0	36.1
Enga	17.1	8.2	25.2	6.5	8.0	14.5	23.5	16.2	39.7	404	36.5	34.7
Western Highlands	7.5	11.1	18.6	13.9	10.6	24.5	21.4	21.7	43.1	499	56.9	55.6
Chimbu	14.0	10.4	24.3	17.7	24.6	42.2	31.6	35.0	66.6	634	63.4	53.7
Eastern Highlands	10.1	11.6	21.7	18.3	24.2	42.5	28.4	35.8	64.2	922	66.2	58.8
Morobe	12.4	15.9	28.2	15.0	24.0	39.0	27.4	39.9	67.3	1,013	58.0	50.7
Madang	10.3	16.2	26.5	17.0	22.9	40.0	27.3	39.2	66.5	708	60.1	52.0
East Sepik	10.1	24.3	34.4	7.7	20.5	28.2	17.8	44.8	62.5	534	45.0	37.2
West Sepik	18.2	16.3	34.5	14.6	25.9	40.4	32.8	42.2	74.9	374	54.0	41.4
Manus	15.2	13.6	28.8	15.6	27.0	42.5	30.8	40.6	71.4	83	59.6	53.8
New Ireland	8.6	15.6	24.3	15.4	33.4	48.9	24.1	49.1	73.1	241	66.8	54.2
East New Britain	10.4	18.9	29.3	15.1	28.8	43.9	25.5	47.7	73.1	362	60.0	44.4
West New Britain	11.0	9.9	20.9	24.2	31.0	55.1	35.1	40.9	76.0	344	72.5	39.1
Autonomous Region of Bougainville	12.1	16.1	28.2	13.6	29.1	42.7	25.7	45.2	70.8	336	60.2	30.6
Hela	22.8	6.0	28.8	6.4	6.9	13.3	29.1	12.9	42.1	566	31.6	30.7
Jiwaka	9.2	11.5	20.7	11.4	15.0	26.4	20.6	26.5	47.1	433	56.0	52.3
Education												
No education	13.1	13.7	26.9	7.8	16.4	24.2	21.0	30.1	51.1	2,808	47.4	38.2
Elementary	9.8	14.5	24.3	14.2	21.4	35.5	24.0	35.9	59.8	465	59.4	52.1
Primary	11.7	15.3	27.0	15.0	25.2	40.2	26.8	40.5	67.2	4,381	59.8	50.8
Secondary	11.8	10.7	22.5	22.7	23.1	45.9	34.5	33.8	68.4	2,021	67.1	54.9
Higher	20.6	4.0	24.6	23.7	17.9	41.6	44.3	21.9	66.2	377	62.8	46.3
Wealth quintile												
Lowest	17.0	15.0	32.1	8.4	14.8	23.2	25.4	29.9	55.3	1,933	42.0	33.5
Second	12.6	16.0	28.6	11.6	19.5	31.2	24.3	35.5	59.8	1,946	52.2	44.1
Middle	10.4	14.9	25.3	14.8	21.5	36.4	25.3	36.4	61.7	2,021	59.0	48.7
Fourth	11.0	12.9	23.9	17.7	27.5	45.2	28.6	40.5	69.1	2,042	65.4	55.0
Highest	11.1	9.0	20.1	21.1	25.2	46.3	32.2	34.2	66.4	2,110	69.7	57.9
Total	12.4	13.5	25.9	14.9	21.9	36.7	27.2	35.3	62.6	10,052	58.7	48.7

Note: Numbers in this table correspond to the revised definition of unmet need described in Bradley et al. 2012.
[1] Total demand is the sum of unmet need and met need.
[2] Percentage of demand satisfied is met need divided by total demand.
[3] Modern methods include female sterilisation, male sterilisation, pill, IUD, injectables, implants, male condom, female condom, emergency contraception, and other modern methods.

Table 7.12.2 Need and demand for family planning among all women and sexually active unmarried women

Percentage of all women and sexually active unmarried women age 15-49 with unmet need for family planning, percentage with met need for family planning, total demand for family planning, and percentage of the demand for family planning that is satisfied, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Unmet need for family planning			Met need for family planning (currently using)			Total demand for family planning[1]			Number of women	Percentage of demand satisfied[2]	Percentage of demand satisfied by modern methods[3]
	For spacing	For limiting	Total	For spacing	For limiting	Total	For spacing	For limiting	Total			
						ALL WOMEN						
Age												
15-19	5.5	1.5	7.0	3.4	0.6	4.0	9.0	2.1	11.1	2,945	36.4	30.9
20-24	16.7	5.9	22.6	15.8	5.3	21.1	32.5	11.2	43.7	2,759	48.3	40.6
25-29	13.9	9.2	23.2	19.8	12.9	32.7	33.7	22.2	55.9	2,543	58.5	50.0
30-34	9.6	12.8	22.4	15.0	23.8	38.8	24.6	36.6	61.2	2,180	63.4	51.8
35-39	7.3	14.8	22.1	9.9	28.5	38.4	17.2	43.3	60.5	2,059	63.4	53.6
40-44	3.3	17.9	21.1	5.3	31.4	36.7	8.5	49.3	57.8	1,484	63.5	52.7
45-49	2.3	10.4	12.7	2.2	27.0	29.2	4.5	37.4	41.9	1,228	69.6	54.9
Residence												
Urban	7.0	7.0	14.0	13.7	19.8	33.5	20.7	26.8	47.5	2,018	70.5	57.4
Rural	9.7	9.7	19.4	10.6	15.1	25.8	20.3	24.9	45.1	13,180	57.1	47.8
Region												
Southern	8.2	9.4	17.6	14.8	21.1	35.9	23.0	30.5	53.5	2,899	67.2	56.5
Highlands	10.4	7.0	17.4	9.1	11.2	20.3	19.5	18.2	37.7	6,213	53.8	48.9
Momase	9.1	12.4	21.5	10.8	16.5	27.3	19.9	28.9	48.8	3,919	55.9	47.6
Islands	7.9	10.5	18.5	12.0	20.3	32.3	19.9	30.9	50.8	2,167	63.6	42.2
Education												
No education	11.2	11.3	22.5	6.7	14.1	20.8	17.9	25.4	43.3	3,488	48.0	39.1
Elementary	7.4	10.2	17.5	10.4	16.9	27.4	17.8	27.1	44.9	676	61.0	53.5
Primary	8.8	10.2	19.0	10.4	17.0	27.4	19.2	27.2	46.4	6,969	59.1	50.1
Secondary	8.1	6.6	14.8	16.0	14.5	30.5	24.1	21.1	45.2	3,460	67.3	55.7
Higher	13.2	3.0	16.2	16.0	17.0	33.0	29.2	20.1	49.3	605	67.1	50.6
Wealth quintile												
Lowest	13.2	10.7	23.8	6.2	11.3	17.5	19.4	22.0	41.3	2,783	42.4	34.2
Second	9.5	11.5	21.0	8.8	14.4	23.2	18.3	25.9	44.2	2,831	52.4	44.3
Middle	8.6	10.6	19.3	11.4	16.4	27.8	20.0	27.1	47.1	2,897	59.1	48.9
Fourth	8.4	9.2	17.6	13.0	19.2	32.2	21.4	28.5	49.8	3,118	64.6	54.8
Highest	7.5	5.7	13.1	14.6	16.7	31.4	22.1	22.4	44.5	3,569	70.5	58.5
Total	9.3	9.4	18.7	11.0	15.8	26.8	20.3	25.1	45.4	15,198	59.0	49.2
						SEXUALLY ACTIVE UNMARRIED WOMEN[4]						
Residence												
Urban	27.4	9.7	37.1	24.6	13.5	38.1	52.0	23.2	75.2	43	50.6	35.9
Rural	62.3	8.2	70.5	9.9	4.3	14.2	72.2	12.5	84.7	216	16.8	15.8
Total	56.5	8.4	65.0	12.3	5.9	18.2	68.9	14.3	83.2	259	21.9	18.8

Note: Numbers in this table correspond to the revised definition of unmet need described in Bradley et al. 2012.
[1] Total demand is the sum of unmet need and met need.
[2] Percentage of demand satisfied is met need divided by total demand.
[3] Modern methods include female sterilisation, male sterilisation, pill, IUD, injectables, implants, male condom, female condom, emergency contraception, and other modern methods.
[4] Women who have had sexual intercourse within 30 days preceding the survey

Table 7.13 Decision making about family planning

Among currently married women age 15-49 who are current users of family planning, percent distribution by who makes the decision to use family planning, and among currently married women who are not currently using family planning, percent distribution by who makes the decision not to use family planning, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Among currently married women who are current users of family planning						Among currently married women who are not currently using family planning					
	Mainly wife	Wife and husband jointly	Mainly husband	Other/ don't know/ missing	Total	Number of women	Mainly wife	Wife and husband jointly	Mainly husband	Other/ don't know/ missing	Total	Number of women
Age												
15-19	37.5	45.1	12.0	5.4	100.0	74	26.7	37.8	9.1	26.5	100.0	251
20-24	29.5	54.5	12.3	3.7	100.0	473	37.0	31.1	12.4	19.5	100.0	939
25-29	24.1	59.9	12.1	4.0	100.0	779	31.7	34.9	12.9	20.6	100.0	1,143
30-34	21.8	62.4	12.2	3.6	100.0	793	26.9	39.1	13.7	20.3	100.0	951
35-39	22.8	62.4	11.5	3.3	100.0	745	33.7	37.4	9.6	19.3	100.0	922
40-44	21.3	60.6	13.5	4.6	100.0	490	32.7	37.5	14.8	15.0	100.0	764
45-49	17.9	62.2	15.1	4.7	100.0	337	34.9	33.9	10.0	21.1	100.0	670
Number of living children												
0	22.9	56.6	12.1	8.4	100.0	75	25.8	43.5	8.3	22.4	100.0	811
1-2	26.0	59.4	10.5	4.1	100.0	1,169	35.6	33.9	10.4	20.1	100.0	2,069
3-4	22.5	60.4	13.4	3.7	100.0	1,451	32.7	33.4	14.6	19.4	100.0	1,588
5+	21.7	61.3	13.5	3.6	100.0	996	30.9	36.9	14.6	17.7	100.0	1,172
Residence												
Urban	23.2	63.7	9.5	3.6	100.0	602	32.4	47.8	11.3	8.5	100.0	516
Rural	23.4	59.6	13.1	3.9	100.0	3,089	32.4	34.5	12.2	20.8	100.0	5,124
Region												
Southern	23.1	61.3	11.5	4.0	100.0	912	38.0	38.6	13.3	10.1	100.0	830
Highlands	27.2	54.4	12.5	6.0	100.0	1,154	36.0	25.3	11.2	27.4	100.0	2,708
Momase	18.5	66.1	13.9	1.5	100.0	980	26.8	47.5	12.4	13.3	100.0	1,485
Islands	24.3	60.4	11.8	3.5	100.0	645	22.2	49.3	14.3	14.2	100.0	616
Province												
Western	13.0	76.4	5.6	5.0	100.0	142	34.6	41.7	7.7	15.9	100.0	68
Gulf	11.7	75.1	6.9	6.2	100.0	65	23.6	46.0	9.6	20.9	100.0	106
Central	27.1	48.5	18.1	6.3	100.0	144	39.3	32.5	16.3	11.9	100.0	201
National Capital District	24.9	62.9	8.6	3.6	100.0	176	31.0	56.7	10.2	2.1	100.0	113
Milne Bay	27.1	57.4	12.9	2.6	100.0	277	51.6	30.8	13.2	4.4	100.0	209
Northern	25.0	57.7	14.5	2.8	100.0	109	33.8	37.0	17.7	11.5	100.0	132
Southern Highlands	17.1	62.9	7.0	13.0	100.0	124	29.0	30.4	10.3	30.3	100.0	503
Enga	31.8	42.6	18.9	6.6	100.0	58	38.2	27.2	5.1	29.6	100.0	316
Western Highlands	30.3	57.8	8.2	3.7	100.0	122	55.5	19.1	7.3	18.2	100.0	335
Chimbu	18.8	65.2	5.4	10.6	100.0	268	15.6	28.6	11.2	44.6	100.0	338
Eastern Highlands	32.7	46.3	18.5	2.5	100.0	392	33.3	25.3	14.6	26.8	100.0	478
Morobe	16.7	66.3	14.7	2.2	100.0	395	42.7	36.4	15.4	5.5	100.0	555
Madang	20.6	68.5	8.9	2.1	100.0	283	14.8	44.6	9.3	31.3	100.0	373
East Sepik	11.7	79.5	8.7	0.2	100.0	150	16.1	67.6	10.2	6.1	100.0	348
West Sepik	25.9	47.9	26.1	0.1	100.0	151	23.9	49.0	13.3	13.8	100.0	209
Manus	35.6	51.7	8.6	4.1	100.0	35	40.8	44.9	9.0	5.4	100.0	44
New Ireland	26.2	66.9	4.5	2.4	100.0	118	26.5	45.9	19.7	7.9	100.0	110
East New Britain	31.6	47.9	17.1	3.4	100.0	159	22.9	46.0	15.6	15.5	100.0	179
West New Britain	24.5	55.3	17.4	2.8	100.0	189	27.4	25.8	17.3	29.6	100.0	121
Autonomous Region of Bougainville	11.6	77.8	5.2	5.5	100.0	143	9.7	73.7	8.5	8.1	100.0	163
Hela	28.6	57.7	12.3	1.4	100.0	75	38.9	22.0	16.4	22.7	100.0	445
Jiwaka	32.3	47.5	15.7	4.5	100.0	114	47.5	23.2	10.2	19.1	100.0	292
Education												
No education	25.3	56.1	15.1	3.6	100.0	680	31.8	28.7	10.0	29.5	100.0	1,943
Elementary	16.7	63.8	11.8	7.7	100.0	165	37.3	31.0	10.5	21.3	100.0	249
Primary	23.8	59.8	12.3	4.1	100.0	1,761	31.5	40.0	12.4	16.1	100.0	2,320
Secondary	23.3	63.0	10.9	2.8	100.0	927	33.4	41.8	14.5	10.3	100.0	954
Higher	17.9	64.0	13.2	4.9	100.0	157	37.9	31.4	22.8	7.9	100.0	173
Wealth quintile												
Lowest	24.5	56.5	16.2	2.8	100.0	449	31.5	28.5	11.7	28.3	100.0	1,300
Second	25.3	56.4	13.7	4.7	100.0	607	30.0	34.6	10.7	24.7	100.0	1,171
Middle	24.0	59.1	11.5	5.4	100.0	735	32.6	36.2	11.6	19.6	100.0	1,164
Fourth	23.3	61.3	11.7	3.6	100.0	923	32.3	42.6	12.0	13.1	100.0	986
Highest	21.2	64.3	11.5	3.0	100.0	977	36.0	39.2	15.2	9.6	100.0	1,019
Total	23.4	60.3	12.5	3.9	100.0	3,691	32.4	35.8	12.2	19.7	100.0	5,640

Note: Table excludes women who are currently pregnant.

Table 7.14 Future use of contraception

Percent distribution of currently married women age 15-49 who are not using a contraceptive method by intention to use in the future, according to number of living children, Papua New Guinea DHS 2016-18

	Number of living children[1]					
Intention to use in the future	0	1	2	3	4+	Total
Intends to use	27.7	43.9	37.1	38.0	26.5	33.9
Unsure	14.6	17.4	16.8	17.9	17.1	16.9
Does not intend to use	49.3	35.2	41.5	38.2	49.4	43.3
Missing	8.4	3.4	4.6	5.9	7.0	5.8
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	811	1,337	1,079	1,012	2,121	6,361

[1] Includes current pregnancy

Table 7.15 Exposure to family planning messages

Percentage of women and men age 15-49 who heard or saw a family planning message on radio, on television, or in a newspaper or magazine in the past few months, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Women					Men				
	Radio	Television	Newspaper/ magazine	None of these three media sources	Number of women	Radio	Television	Newspaper/ magazine	None of these three media sources	Number of men
Age										
15-19	12.5	9.5	17.0	77.2	2,945	13.0	10.2	17.9	77.0	1,469
20-24	14.9	11.7	18.4	74.1	2,759	19.6	13.5	26.8	64.9	1,246
25-29	13.1	7.1	12.9	81.8	2,543	23.1	16.1	31.5	60.0	1,171
30-34	14.2	8.8	12.5	80.5	2,180	18.2	9.2	22.1	70.6	1,058
35-39	12.1	6.0	9.6	84.0	2,059	17.6	8.1	17.8	74.5	966
40-44	11.0	7.6	15.8	79.1	1,484	19.9	11.1	20.0	70.3	782
45-49	11.8	6.7	9.8	85.0	1,228	20.2	14.5	24.1	67.1	641
Residence										
Urban	30.6	24.6	36.6	50.7	2,018	33.0	28.7	43.8	45.0	976
Rural	10.3	6.0	10.8	84.1	13,180	16.2	9.2	19.8	73.1	6,357
Region										
Southern	20.4	13.4	22.7	69.2	2,899	21.7	15.5	28.9	63.6	1,490
Highlands	9.4	7.8	10.9	83.9	6,213	18.3	10.7	21.1	70.8	2,871
Momase	12.5	7.4	13.6	80.3	3,919	15.5	10.6	22.2	71.4	1,999
Islands	14.6	5.9	13.6	79.9	2,167	20.1	11.6	20.9	70.1	973
Province										
Western	2.6	1.9	3.7	94.5	352	8.6	2.8	10.7	85.6	182
Gulf	13.0	6.9	11.0	81.2	277	15.3	9.9	17.4	74.0	137
Central	30.8	20.3	26.3	62.5	557	30.4	18.9	39.0	53.3	272
National Capital District	39.5	35.3	48.4	36.6	526	43.6	46.9	60.4	28.3	251
Milne Bay	11.4	4.2	18.6	77.5	767	12.2	4.6	17.9	77.2	423
Northern	18.6	7.8	16.9	74.9	421	18.7	10.4	24.0	65.9	223
Southern Highlands	4.2	2.0	3.5	94.7	1,089	4.8	4.3	6.8	89.7	457
Enga	4.1	2.9	4.6	92.8	563	12.6	11.2	17.6	76.6	306
Western Highlands	9.4	6.9	8.5	85.2	746	25.4	12.7	22.5	62.4	378
Chimbu	9.6	10.4	26.4	70.3	1,038	23.8	18.4	33.3	58.8	397
Eastern Highlands	20.0	18.7	15.6	72.0	1,310	27.0	10.9	25.6	59.9	587
Morobe	18.3	13.6	24.6	67.9	1,514	17.6	20.3	35.3	60.1	796
Madang	8.5	4.0	8.7	86.8	987	18.5	5.6	17.7	71.9	493
East Sepik	12.0	4.5	6.3	86.3	872	11.0	2.1	11.1	83.8	435
West Sepik	4.4	1.3	3.8	93.6	545	11.5	4.6	10.0	83.7	276
Manus	20.9	5.4	21.3	70.1	135	25.8	12.2	28.8	64.4	64
New Ireland	9.6	3.6	12.9	83.8	385	9.0	4.0	11.1	85.8	171
East New Britain	28.7	11.4	21.1	65.3	572	22.7	14.7	18.6	70.4	247
West New Britain	6.5	2.9	8.5	88.1	532	22.5	12.3	27.2	64.4	260
Autonomous Region of Bougainville	9.7	4.9	9.2	86.7	544	21.3	13.1	21.4	66.0	231
Hela	5.2	2.3	4.8	92.5	874	10.7	6.0	12.5	84.9	438
Jiwaka	5.9	3.6	4.9	91.8	594	22.2	13.5	31.8	63.3	309
Education										
No education	3.4	1.0	0.8	96.2	3,488	7.4	1.7	2.3	92.0	941
Elementary	7.0	3.6	2.1	91.6	676	15.6	5.4	3.8	83.3	253
Primary	11.8	6.2	9.4	83.4	6,969	15.9	8.2	15.1	76.2	3,593
Secondary	23.7	17.7	32.0	60.6	3,460	25.0	20.1	41.0	52.8	2,156
Higher	27.6	31.3	58.8	35.9	605	34.6	27.0	57.6	34.7	389
Wealth quintile										
Lowest	2.1	0.6	1.1	97.5	2,783	7.5	2.0	5.5	89.4	1,366
Second	4.9	2.1	3.8	92.7	2,831	10.6	3.5	9.9	84.1	1,384
Middle	9.5	2.7	6.2	87.9	2,897	14.9	5.5	16.8	75.3	1,528
Fourth	15.5	6.5	14.1	78.2	3,118	23.3	12.0	26.4	64.2	1,399
Highest	28.7	26.2	39.5	49.9	3,569	33.3	32.3	51.0	39.6	1,656
Total	13.0	8.5	14.2	79.6	15,198	18.5	11.8	23.0	69.4	7,333

Table 7.16 Contact of nonusers with family planning providers

Among women age 15-49 who are not using contraception, percentage who during the past 12 months were visited by a fieldworker who discussed family planning, percentage who visited a health facility and discussed family planning, percentage who visited a health facility but did not discuss family planning, and percentage who did not discuss family planning either with a fieldworker or at a health facility, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage of women who were visited by a fieldworker who discussed family planning	Percentage of women who visited a health facility in the past 12 months and who:		Percentage of women who did not discuss family planning either with a fieldworker or at a health facility	Number of women
		Discussed family planning	Did not discuss family planning		
Age					
15-19	4.2	3.8	20.5	92.9	2,827
20-24	7.7	12.7	30.0	83.2	2,177
25-29	9.4	15.8	26.1	80.4	1,711
30-34	10.3	16.4	23.9	79.4	1,334
35-39	8.9	13.2	26.8	83.4	1,268
40-44	7.0	13.6	30.4	82.5	939
45-49	7.6	8.5	24.1	86.7	869
Residence					
Urban	7.4	15.1	30.9	81.2	1,343
Rural	7.5	10.6	24.7	85.6	9,783
Region					
Southern	10.7	16.4	27.3	78.6	1,857
Highlands	6.0	9.7	24.3	87.4	4,953
Momase	7.3	9.4	24.2	86.2	2,849
Islands	8.7	12.7	29.5	82.8	1,467
Province					
Western	5.5	10.9	24.0	85.4	199
Gulf	5.9	11.3	29.2	86.0	207
Central	12.3	18.1	22.2	77.0	398
National Capital District	6.7	12.6	34.3	83.2	323
Milne Bay	16.3	25.8	31.6	67.3	428
Northern	11.7	12.2	21.1	82.2	303
Southern Highlands	5.5	9.6	21.1	88.3	948
Enga	6.5	8.1	24.4	87.6	500
Western Highlands	5.1	9.5	19.1	89.5	617
Chimbu	3.7	8.8	29.6	90.0	724
Eastern Highlands	7.7	9.4	29.7	86.1	899
Morobe	6.6	13.8	31.3	82.7	1,076
Madang	11.7	10.4	20.4	82.6	677
East Sepik	5.1	4.3	19.8	92.2	711
West Sepik	5.3	5.1	19.0	91.2	386
Manus	12.0	17.0	30.8	77.5	94
New Ireland	12.6	21.9	23.7	72.8	248
East New Britain	4.3	11.1	43.5	86.3	399
West New Britain	4.7	7.8	19.3	90.8	332
Autonomous Region of Bougainville	13.4	11.8	27.2	79.9	393
Hela	6.5	11.4	19.7	84.8	789
Jiwaka	6.6	11.0	27.0	85.9	476
Education					
No education	4.0	6.8	20.7	91.4	2,764
Elementary	6.3	10.2	22.4	86.3	491
Primary	8.6	11.7	25.5	84.1	5,060
Secondary	8.2	13.5	29.4	81.6	2,406
Higher	12.7	20.9	38.0	71.9	405
Wealth quintile					
Lowest	5.4	6.1	20.1	90.5	2,295
Second	7.1	10.8	20.1	85.7	2,175
Middle	7.9	11.9	25.8	84.6	2,091
Fourth	9.3	13.4	29.4	82.1	2,114
Highest	7.7	13.6	31.5	82.2	2,450
Total	7.5	11.2	25.5	85.0	11,126

Table 7.17 Knowledge of family planning policy

Among women and men age 15-49, percentage who are aware of the government policy encouraging women and men to plan their families and percentage who are aware that women and men do not require their partners' consent to use family planning, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Women			Men		
	Aware government encourages women and men to plan their families	Aware women and men do not require partners' consent to use family planning	Number of women	Aware government encourages women and men to plan their families	Aware women and men do not require partners' consent to use family planning	Number of men
Age						
15-19	43.6	29.5	2,945	47.6	21.6	1,469
20-24	59.9	47.5	2,759	62.8	28.9	1,246
25-29	62.5	47.6	2,543	67.0	37.6	1,171
30-34	64.7	51.8	2,180	63.2	35.9	1,058
35-39	64.7	52.3	2,059	63.0	33.6	966
40-44	64.6	51.5	1,484	69.5	37.1	782
45-49	63.4	47.4	1,228	64.9	31.3	641
Residence						
Urban	79.8	58.9	2,018	78.2	36.2	976
Rural	56.1	43.6	13,180	58.8	30.8	6,357
Region						
Southern	66.5	45.7	2,899	60.5	37.2	1,490
Highlands	52.6	41.3	6,213	59.0	28.1	2,871
Momase	62.7	52.9	3,919	61.1	31.3	1,999
Islands	62.6	45.1	2,167	70.5	33.8	973
Province						
Western	56.0	42.8	352	48.1	31.0	182
Gulf	37.8	27.4	277	39.0	34.0	137
Central	59.9	40.5	557	60.7	36.9	272
National Capital District	86.9	63.6	526	84.9	39.7	251
Milne Bay	75.5	49.2	767	61.2	41.2	423
Northern	61.0	38.5	421	54.8	34.1	223
Southern Highlands	36.7	26.7	1,089	41.7	23.7	457
Enga	46.6	29.4	563	55.3	24.5	306
Western Highlands	50.6	37.0	746	73.8	31.3	378
Chimbu	74.3	58.5	1,038	66.0	36.9	397
Eastern Highlands	66.5	54.4	1,310	70.3	28.4	587
Morobe	68.5	58.8	1,514	61.2	33.3	796
Madang	66.4	55.5	987	75.2	38.3	493
East Sepik	57.8	50.5	872	58.3	21.2	435
West Sepik	47.5	35.6	545	40.0	28.8	276
Manus	73.5	59.6	135	76.1	41.0	64
New Ireland	78.8	65.8	385	71.5	32.6	171
East New Britain	69.7	52.8	572	68.1	23.8	247
West New Britain	54.9	32.6	532	58.9	31.1	260
Autonomous Region of Bougainville	48.5	31.1	544	83.7	46.4	231
Hela	23.0	19.8	874	43.9	25.4	438
Jiwaka	65.2	57.3	594	61.5	26.0	309
Education						
No education	34.4	25.7	3,488	32.6	17.9	941
Elementary	53.9	44.1	676	41.0	17.9	253
Primary	58.5	45.3	6,969	55.2	28.4	3,593
Secondary	81.0	62.1	3,460	81.2	39.8	2,156
Higher	92.7	72.8	605	92.7	57.3	389
Wealth quintile						
Lowest	35.2	26.3	2,783	38.9	19.3	1,366
Second	48.6	38.7	2,831	49.0	24.4	1,384
Middle	59.0	46.4	2,897	59.4	32.4	1,528
Fourth	65.9	50.2	3,118	74.0	39.5	1,399
Highest	80.9	61.7	3,569	81.7	40.1	1,656
Total	59.3	45.7	15,198	61.4	31.6	7,333

INFANT AND CHILD MORTALITY 8

Key Findings

- ***Current levels:*** For the 5-year period preceding the survey, the under-5 mortality rate was 49 deaths per 1,000 live births and the infant mortality rate was 33 deaths per 1,000 live births. This means that 1 in 20 children in Papua New Guinea die before reaching age 5. Two-thirds of these deaths occur during infancy.
- ***Trends:*** Under-5 mortality decreased from 75 deaths per 1,000 births for the 5-year period before the 2006 PNG DHS to 49 deaths per 1,000 births in 2016-18. Infant mortality declined from 57 to 33 deaths per 1,000 births over the same period.
- ***Mortality differentials:*** Overall, childhood mortality is higher in the Highlands region than in other regions. It is also higher among births occurring less than 2 years after a prior birth and births of order 7 or above. Childhood mortality generally decreases with increasing mother's education and household wealth.

Information on infant and child mortality is relevant to a demographic assessment of a country's population and is an important indicator of the country's socioeconomic development and quality of life. It can also help to estimate how many children may be at higher risk of death and support the development of strategies to reduce this risk, such as promoting birth spacing.

This chapter presents information on levels, trends, and differentials in perinatal, neonatal, postneonatal, infant, child, and under-5 mortality rates. It also examines biodemographic factors and fertility behaviours that increase mortality risks for infants and children. The information was collected through a retrospective birth history in which female respondents listed all of the children they had ever borne, along with each child's date of birth, survivorship status, and current age or age at death.

The quality of mortality estimates calculated from birth histories depends on the mother's ability to recall all of the children she has given birth to, as well as their birth dates and ages at death. Potential data quality problems include:

- The selective omission from birth histories of those births that did not survive, which can result in underestimation of childhood mortality.
- Displacement of birth dates, which may distort mortality trends. An interviewer might knowingly record a birth as occurring in a different year than the one in which it occurred. This may happen if an interviewer is trying to cut down on his or her overall workload, because live births occurring during the 5 years before the interview are the subject of a lengthy set of additional questions.
- Inaccurate reporting of age at death. Misreporting the child's age at death may distort the age pattern of mortality, especially if the net effect of the age misreporting is to transfer deaths from one age bracket to another.

- Mortality of mothers. Any method of measuring childhood mortality that relies on retrospective information based on mothers' reports assumes that female adult mortality is not high or, if it is high, that there is little or no correlation between the mortality risks of mothers and those of their children.

Selected indicators of the quality of the mortality data in this chapter are presented in Appendix C, Tables C.4-C.6. The tables do not indicate any egregious anomalies in the reported data.

8.1 Infant and Child Mortality

Neonatal mortality: The probability of dying within the first month of life.

Postneonatal mortality: The probability of dying between 1 month and the first birthday (computed as the difference between infant and neonatal mortality).

Infant mortality: The probability of dying between birth and the first birthday.

Child mortality: The probability of dying between the first and the fifth birthday.

Under-5 mortality: The probability of dying between birth and the fifth birthday.

All rates are expressed per 1,000 live births with the exception of child mortality, which is expressed per 1,000 children surviving to age 12 months.

The 2016-18 PNG DHS results show that in the 5 years immediately preceding the survey, the infant mortality rate was 33 deaths per 1,000 live births. The child mortality rate was 16 deaths per 1,000 children surviving to age 12 months, while the overall under-5 mortality rate was 49 deaths per 1,000 live births. Sixty-seven percent of all deaths among children under age 5 in Papua New Guinea take place before a child's first birthday, with 41% occurring during the first month of life. Child mortality accounts for 33% of all under-5 deaths. In other words, 1 in every 50 children die within the first month and 1 of every 20 children die before reaching their fifth birthday (**Table 8.1**).

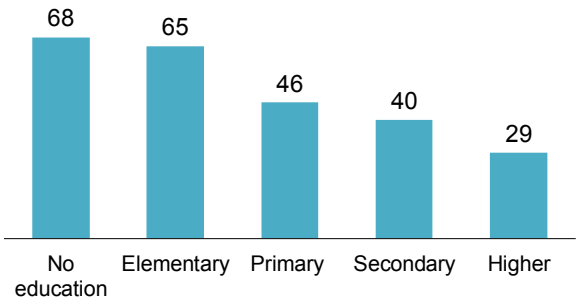
Trends: Childhood mortality has decreased considerably over the past decade. For example, under-5 mortality declined from 75 deaths per 1,000 births for the 5-year period before the 2006 PNG DHS to 49 deaths per 1,000 births in 2016-18. Infant mortality declined from 57 to 33 deaths per 1,000 births over the same period.

Patterns by background characteristics

- With the exception of neonatal mortality, childhood mortality rates are higher in rural areas than in urban areas (**Table 8.2**).
- Under-5 mortality is highest in the Highlands region (66 deaths per 1,000 live births) and lowest in the Islands region (36 deaths per 1,000 live births).
- In general, childhood mortality decreases with increasing mother's education and household wealth. For example, under-5 mortality decreases from 68 deaths per 1,000 births among children whose mothers have no education to 29 deaths per 1,000 births among children whose mothers have a higher education (**Figure 8.1**).

Figure 8.1 **Under-5 mortality by mother's education**

Deaths per 1,000 live births for the 10-year period before the survey



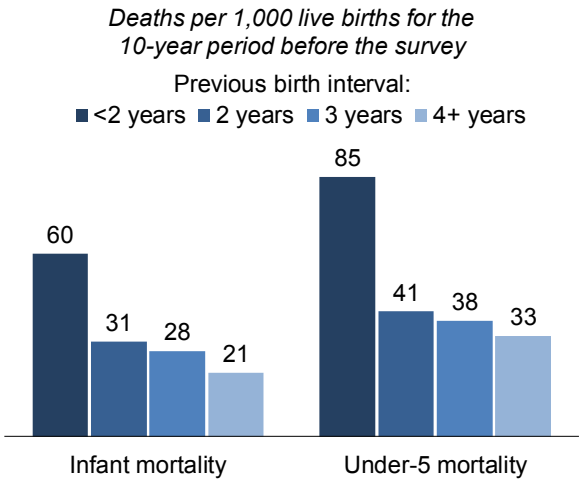
8.2 BIODEMOGRAPHIC RISK FACTORS

The demographic characteristics of both mothers and children have been found to play an important role in the survival of children. **Tables 8.2** and **8.3** present childhood mortality rates by demographic characteristics.

Patterns by background characteristics

- Mortality estimates for other background characteristics were calculated for the 10-year period before the survey to ensure that there were sufficient cases to produce statistically reliable estimates (**Table 8.3**). Childhood mortality is particularly high for children of birth order 7 or higher.
- Shorter intervals between births are associated with higher mortality. For example, infant mortality decreases from 60 deaths per 1,000 live births for babies born less than 2 years after a previous birth to only 21 per 1,000 for births occurring 4 or more years after a previous birth. Similarly, the under-5 mortality rate for children born less than 2 years after the preceding birth is more than twice as high as that for children born 4 or more years after their preceding sibling (85 versus 33 deaths per 1,000 live births) (**Figure 8.2**).

Figure 8.2 **Childhood mortality by previous birth interval**



- Size at birth also has an association with the risk of childhood mortality. For instance, neonatal mortality is 51 deaths per 1,000 live births among children who were reported to be small or very small at birth as opposed to 12 deaths per 1,000 live births among children reported to be of average size.

8.3 PERINATAL MORTALITY

Perinatal mortality rate

Perinatal deaths comprise stillbirths (pregnancy losses occurring after 7 months of gestation) and early neonatal deaths (deaths of live births within the first 7 days of life). The perinatal mortality rate is calculated as the number of perinatal deaths per 1,000 pregnancies of 7 or more months' duration.

Sample: Number of pregnancies of 7 or more months' duration to women age 15-49 in the 5 years before the survey

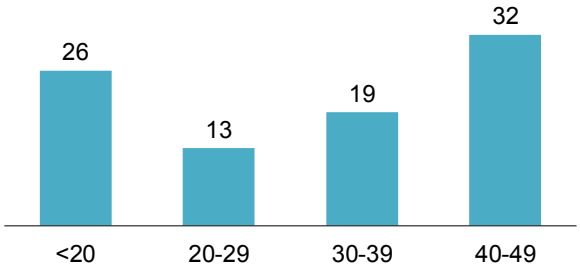
The causes of stillbirths and early neonatal deaths are closely linked, and it can be difficult to determine whether a death is attributable to one cause or the other. The perinatal mortality rate encompasses both stillbirths and early neonatal deaths and offers a better measure of the level of mortality and quality of services at delivery. During the 5 years before the 2016-18 PNG DHS, the perinatal mortality rate was 17 deaths per 1,000 pregnancies (**Table 8.4**).

Patterns by background characteristics

- Perinatal mortality is higher for very young mothers (those less than age 20) and older mothers (those in their 40s) than for mothers age 20-39 (**Figure 8.3**).
- The perinatal mortality rate is relatively high for first pregnancies (24 deaths per 1,000 pregnancies) as well as pregnancies occurring 27-38 months after a previous pregnancy.
- Perinatal mortality is higher in urban (24 deaths per 1,000 pregnancies) than rural (17 deaths per 1,000 pregnancies) areas.
- The perinatal mortality rate varies little by region, mother's education, or household wealth.

Figure 8.3 **Perinatal mortality by mother's age at birth**

Deaths per 1,000 pregnancies of 7 or more months' duration in the 5-year period before the survey



8.4 HIGH-RISK FERTILITY BEHAVIOUR

Findings from scientific studies have confirmed a strong relationship between a child's chance of dying and specific fertility behaviours, meaning that the survival of infants and children depends in part on the demographic and biological characteristics of their mothers. The probability of dying in infancy is much greater among children born to mothers who are too young (under age 18) or too old (over age 34), children born after a short birth interval (less than 24 months after the preceding birth), and children born to mothers of high parity (more than three children). The risk is elevated when a child is born to a mother who has a combination of these risk characteristics.

Table 8.5 presents the percentage distribution of children born in the 5 years preceding the survey who fall into different risk categories: not in any high-risk category, in an unavoidable risk category, in a single high-risk category, or in a multiple high-risk category.

In the 5 years before the survey, over half (53%) of infants in Papua New Guinea were at an elevated risk of dying from avoidable risks; 32% fell into a single high-risk category, and 20% were in a multiple high-risk category. Twenty-seven percent of births were not in any high-risk category, while 21% were in the unavoidable risk category.

The most vulnerable births are those to women under age 18, for which the risk ratio is 3.21. However, only 4% of births fall into this category.

Overall, 67% of currently married women have the potential for a high-risk birth, with 29% falling into a single high-risk category and 38% falling into a multiple high-risk category.

LIST OF TABLES

For more information on infant and child mortality, see the following tables:

- **Table 8.1 Early childhood mortality rates**
- **Table 8.2 Five-year early childhood mortality rates according to background characteristics**
- **Table 8.3 Ten-year early childhood mortality rates according to additional characteristics**
- **Table 8.4 Perinatal mortality**
- **Table 8.5 High-risk fertility behaviour**

Table 8.1 Early childhood mortality rates

Neonatal, postneonatal, infant, child, and under-5 mortality rates for 5-year periods preceding the survey, Papua New Guinea DHS 2016-18

Years preceding the survey	Neonatal mortality (NN)	Postneonatal mortality (PNN)[1]	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-5 mortality ($_5q_0$)
0-4	20	13	33	16	49
5-9	27	15	42	13	55
10-14	26	16	42	18	59

[1] Computed as the difference between the infant and neonatal mortality rates

Table 8.2 Five-year early childhood mortality rates according to background characteristics

Neonatal, postneonatal, infant, child, and under-5 mortality rates for the 5-year period preceding the survey, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Neonatal mortality (NN)	Postneonatal mortality (PNN)[1]	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-5 mortality ($_5q_0$)
Child's sex					
Male	21	11	32	16	48
Female	20	15	34	15	49
Residence					
Urban	21	6	27	14	41
Rural	20	14	34	16	49
Total	20	13	33	16	49

[1] Computed as the difference between the infant and neonatal mortality rates

Table 8.3 Ten-year early childhood mortality rates according to additional characteristics

Neonatal, postneonatal, infant, child, and under-5 mortality rates for the 10-year period preceding the survey, according to additional characteristics, Papua New Guinea DHS 2016-18

Characteristic	Neonatal mortality (NN)	Postneonatal mortality (PNN)[1]	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-5 mortality ($_5q_0$)
Mother's age at birth					
<20	34	25	59	21	79
20-29	20	12	32	14	46
30-39	26	14	40	13	52
40-49	27	8	35	(11)	(46)
Birth order					
1	27	16	43	13	55
2-3	19	12	32	16	47
4-6	23	13	37	14	51
7+	39	22	61	19	78
Previous birth interval[2]					
<2 years	35	24	60	27	85
2 years	19	12	31	11	41
3 years	22	7	28	10	38
4+ years	13	8	21	12	33
Birth size[3]					
Small/very small	51	17	68	na	na
Average or larger	12	13	24	na	na
Region					
Southern	23	7	29	11	40
Highlands	23	24	47	20	66
Momase	25	9	34	15	48
Islands	26	6	31	5	36
Mother's education					
No education	28	19	48	21	68
Elementary	23	28	51	14	65
Primary	22	12	34	13	46
Secondary	22	7	29	12	40
Higher	19	9	27	2	29
Wealth quintile					
Lowest	29	18	47	23	69
Second	27	16	43	19	61
Middle	20	16	37	10	46
Fourth	22	10	31	11	42
Highest	20	8	27	9	36

Note: Figures in parentheses are based on 250-499 unweighted person-years of exposure to the risk of death.
na = Not available
[1] Computed as the difference between the infant and neonatal mortality rates
[2] Excludes first-order births
[3] Rates for the 5-year period before the survey

Table 8.4 Perinatal mortality

Number of stillbirths and early neonatal deaths, and the perinatal mortality rate for the 5-year period preceding the survey, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Number of stillbirths[1]	Number of early neonatal deaths[2]	Perinatal mortality rate[3]	Number of pregnancies of 7+ months' duration
Mother's age at birth				
<20	6	23	26	1,123
20-29	10	60	13	5,259
30-39	10	45	19	2,884
40-49	2	13	32	462
Previous pregnancy interval in months[4]				
First pregnancy	11	45	24	2,371
<15	4	25	20	1,478
15-26	0	17	8	2,028
27-38	6	26	22	1,423
39+	7	28	14	2,429
Residence				
Urban	8	17	24	1,018
Rural	21	124	17	8,710
Region				
Southern	5	25	16	1,903
Highlands	6	58	17	3,743
Momase	13	35	18	2,675
Islands	4	23	19	1,408
Mother's education				
No education	4	35	15	2,527
Elementary	2	3	10	491
Primary	14	68	19	4,362
Secondary	6	30	18	1,974
Higher	2	5	18	374
Wealth quintile				
Lowest	4	34	18	2,096
Second	7	30	19	1,982
Middle	5	24	15	2,008
Fourth	6	29	18	1,919
Highest	7	22	17	1,725
Total	28	141	17	9,728

[1] Stillbirths are foetal deaths in pregnancies lasting 7 or more months.
[2] Early neonatal deaths are deaths at age 0-6 days among live-born children.
[3] The sum of the number of stillbirths and early neonatal deaths divided by the number of pregnancies of 7 or more months' duration, expressed per 1,000
[4] Category cutoffs correspond to birth intervals of <24 months, 24-35 months, 36-47 months, and 48+ months assuming a pregnancy duration of 9 months.

Table 8.5 High-risk fertility behaviour

Percent distribution of children born in the 5 years preceding the survey by category of elevated risk of mortality and the risk ratio, and percent distribution of currently married women by category of risk if they were to conceive a child at the time of the survey, Papua New Guinea DHS 2016-18

Risk category	Births in the 5 years preceding the survey		Percentage of currently married women[1]
	Percentage of births	Risk ratio	
Not in any high-risk category	26.5	1.00	25.8[a]
Unavoidable risk category			
First-order births between age 18 and age 34	20.9	1.53	7.7
In any avoidable high-risk category	52.6	1.75	66.6
Single high-risk category			
Mother's age <18 only	4.0	2.67	0.5
Mother's age >34 only	2.6	1.22	7.5
Birth interval <24 months only	8.7	1.71	8.9
Birth order >3 only	16.9	1.30	12.3
Subtotal	32.2	1.58	29.1
Multiple high-risk category			
Age <18 and birth interval <24 months[2]	0.4	(8.29)	0.2
Age >34 and birth interval <24 months	0.2	(1.52)	0.3
Age >34 and birth order >3	11.1	1.70	24.8
Age >34 and birth interval <24 months and birth order >3	2.0	3.79	4.0
Birth interval <24 months and birth order >3	6.6	1.65	8.1
Subtotal	20.4	2.03	37.5
Total	100.0	na	100.0
Subtotals by individual avoidable high-risk category			
Mother's age <18	4.4	3.21	0.8
Mother's age >34	15.8	1.88	36.6
Birth interval <24 months	18.0	2.08	21.5
Birth order >3	36.6	1.62	49.2
Number of births/women	9,761	na	10,052

Note: Risk ratio is the ratio of the proportion dead among births in a specific high-risk category to the proportion dead among births not in any high-risk category. Figures in parentheses are based on 25-49 unweighted cases.
na = Not applicable
[1] Women are assigned to risk categories according to the status they would have at the birth of a child if they were to conceive at the time of the survey: current age less than 17 years and 3 months or older than 34 years and 2 months, latest birth less than 15 months ago, or latest birth being of order 3 or higher.
[2] Includes the category age <18 and birth order >3
[a] Includes sterilised women

MATERNAL HEALTH CARE 9

Key Findings

- ***Antenatal care:*** Three quarters (76%) of women in Papua New Guinea who gave birth in the 5 years preceding the survey received antenatal care (ANC) from a skilled provider. Just under half of women had at least four ANC visits during their last pregnancy; however, only 17% had an ANC visit during their first trimester of pregnancy.
- ***Components of antenatal care:*** Almost 9 in 10 pregnant women (87%) who received ANC had their blood pressure measured, 8 in 10 (78%) had a blood sample taken, and 46% had a urine sample taken. Seven in 10 women took iron supplements during pregnancy.
- ***Protection against neonatal tetanus:*** Only 38% of women's most recent births were protected against neonatal tetanus.
- ***Delivery:*** Over half (55%) of births in Papua New Guinea are delivered in a health facility. Fifty-six percent of births are assisted by skilled providers.
- ***Caesarean sections:*** Only 3% of births are delivered via caesarean section.
- ***Postnatal care:*** 46% of women and 45% of newborns received a postnatal check within the first 2 days of birth.
- ***Problems in accessing health care:*** The main problems women face in accessing health care for themselves are getting money for treatment and distance to a health facility.

Health care services during pregnancy and after delivery are important for the survival and well-being of both the mother and the infant. Skilled care during pregnancy, childbirth, and the postpartum period is important in reducing maternal and neonatal morbidity and mortality. The ministerial task force on maternal health in Papua New Guinea tailored the National Health Plan 2011-2020 to highlight maternal health, with a focus on family planning, safe motherhood, access to emergency obstetric care, and sexual reproductive health among adolescents. The report of the task force has led to development of policies and updating of clinical guidelines to address maternal health through evidence-based interventions (National Department of Health 2009).

This chapter presents information on antenatal care (ANC) and its main components: the number and timing of ANC visits, protection at birth from tetanus, blood pressure measurement, blood and urine sampling, iron supplementation, and intestinal parasite medications. The chapter also presents information on childbirth and postnatal care such as place of delivery, assistance during delivery, caesarean delivery, postnatal health checks for mothers and newborns, and care of the umbilical cord. The chapter concludes with an assessment of key barriers women may face when seeking care during pregnancy, delivery, and the

postnatal period and an examination of the proportion of women and men who visited a health facility in the 12 months before the survey and why they sought treatment.

9.1 Antenatal Care Coverage and Content

9.1.1 Skilled Providers

Antenatal care (ANC) from a skilled provider

Pregnancy care received from skilled providers, such as doctors, midwives, nurses (including trained community health workers), and trained village health volunteers.

Sample: Women age 15-49 who had a live birth in the 5 years before the survey

Seventy-six percent of women who gave birth in the 5 years preceding the survey received antenatal care from a skilled provider at least once for their last birth. By far, the most common providers of ANC are nurses (**Table 9.1**). The 2016-18 PNG DHS included trained community health workers within the nurse category because these providers have received 6 months of training in delivery care. The 2008 human resource planning forum for health manpower endorsed, as an emergency response to the critical shortage of midwives in the country, the National Department of Health providing in-service programmes to improve the skills of female community health workers in emergency obstetric and newborn care and family planning (National Department of Health 2014a).

Trends: ANC coverage has remained fairly stable over time. The results of the 2006 PNG DHS showed that 79% of all births in the 3 years before the survey were delivered by women who had received ANC from skilled providers. However, this figure is not strictly comparable to that from the 2016-18 PNG DHS due to the reference period and the definition of a skilled provider.

Patterns by background characteristics

- Urban women are more likely than rural women to receive ANC from a skilled provider (89% and 75%, respectively).
- Women in the Islands and Southern regions are most likely to receive antenatal care from a skilled provider (89% and 83%, respectively).
- Women who have more education are more likely than those who have less education to receive ANC from a skilled provider. For instance, 54% of women with no education received ANC from a skilled provider, as compared with 98% of women with a higher education.
- The proportion of women who receive ANC from a skilled provider increases steadily with increasing household wealth (**Table 9.1**).

9.1.2 Timing and Number of ANC Visits

Just under half of women (49%) had four or more ANC visits, as recommended by the World Health Organization. Urban women are more likely than rural women to have had four or more ANC visits for their most recent birth (63% and 47%, respectively) (**Table 9.2**).

Only 17% of women had an ANC visit during the first trimester of pregnancy. Urban women are slightly more likely than rural women to receive ANC in the first trimester (19% and 17%, respectively). The median gestational age at which women made their first ANC visit was 5.4 months, which coincides with the onset of foetal movement.

9.2 COMPONENTS OF ANC

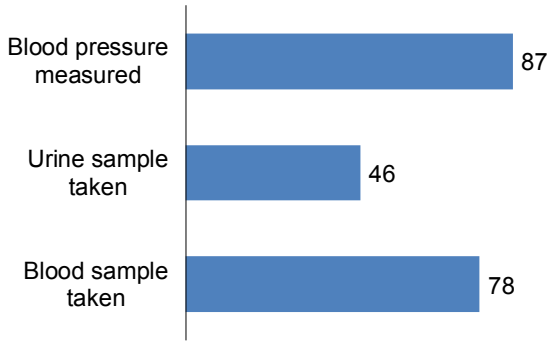
Standard guidelines for ANC emphasise that pregnant women should receive ANC from a skilled provider that includes a thorough physical examination, blood pressure testing, blood tests for infection screening and anaemia, a urine test, tetanus toxoid injections, and iron supplements.

Seven in 10 women age 15-49 said that they took iron supplements during the pregnancy of their last live birth in the 5 years before the survey. However, only 18% said they took drugs for intestinal parasites during the pregnancy (**Table 9.3**).

Among women who received ANC, 87% had their blood pressure measured, 46% had a urine sample taken, and 78% had a blood sample taken (**Figure 9.1**).

***Figure 9.1* Components of antenatal care**

Among women who received antenatal care for their most recent birth, the percentage with selected services



Patterns by background characteristics

- Urban women are more likely than rural women to have taken iron supplements, to have had urine and blood samples taken, and to have had their blood pressure measured during an ANC visit.
- Coverage of all ANC components tends to be higher among women in the Islands and Southern regions than among women in the other regions (**Table 9.3**).
- Iron supplementation during pregnancy increases with increasing education and household wealth, as does coverage of the three components of ANC (blood pressure measurements and urine and blood samples).

9.3 PROTECTION AGAINST NEONATAL TETANUS

Protection against neonatal tetanus

The number of tetanus toxoid injections needed to protect a baby from neonatal tetanus depends on the mother's vaccinations. A birth is protected against neonatal tetanus if the mother has received any of the following:

- Two tetanus toxoid injections during that pregnancy
- Two or more injections, the last one within 3 years of the birth
- Three or more injections, the last one within 5 years of the birth
- Four or more injections, the last one within 10 years of the birth
- Five or more injections at any time prior to the birth

Sample: Last live births in the 5 years before the survey to women age 15-49

Tetanus toxoid injections are given during pregnancy to prevent neonatal tetanus, a major cause of early infant death in many developing countries, often due to failure to observe hygienic procedures during delivery. **Table 9.4** shows that 38% of women with a birth in the 5 years before the survey received sufficient doses of tetanus toxoid to protect their last birth against neonatal tetanus.

Patterns by background characteristics

- Urban births are more likely to be protected against neonatal tetanus than rural births (50% and 36%, respectively).

- The proportion of births protected against neonatal tetanus is higher in the Islands (45%) and Southern (40%) regions than in the Momase (38%) and Highlands (34%) regions.
- The percentage of women whose last birth was protected from tetanus increases with increasing education, from 21% among women with no education to 60% among women with a higher education.
- There is a similar increase by household wealth in the proportion of births protected from tetanus.

9.4 DELIVERY SERVICES

9.4.1 Institutional Deliveries

Institutional deliveries
Deliveries that occur in a health facility.
Sample: All live births in the 5 years before the survey

Access to proper medical attention and hygienic conditions during delivery can reduce the risk of complications and infections that may lead to death or serious illness for the mother or the baby. The survey data show that, in Papua New Guinea, 55% of births in the 5 years preceding the survey were delivered in a health facility (**Table 9.5**). A much larger proportion of births were delivered in public facilities (53%) than in private facilities (2%).

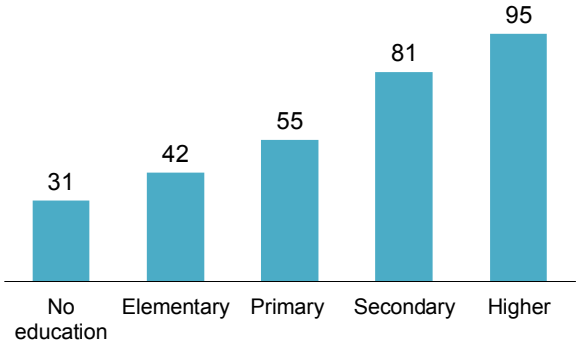
Trends: The proportion of institutional deliveries has increased slightly over time, from 52% of births in the 3 years before the 2006 PNG DHS to 55% of births in the 5 years before the 2016-18 PNG DHS.

Patterns by background characteristics

- Institutional births are more prevalent in urban than rural areas; 85% of births to urban mothers were delivered in a health facility, as compared with 51% of births to rural mothers.
- Mothers' educational status correlates highly with whether their birth is delivered in a health facility. For example, 31% of births to mothers with no education were delivered in a health facility, compared with 95% of births to mothers with a higher education (**Figure 9.2**).
- Similarly, the proportion of institutional births increases with increasing household wealth, from 31% of births to women in the lowest wealth quintile to 91% of births to women in the highest quintile.

Figure 9.2 **Health facility births by mother's education**

Percentage of live births in the 5 years before the survey that were delivered in a health facility



9.4.2 Skilled Assistance during Delivery

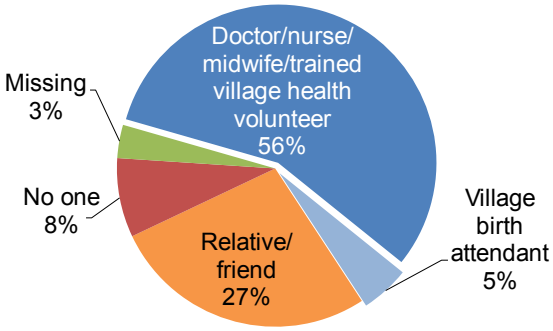
Skilled assistance during delivery
Births delivered with the assistance of doctors, midwives, nurses (including trained community health workers), and trained village health volunteers.
Sample: All live births in the 5 years before the survey

In the 5 years before the survey, 56% of births were delivered by a skilled provider (**Table 9.6**). One-third of births (33%) were assisted by nurses (including trained community health workers), while 15% were assisted by midwives, 7% by doctors, and 2% by trained village health volunteers. Over 1 in 4 births (27%) were assisted by relatives or friends. Eight percent of births were delivered with no assistance (**Figure 9.3**).

Trends: The proportion of births with skilled assistance during delivery increased from 54% in 2006 to 56% in 2016-18. These figures are not strictly comparable due to differences in the reference period and the definition of a skilled provider.

***Figure 9.3* Assistance during delivery**

Percent distribution of births in the 5 years before the survey



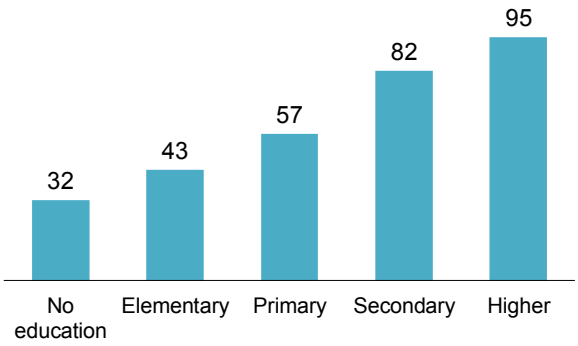
Note: Percentages may not add to 100% due to rounding.

Patterns by background characteristics

- Births in urban areas are far more likely to benefit from skilled delivery care than those in rural areas. Eighty-seven percent of births to urban mothers are assisted by a skilled provider, as compared with 53% of births to rural mothers.
- Seventy-four percent of births in the Islands region are assisted by a skilled provider, compared with 45% of those in the Momase region.
- The proportion of births assisted by skilled providers increases with increasing mother's education, from 32% among births to mothers with no education to 95% among births to mothers with a higher education (**Figure 9.4**).

***Figure 9.4* Skilled assistance at delivery by mother's education**

Percentage of live births in the 5 years before the survey assisted by a skilled provider



- Similarly, the proportion of births assisted by skilled providers increases with increasing household wealth, from 33% among births to mothers in the lowest quintile to 91% among births to mothers in the highest quintile.

9.4.3 Delivery by Caesarean Section

Access to caesarean sections (C-sections) can reduce maternal and neonatal mortality and complications such as obstetric fistula. However, use of caesarean sections without medical need can put women at risk of short-term and long-term health problems. The World Health Organization advises that caesarean sections be done when medically necessary but does not recommend a specific rate for countries to achieve at the population level (WHO 2015a).

The 2016-18 PNG DHS results showed that only 3% of live births in the 5 years before the survey were delivered via C-section. The decision to deliver via C-section was more likely to be made after than before the onset of labour pains (2% versus 1%) (**Table 9.7**).

Patterns by background characteristics

- C-section deliveries are more common among first-order births (5%) than among second- and higher-order births (2%-3%).
- The caesarean section rate is highest among women with a higher education (14%) and those with a secondary education (5%).
- The C-section rate is also relatively high among women in the highest wealth quintile (7%) (**Table 9.7**).

Among women who had their most recent live birth in a health facility, 74% of those who gave birth via C-section spent 3 or more days at the facility after delivery. Women who delivered vaginally mostly spent 1-2 days at the facility (48%) (**Table 9.8**).

9.4.4 Delivery Complications

Women who had a live birth in the 3 years before the survey were asked if they had experienced specific kinds of complications such as prolonged labour and excessive vaginal bleeding. As shown in **Table 9.9**, delivery complications are quite common in Papua New Guinea. Mothers experienced no complications for only 39% of births, meaning that complications were reported for 61% of births. The most common complications were prolonged labour (36% of births), excessive bleeding following childbirth (32% of births), and membrane rupture leading to water breaking more than 6 hours before delivery (28% of births).

Trends: Although the wording of the questions changed somewhat between surveys, it appears that the prevalence of delivery complications has increased since 2006. For example, the proportion of births for which the mother reported having prolonged labour has increased from 24% to 36%.

9.5 Postnatal Care

9.5.1 Postnatal Health Check for Mothers

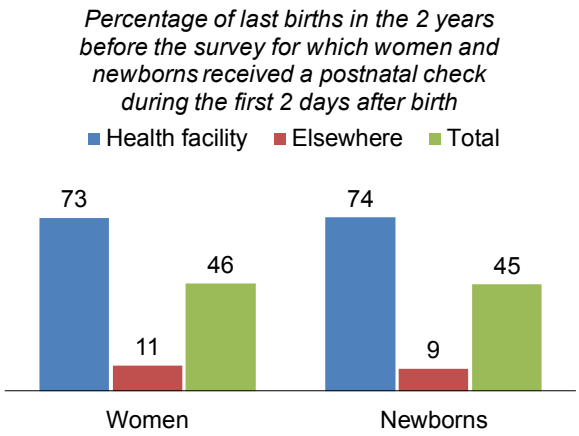
A large proportion of maternal and neonatal deaths occur during the first 48 hours after delivery. Thus, prompt postnatal care (PNC) for both the mother and the child is important to treat any complications arising from the delivery, as well as to provide the mother with important information on how to care for herself and her child. Safe motherhood programmes recommend that all women receive a check of their health within 2 days after delivery. To assess the extent of PNC use, women were asked, for their last birth in the 2 years preceding the survey, whether they had received a checkup after delivery and the timing of the first checkup.

Forty-six percent of women reported having received a PNC checkup in the first 2 days after birth, with 24% having a postnatal check less than 4 hours after delivering. However, 51% of women did not receive a postnatal check at all (**Table 9.10**).

Patterns by background characteristics

- As expected, women who gave birth in a health facility were much more likely to receive a postnatal health check within 2 days of delivery than those who gave birth elsewhere (73% versus 11%) (**Figure 9.5**).
- The proportion of women receiving a postnatal checkup within 2 days of delivery is higher in urban than rural areas (72% and 42%, respectively).
- The proportion of women receiving postnatal checkups in the 2 days after delivery varies by region, from a low of 38% in the Highlands region to a high of 63% in the Islands region.

Figure 9.5 **Postnatal care by place of delivery**



- The proportion of women who received a postnatal checkup in the 2 days after delivery increases substantially with increasing education and household wealth.

Type of Provider of Maternal Postnatal Care

The skills of a provider are an important component of the ability to diagnose problems and recommend appropriate treatment or referral. Over one quarter (27%) of women who gave birth in the 2 years preceding the survey received a postnatal check from a nurse (including trained community health workers), while 12% received a postnatal check from a doctor and 5% from a midwife (**Table 9.11**).

9.5.2 Postnatal Health Care for Newborns

The first 48 hours of life is a critical phase for newborn babies and a period in which many neonatal deaths occur. A lack of postnatal health checks during this period can delay identification of newborn complications and initiation of appropriate care and treatment.

Table 9.12 shows that 45% of newborns had a postnatal check within the first 2 days after birth, while 53% received no postnatal checkup.

Patterns by background characteristics

- The proportion of newborns receiving a checkup within the first 2 days after birth decreases as birth order increases. In addition, the proportion is higher among urban births (74%) than rural births (42%).
- Postnatal checkups are much more common among children born in a health facility than those born elsewhere (74% and 9%, respectively) (**Figure 9.5**).
- The proportion of newborns receiving a checkup within the first 2 days after birth increases dramatically with increasing mother's education and household wealth. For example, 24% of newborns whose mothers have no education received a postnatal check, as compared with 87% of newborns whose mothers have a higher education.

Type of Provider of Newborn Postnatal Care

Thirty-one percent of newborns received a postnatal checkup within 2 days after birth from a nurse (including trained community health workers) or midwife, and 13% received a checkup from a doctor (**Table 9.13**).

Content of Newborn Postnatal Care

The survey also collected data on other components of postnatal care such as whether selected functions were performed within 2 days after birth and whether the mother was informed of danger signs in newborns. Forty-six percent of newborns in the 2 years preceding the survey had at least two signal functions performed within 2 days after birth (**Table 9.14**).

Over half of all newborns were weighed at birth (52%), 42% had their umbilical cord examined, and 40% had their temperature measured. Breastfeeding was observed for 38% of mothers, while 37% received counselling on breastfeeding and 36% were informed about danger signs in newborns (**Table 9.14**).

Umbilical Cord Care

Unhygienic procedures used in cutting the umbilical cord after delivery can result in infections among newborns. In the 2016-18 PNG DHS, mothers were asked a series of questions concerning the type of instrument used to cut the umbilical cord, whether it was new and/or sterilised prior to use, and what was applied to the stump of the cord, if anything.

For 76% of births in the 2 years before the survey, the mother reported that the umbilical cord was cut with a new instrument (razor blade, knife, or scissors). For 17% of births, the cord was cut with a used metal instrument that had not been boiled (**Table 9.15**). The proportion of births for which a clean instrument was used to cut the cord is higher in urban than rural areas and increases with increasing mother's education.

For 91% of women's most recent live births in the 2 years before the survey, no harmful substance was applied to the stump of the umbilical cord (**Table 9.16**). More than half of newborns had nothing applied to the stump (52%), whereas about 1 in 5 had either chlorhexidine (21%) or another antiseptic (20%) applied. In most cases in which chlorhexidine was applied, it was used within the first 24 hours after birth (14% of births) and for 2-7 days (**Table 9.17**).

9.6 PROBLEMS IN ACCESSING HEALTH CARE

Problems in accessing health care

Women were asked whether each of the following factors is a big problem in seeking medical advice or treatment for themselves when they are sick:

- Getting permission to go to the doctor
- Getting money for advice or treatment
- Distance to a health facility
- Not wanting to go alone

Sample: Women age 15-49

Many factors can prevent women from obtaining medical advice or treatment for themselves when they are sick. Information on such factors is particularly important in understanding and addressing the barriers that women face in seeking care during pregnancy and delivery.

In Papua New Guinea, almost 3 in 4 women (74%) report having at least one of the specified problems in accessing health care. The most frequently reported problems were difficulty in getting money for treatment (63%) and distance to a health facility (56%). More than 4 in 10 women cited not wanting to go alone to seek treatment (44%), and 32% said that getting permission to go for treatment was a serious problem (**Table 9.18**).

9.7 VISITS TO HEALTH FACILITIES BY WOMEN AND MEN

In order to gauge the frequency of health service use, both women and men age 15-49 who were interviewed in the 2016-18 PNG DHS were asked if they had gone to a health facility in the 12 months before the survey to seek advice or treatment for themselves. If so, they were asked why they had gone for treatment the most recent time they went and where they went.

Slightly over one-third of women (36%) and men (34%) said they had visited a health facility in the 12 months before the survey. Health facility visits are more common among urban women and men than rural residents. In addition, the percentage of respondents visiting a facility generally increases with increasing education and wealth.

Among those who sought treatment, the vast majority of both women (78%) and men (85%) cited illness as the reason. Health checkups were the next most common reason among both women (11%) and men (7%). Eight percent of women visited a health facility for a family planning consultation or method, as compared with only 1% of men. Health facility visits due to accidents were more commonly reported by men (6%) than women (2%) (**Tables 9.19.1** and **9.19.2**).

Government health centres are the facilities most commonly visited by both women and men, followed by government hospitals (**Table 9.20**). Nine percent of women and men visited church-run health facilities.

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- **Table 9.4 Tetanus toxoid injections**
- **Table 9.5 Place of delivery**
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Table 9.1 Antenatal care

Percent distribution of women age 15-49 who had a live birth in the 5 years preceding the survey by antenatal care (ANC) provider during pregnancy for the most recent birth and percentage receiving antenatal care from a skilled provider for the most recent birth, according to background characteristics, Papua New Guinea DHS 2016-18

	Antenatal care provider											
Background characteristic	Doctor	Midwife	Nurse[1]	Trained village health volunteer (VHV)	Village birth attendant	Female relative	Other	Missing	No ANC	Total	Percentage receiving antenatal care from a skilled provider[2]	Number of women
Age at birth												
<20	9.6	7.9	62.1	1.8	0.1	0.1	0.4	1.0	17.0	100.0	81.4	666
20-34	7.1	7.7	61.4	1.0	0.0	0.1	0.1	1.4	21.2	100.0	77.1	4,845
35-49	4.1	8.3	55.9	0.8	0.0	0.0	0.1	2.7	28.1	100.0	69.1	1,249
Birth order												
1	9.2	7.6	67.3	1.2	0.0	0.1	0.1	0.5	14.1	100.0	85.3	1,575
2-3	7.4	8.8	60.0	0.8	0.1	0.1	0.1	1.3	21.3	100.0	77.1	2,556
4-5	6.2	8.0	58.2	0.5	0.0	0.1	0.4	2.6	24.0	100.0	72.9	1,627
6+	2.3	5.2	54.3	2.4	0.0	0.1	0.0	2.4	33.3	100.0	64.2	1,002
Residence												
Urban	17.6	9.5	61.4	0.2	0.0	0.1	0.0	1.3	9.9	100.0	88.6	761
Rural	5.4	7.6	60.3	1.2	0.0	0.1	0.2	1.6	23.6	100.0	74.5	5,998
Region												
Southern	12.8	3.6	65.1	1.9	0.1	0.3	0.1	0.8	15.3	100.0	83.3	1,327
Highlands	5.6	12.6	53.9	1.2	0.0	0.1	0.3	2.0	24.2	100.0	73.3	2,621
Momase	5.4	5.0	57.3	0.5	0.0	0.0	0.0	1.4	30.4	100.0	68.2	1,851
Islands	4.2	6.0	77.8	0.8	0.0	0.0	0.0	1.9	9.4	100.0	88.7	961
Province												
Western	4.2	7.8	64.4	1.2	0.0	0.0	0.2	1.6	20.6	100.0	77.6	167
Gulf	2.0	1.5	68.3	0.4	0.0	1.6	0.5	1.6	24.2	100.0	72.2	134
Central	18.2	1.1	59.2	4.9	0.7	0.0	0.3	0.6	15.1	100.0	83.3	290
National Capital District	36.2	2.1	57.9	0.2	0.0	0.0	0.0	0.8	2.8	100.0	96.4	176
Milne Bay	10.8	2.5	78.8	0.8	0.0	0.5	0.0	0.0	6.5	100.0	92.9	379
Northern	1.5	9.1	50.8	2.8	0.0	0.0	0.0	1.1	34.8	100.0	64.1	181
Southern Highlands	0.8	11.6	46.4	4.9	0.0	0.0	1.2	0.6	34.4	100.0	63.8	527
Enga	3.5	6.2	54.1	1.0	0.0	0.0	0.0	0.5	34.7	100.0	64.8	234
Western Highlands	4.6	6.2	70.0	0.0	0.0	0.0	0.0	3.3	16.0	100.0	80.8	281
Chimbu	11.5	19.1	47.4	0.0	0.0	0.1	0.0	1.7	20.2	100.0	78.0	420
Eastern Highlands	10.5	14.2	50.6	0.4	0.0	0.3	0.4	3.0	20.5	100.0	75.7	540
Morobe	7.2	7.3	62.5	0.0	0.0	0.0	0.0	1.5	21.5	100.0	77.0	686
Madang	8.2	2.3	54.8	0.5	0.0	0.0	0.0	0.9	33.3	100.0	65.8	499
East Sepik	2.0	4.2	54.9	0.3	0.0	0.0	0.0	2.5	36.1	100.0	61.4	377
West Sepik	0.7	5.3	52.4	2.1	0.0	0.1	0.0	0.5	39.0	100.0	60.4	289
Manus	14.0	2.0	65.5	10.3	0.0	0.0	0.0	1.5	6.7	100.0	91.8	59
New Ireland	7.0	4.4	74.0	0.0	0.0	0.0	0.0	0.6	13.9	100.0	85.5	182
East New Britain	2.3	3.0	92.4	0.0	0.0	0.0	0.0	0.6	1.7	100.0	97.7	271
West New Britain	1.2	9.6	69.5	0.5	0.0	0.1	0.0	0.8	18.3	100.0	80.7	222
Autonomous Region of Bougainville	4.7	8.2	74.6	0.0	0.0	0.0	0.0	5.7	6.8	100.0	87.6	227
Hela	1.1	8.4	64.1	0.0	0.0	0.0	0.0	3.7	22.6	100.0	73.7	361
Jiwaka	5.0	19.0	55.2	0.0	0.0	0.0	0.0	1.3	19.5	100.0	79.2	258
Education												
No education	1.8	4.4	45.6	1.9	0.0	0.2	0.0	2.3	43.8	100.0	53.7	1,717
Elementary	4.9	7.4	59.0	3.1	0.0	0.4	2.1	1.6	21.5	100.0	74.3	314
Primary	6.1	7.5	64.7	0.8	0.1	0.1	0.0	1.5	19.2	100.0	79.1	3,027
Secondary	11.3	10.2	70.7	0.5	0.0	0.0	0.2	0.9	6.1	100.0	92.8	1,423
Higher	23.5	20.4	54.2	0.0	0.0	0.0	0.0	0.7	1.2	100.0	98.1	278
Wealth quintile												
Lowest	2.6	4.4	47.9	1.2	0.0	0.0	0.0	1.6	42.4	100.0	56.0	1,417
Second	2.9	9.4	55.3	1.1	0.0	0.3	0.1	2.5	28.3	100.0	68.7	1,357
Middle	4.3	6.3	66.3	1.4	0.0	0.1	0.5	1.4	19.7	100.0	78.4	1,341
Fourth	6.8	6.9	69.6	1.4	0.1	0.0	0.1	1.5	13.5	100.0	84.7	1,358
Highest	18.0	12.4	63.8	0.3	0.0	0.1	0.0	0.9	4.6	100.0	94.5	1,286
Total	6.8	7.8	60.4	1.1	0.0	0.1	0.2	1.6	22.1	100.0	76.1	6,759

Note: If more than one source of ANC was mentioned, only the provider with the highest qualifications is considered in this tabulation.
[1] Includes trained community health workers
[2] Skilled provider includes doctor, midwife, nurse (including trained community health workers), and trained village health volunteer.

Table 9.2 Number of antenatal care visits and timing of first visit

Percent distribution of women age 15-49 who had a live birth in the 5 years preceding the survey by number of antenatal care (ANC) visits for the most recent live birth and by the timing of the first visit, and among women with ANC, median months pregnant at first visit, according to residence, Papua New Guinea DHS 2016-18

	Residence		
Number of ANC visits and timing of first visit	Urban	Rural	Total
Number of ANC visits			
None	9.9	23.6	22.1
1	3.1	3.8	3.7
2-3	16.4	20.3	19.8
4+	62.9	47.2	49.0
Don't know/missing	7.7	5.2	5.5
Total	100.0	100.0	100.0
Number of months pregnant at time of first ANC visit			
No antenatal care	9.9	23.6	22.1
<4	19.3	17.2	17.4
4-5	37.6	29.7	30.6
6-7	27.2	23.1	23.5
8+	3.7	3.2	3.3
Don't know/missing	2.3	3.2	3.1
Total	100.0	100.0	100.0
Number of women	761	5,998	6,759
Median months pregnant at first visit (for those with ANC)	5.4	5.4	5.4
Number of women with ANC	683	4,509	5,192

Table 9.3 Components of antenatal care

Among women age 15-49 with a live birth in the 5 years preceding the survey, percentage who took iron tablets or syrup and drugs for intestinal parasites during the pregnancy of the most recent live birth, and among women receiving antenatal care (ANC) for the most recent live birth in the 5 years preceding the survey, percentage receiving specific antenatal services, according to background characteristics, Papua New Guinea DHS 2016-18

	Among women with a live birth in the past 5 years, percentage who during the pregnancy of their most recent live birth:			Among women who received antenatal care for their most recent birth in the past 5 years, percentage with selected services			
Background characteristic	Took iron tablets or syrup	Took intestinal parasite drugs	Number of women with a live birth in the past 5 years	Blood pressure measured	Urine sample taken	Blood sample taken	Number of women with ANC for their most recent birth
Age at birth							
<20	74.8	18.1	666	85.7	36.2	76.6	550
20-34	70.7	17.9	4,845	86.8	47.4	77.8	3,772
35-49	63.0	18.7	1,249	87.1	48.6	79.9	870
Birth order							
1	78.0	17.3	1,575	88.1	49.1	81.8	1,349
2-3	70.7	18.6	2,556	87.6	45.8	77.6	1,988
4-5	67.0	18.6	1,627	86.2	45.5	77.3	1,207
6+	58.6	17.0	1,002	82.2	44.4	73.0	649
Residence							
Urban	84.4	18.1	761	95.1	60.3	89.3	683
Rural	67.8	18.1	5,998	85.5	44.3	76.3	4,509
Region							
Southern	75.6	20.7	1,327	89.8	56.5	78.2	1,118
Highlands	65.8	14.6	2,621	85.1	39.9	77.6	1,948
Momase	65.4	15.5	1,851	84.2	41.8	77.0	1,268
Islands	80.4	28.9	961	90.2	54.8	80.2	859
Province							
Western	69.4	16.7	167	88.6	62.9	78.7	131
Gulf	70.1	14.4	134	74.7	43.5	61.3	101
Central	68.7	14.7	290	89.4	66.7	78.3	244
National Capital District	92.7	16.4	176	97.3	82.5	93.6	171
Milne Bay	85.0	33.6	379	92.5	42.3	76.8	354
Northern	60.5	15.2	181	85.5	44.2	73.9	117
Southern Highlands	56.9	9.7	527	75.3	34.0	64.7	342
Enga	58.2	13.6	234	85.5	20.9	56.5	152
Western Highlands	74.5	15.3	281	84.6	63.8	86.8	227
Chimbu	75.6	16.4	420	93.8	25.8	83.8	328
Eastern Highlands	73.4	22.6	540	91.0	53.1	80.8	423
Morobe	75.5	12.1	686	84.9	37.8	80.3	534
Madang	63.5	18.7	499	90.9	50.2	84.7	328
East Sepik	55.7	13.2	377	77.0	27.8	61.4	232
West Sepik	57.3	20.7	289	79.1	56.7	73.5	175
Manus	87.3	16.2	59	95.5	69.1	83.2	55
New Ireland	75.5	41.3	182	94.5	49.2	88.0	156
East New Britain	88.6	37.1	271	95.3	74.5	88.3	264
West New Britain	77.9	22.9	222	88.3	51.8	78.0	181
Autonomous Region of Bougainville	75.1	18.3	227	80.4	32.4	64.7	202
Hela	51.6	9.9	361	71.6	32.3	81.2	270
Jiwaka	69.7	11.7	258	93.4	43.0	83.7	206
Education							
No education	46.3	10.4	1,717	75.3	33.7	65.1	935
Elementary	71.2	18.2	314	76.3	36.9	65.5	244
Primary	72.3	21.5	3,027	87.9	47.8	79.5	2,412
Secondary	87.2	19.1	1,423	92.9	49.0	83.6	1,328
Higher	94.2	22.4	278	94.8	73.3	94.0	274
Wealth quintile							
Lowest	48.7	10.3	1,417	76.2	31.3	66.8	804
Second	64.8	17.6	1,357	83.8	41.2	73.9	946
Middle	70.4	20.1	1,341	85.4	44.3	74.8	1,064
Fourth	78.0	24.1	1,358	89.2	48.1	80.4	1,160
Highest	88.5	18.5	1,286	94.7	60.6	89.2	1,218
Total	69.7	18.1	6,759	86.7	46.4	78.0	5,192

Table 9.4 Tetanus toxoid injections

Among mothers age 15-49 with a live birth in the 5 years preceding the survey, percentage receiving two or more tetanus toxoid injections during the pregnancy for the most recent live birth and percentage whose last live birth was protected against neonatal tetanus, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage receiving two or more injections during the pregnancy for the last live birth	Percentage whose most recent live birth was protected against neonatal tetanus[1]	Number of mothers
Age at birth			
<20	30.5	39.6	666
20-34	26.7	38.5	4,845
35-49	24.5	35.1	1,249
Birth order			
1	33.3	40.6	1,575
2-3	25.9	38.7	2,556
4-5	23.7	36.7	1,627
6+	23.3	34.0	1,002
Residence			
Urban	35.0	50.1	761
Rural	25.6	36.4	5,998
Region			
Southern	27.7	40.4	1,327
Highlands	23.7	34.0	2,621
Momase	25.8	38.0	1,851
Islands	35.2	45.3	961
Province			
Western	25.8	36.7	167
Gulf	23.0	29.9	134
Central	28.8	38.0	290
National Capital District	37.9	53.0	176
Milne Bay	26.1	42.2	379
Northern	24.4	39.6	181
Southern Highlands	15.9	27.4	527
Enga	10.9	14.5	234
Western Highlands	19.6	29.3	281
Chimbu	33.7	44.2	420
Eastern Highlands	34.1	42.7	540
Morobe	30.9	42.3	686
Madang	19.5	39.2	499
East Sepik	23.9	32.3	377
West Sepik	27.1	32.9	289
Manus	32.5	49.8	59
New Ireland	30.6	39.9	182
East New Britain	49.0	62.3	271
West New Britain	27.4	33.6	222
Autonomous Region of Bougainville	30.8	39.7	227
Hela	18.7	31.3	361
Jiwaka	24.4	39.4	258
Education			
No education	14.8	21.4	1,717
Elementary	19.7	28.8	314
Primary	28.7	40.5	3,027
Secondary	34.6	50.2	1,423
Higher	45.5	60.1	278
Wealth quintile			
Lowest	15.0	24.6	1,417
Second	20.6	30.0	1,357
Middle	24.9	36.8	1,341
Fourth	33.9	46.7	1,358
Highest	40.3	53.1	1,286
Total	26.7	38.0	6,759

[1] Includes mothers with two injections during the pregnancy of their most recent live birth, or two or more injections (the last within 3 years of the most recent live birth), or three or more injections (the last within 5 years of the most recent live birth), or four or more injections (the last within 10 years of the most recent live birth), or five or more injections at any time prior to the most recent birth

Table 9.5 Place of delivery

Percent distribution of live births in the 5 years preceding the survey by place of delivery and percentage delivered in a health facility, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Health facility		Home	Other	Missing	Total	Percentage delivered in a health facility	Number of births
	Public sector	Private sector						
Mother's age at birth								
<20	59.0	1.6	31.7	4.8	2.9	100.0	60.6	1,122
20-34	53.8	1.5	38.1	3.1	3.5	100.0	55.3	7,093
35-49	46.1	1.3	46.7	3.3	2.6	100.0	47.4	1,547
Birth order								
1	65.4	2.1	26.4	3.2	2.9	100.0	67.5	2,426
2-3	53.9	1.5	37.8	2.8	4.0	100.0	55.4	3,762
4-5	48.7	1.3	43.4	3.4	3.1	100.0	50.0	2,271
6+	36.0	0.7	55.9	5.0	2.4	100.0	36.6	1,304
Antenatal care visits[1]								
None	12.7	0.1	80.0	7.0	0.1	100.0	12.8	1,491
1-3	58.9	1.0	36.5	3.3	0.2	100.0	60.0	1,589
4+	72.9	2.3	23.0	1.5	0.3	100.0	75.2	3,310
Don't know/missing	54.1	2.8	28.6	3.6	10.9	100.0	56.9	369
Residence								
Urban	80.8	4.6	12.0	0.4	2.2	100.0	85.4	1,017
Rural	49.9	1.1	41.8	3.7	3.4	100.0	51.1	8,745
Region								
Southern	59.4	3.2	32.2	2.9	2.3	100.0	62.6	1,914
Highlands	53.2	1.4	36.8	4.6	4.0	100.0	54.5	3,757
Momase	39.7	0.3	54.1	2.8	3.1	100.0	40.1	2,675
Islands	70.1	1.7	23.6	1.5	3.1	100.0	71.7	1,416
Province								
Western	56.6	1.4	21.6	18.3	2.0	100.0	58.1	253
Gulf	43.7	0.1	49.5	0.5	6.1	100.0	43.8	204
Central	63.8	2.3	29.6	1.0	3.2	100.0	66.2	411
National Capital District	81.2	15.6	2.1	0.5	0.7	100.0	96.7	228
Milne Bay	67.4	2.2	28.6	0.4	1.4	100.0	69.5	543
Northern	33.1	0.4	64.8	0.4	1.3	100.0	33.6	275
Southern Highlands	38.6	0.0	56.8	1.2	3.4	100.0	38.6	760
Enga	40.6	0.0	55.5	0.7	3.2	100.0	40.6	334
Western Highlands	58.6	0.7	36.1	0.0	4.6	100.0	59.3	362
Chimbu	64.6	0.1	14.5	15.6	5.3	100.0	64.6	651
Eastern Highlands	52.9	1.2	36.8	5.3	3.9	100.0	54.1	772
Morobe	54.3	0.1	42.3	1.3	1.9	100.0	54.5	936
Madang	35.2	0.6	59.1	1.8	3.3	100.0	35.8	729
East Sepik	29.0	0.0	65.3	1.0	4.7	100.0	29.0	564
West Sepik	30.1	0.7	56.4	9.6	3.2	100.0	30.8	446
Manus	75.9	0.0	20.2	1.4	2.6	100.0	75.9	87
New Ireland	73.6	2.9	20.6	1.3	1.5	100.0	76.6	271
East New Britain	74.3	3.6	18.0	0.8	3.4	100.0	77.9	409
West New Britain	62.6	0.4	30.7	3.4	2.9	100.0	63.0	317
Autonomous Region of Bougainville	67.5	0.0	27.3	0.8	4.5	100.0	67.5	332
Hela	67.4	0.0	24.8	3.7	4.2	100.0	67.4	533
Jiwaka	48.7	11.7	36.1	0.0	3.5	100.0	60.4	344
Mother's education								
No education	30.5	0.8	57.3	7.0	4.4	100.0	31.3	2,532
Elementary	40.2	1.6	53.0	3.0	2.2	100.0	41.8	493
Primary	53.6	0.9	39.7	2.5	3.3	100.0	54.5	4,377
Secondary	77.8	2.7	16.1	1.2	2.3	100.0	80.5	1,986
Higher	87.7	7.6	2.6	0.0	2.1	100.0	95.3	373
Wealth quintile								
Lowest	30.8	0.4	60.1	5.8	2.8	100.0	31.2	2,102
Second	36.2	0.7	53.3	4.7	5.1	100.0	36.9	1,995
Middle	53.1	1.0	40.1	3.2	2.7	100.0	54.1	2,011
Fourth	65.8	1.2	27.3	1.8	3.9	100.0	67.1	1,925
Highest	85.9	4.7	7.0	0.6	1.8	100.0	90.6	1,729
Total	53.2	1.5	38.7	3.3	3.3	100.0	54.7	9,761

[1] Includes only the most recent birth in the 5 years preceding the survey

Table 9.6 Assistance during delivery

Percent distribution of live births in the 5 years preceding the survey by person providing assistance during delivery, percentage of births assisted by a skilled provider, and percentage of infants with skin-to-skin contact immediately after birth, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Person providing assistance during delivery									Percentage delivered by a skilled provider[2]	Percentage with skin-to-skin contact immediately after birth	Number of births
	Doctor	Midwife	Nurse[1]	Trained village health volunteer (VHV)	Village birth attendant	Relative/ friend/ other	No one	Don't know/ missing	Total			
Mother's age at birth												
<20	8.7	16.2	35.0	1.2	4.4	27.8	3.7	3.1	100.0	61.1	41.8	1,122
20-34	7.1	15.1	33.1	1.6	4.9	26.7	7.8	3.6	100.0	57.0	44.1	7,093
35-49	4.8	13.0	30.5	2.4	5.6	28.7	12.3	2.7	100.0	50.7	38.7	1,547
Birth order												
1	10.3	19.0	37.3	1.4	3.8	22.0	3.1	3.1	100.0	68.0	46.5	2,426
2-3	6.3	15.8	33.5	1.7	4.8	26.8	7.0	4.1	100.0	57.3	43.7	3,762
4-5	5.8	12.8	32.1	1.8	5.4	28.8	10.1	3.1	100.0	52.5	43.2	2,271
6+	4.4	8.0	24.5	2.1	6.6	35.0	16.9	2.4	100.0	39.1	33.9	1,304
Antenatal care visits[3]												
None	1.4	1.5	9.4	2.5	9.9	54.3	20.0	1.0	100.0	14.8	21.7	1,491
1-3	6.9	16.9	35.6	1.7	3.3	28.4	7.0	0.1	100.0	61.1	44.3	1,589
4+	11.4	20.2	44.1	1.2	3.2	16.0	3.5	0.3	100.0	76.9	56.1	3,310
Don't know/missing	6.6	19.3	32.2	3.1	5.2	16.7	5.9	10.9	100.0	61.2	41.2	369
Place of delivery												
Health facility	12.5	26.5	58.5	1.0	0.2	0.9	0.2	0.2	100.0	98.5	63.5	5,335
Public facility	12.4	26.1	59.0	1.0	0.2	0.8	0.2	0.2	100.0	98.5	63.7	5,188
Private facility	16.9	38.7	42.5	0.0	0.0	1.4	0.0	0.6	100.0	98.0	57.6	147
Elsewhere	0.2	1.0	2.0	2.8	11.5	63.3	18.8	0.4	100.0	6.0	19.5	4,104
Missing	0.1	0.2	2.5	0.0	0.0	2.7	0.8	93.6	100.0	2.8	1.8	322
Residence												
Urban	18.5	26.6	39.6	1.8	1.1	8.6	1.7	2.1	100.0	86.5	60.4	1,017
Rural	5.6	13.5	32.1	1.7	5.4	29.3	8.8	3.5	100.0	52.9	41.0	8,745
Region												
Southern	10.7	13.1	38.6	2.1	4.9	24.5	3.9	2.3	100.0	64.4	50.4	1,914
Highlands	6.8	17.5	29.4	0.5	3.3	26.5	11.9	4.2	100.0	54.2	41.2	3,757
Momase	5.7	9.5	25.8	3.5	8.0	35.2	9.0	3.3	100.0	44.5	36.2	2,675
Islands	4.4	20.5	48.2	1.2	3.7	17.3	1.8	2.9	100.0	74.3	50.6	1,416
Province												
Western	5.4	14.3	44.1	1.4	3.6	23.0	6.1	2.1	100.0	65.2	30.7	253
Gulf	0.6	13.3	27.8	2.7	4.9	35.8	8.5	6.5	100.0	44.3	38.3	204
Central	13.8	11.3	37.6	3.2	4.8	24.5	1.8	3.1	100.0	65.8	65.7	411
National Capital District	33.2	29.5	31.6	1.3	0.2	1.8	2.0	0.4	100.0	95.6	77.4	228
Milne Bay	8.7	9.6	51.6	1.2	7.7	17.9	2.0	1.2	100.0	71.2	49.5	543
Northern	3.5	7.7	23.0	2.8	4.8	49.5	6.9	1.8	100.0	37.1	34.0	275
Southern Highlands	2.1	14.1	20.9	0.0	1.7	30.0	26.8	4.4	100.0	37.1	31.2	760
Enga	4.7	14.9	22.3	0.7	4.6	33.6	16.1	3.2	100.0	42.5	37.1	334
Western Highlands	11.0	6.1	41.6	0.2	2.8	17.8	15.6	4.9	100.0	58.9	47.9	362
Chimbu	14.1	29.2	21.3	0.2	3.2	23.4	3.4	5.1	100.0	64.9	59.2	651
Eastern Highlands	7.9	23.7	21.3	1.3	1.9	34.3	6.2	3.6	100.0	54.1	40.3	772
Morobe	10.1	15.6	29.2	6.3	7.5	25.1	3.8	2.4	100.0	61.2	34.0	936
Madang	4.6	9.8	22.6	2.0	15.9	37.6	4.3	3.3	100.0	38.9	45.0	729
East Sepik	2.0	3.4	25.4	2.9	1.9	43.7	15.8	4.8	100.0	33.7	27.4	564
West Sepik	3.2	4.1	24.2	0.6	3.9	41.8	18.9	3.4	100.0	32.1	37.6	446
Manus	11.1	5.5	54.3	10.3	1.8	12.5	2.0	2.5	100.0	81.2	55.9	87
New Ireland	3.0	10.6	63.2	1.7	3.0	17.0	0.8	0.7	100.0	78.5	27.7	271
East New Britain	2.8	35.8	40.9	0.2	2.2	13.3	1.5	3.4	100.0	79.7	54.8	409
West New Britain	4.4	20.6	39.0	0.5	4.2	24.2	3.9	3.4	100.0	64.4	47.2	317
Autonomous Region of Bougainville	5.7	13.6	51.9	0.4	6.1	17.2	1.2	3.9	100.0	71.7	65.8	332
Hela	1.0	7.7	56.4	0.7	5.3	15.6	9.3	4.1	100.0	65.7	39.8	533
Jiwaka	7.9	18.6	33.7	0.1	6.1	26.3	3.6	3.8	100.0	60.3	29.9	344
Mother's education												
No education	2.1	5.8	22.6	1.0	5.9	38.5	19.1	5.0	100.0	31.5	27.5	2,532
Elementary	5.8	11.1	23.2	3.4	3.9	42.2	8.3	2.2	100.0	43.4	32.0	493
Primary	5.0	13.7	36.5	2.2	5.9	28.2	5.2	3.2	100.0	57.4	43.8	4,377
Secondary	13.4	25.3	41.9	1.5	2.5	11.5	1.7	2.2	100.0	82.1	58.8	1,986
Higher	29.1	40.5	25.4	0.1	1.5	1.2	0.1	2.2	100.0	95.1	68.0	373
Wealth quintile												
Lowest	2.6	6.5	22.1	2.2	5.8	40.3	16.9	3.6	100.0	33.4	27.0	2,102
Second	3.5	9.8	23.8	1.7	5.8	38.7	11.9	4.8	100.0	38.7	35.9	1,995
Middle	5.0	13.3	36.0	2.0	6.6	28.8	5.5	2.9	100.0	56.3	43.0	2,011
Fourth	7.3	17.5	42.6	1.7	4.9	19.3	3.2	3.6	100.0	69.0	47.7	1,925
Highest	18.1	29.9	42.3	0.8	1.0	4.7	1.4	1.9	100.0	91.1	65.3	1,729
Total	6.9	14.9	32.9	1.7	5.0	27.2	8.1	3.4	100.0	56.4	43.0	9,761

Note: If the respondent mentioned more than one person attending during delivery, only the most qualified person is considered in this tabulation.
[1] Includes trained community health workers
[2] Skilled provider includes doctor, midwife, nurse (including trained community health workers), and trained village health volunteer.
[3] Includes only the most recent birth in the 5 years preceding the survey

Table 9.7 Caesarean section

Percentage of live births in the 5 years preceding the survey delivered by caesarean section (C-section), percentage delivered by C-section planned before the onset of labour pains, and percentage delivered by C-section decided on after the onset of labour pains, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage delivered by C-section	Timing of decision to conduct C-section			Number of births
		Before onset of labour pains	After onset of labour pains	Missing	
Mother's age at birth					
<20	3.3	1.0	2.3	0.0	1,122
20-34	3.0	1.3	1.6	0.1	7,093
35-49	2.7	1.1	1.5	0.1	1,547
Birth order					
1	4.6	2.1	2.4	0.0	2,426
2-3	2.2	0.9	1.2	0.1	3,762
4-5	2.7	1.1	1.5	0.1	2,271
6+	2.6	0.6	2.0	0.1	1,304
Antenatal care visits[1]					
None	0.7	0.1	0.3	0.3	1,491
1-3	3.5	2.5	0.9	0.1	1,589
4+	4.9	1.8	3.0	0.1	3,310
Don't know/missing	3.4	1.6	1.7	0.1	369
Place of delivery					
Health facility	5.4	2.2	3.0	0.2	5,335
Public facility	5.5	2.2	3.1	0.2	5,188
Private facility	2.7	1.0	1.8	0.0	147
Residence					
Urban	5.9	2.0	3.7	0.2	1,017
Rural	2.6	1.1	1.4	0.1	8,745
Region					
Southern	3.0	1.4	1.5	0.1	1,914
Highlands	3.5	1.1	2.3	0.1	3,757
Momase	2.4	1.6	0.8	0.0	2,675
Islands	2.4	0.6	1.7	0.1	1,416
Province					
Western	2.6	1.3	1.3	0.0	253
Gulf	2.6	0.6	1.8	0.1	204
Central	3.2	1.1	1.7	0.5	411
National Capital District	5.7	3.5	2.2	0.0	228
Milne Bay	3.2	1.6	1.6	0.0	543
Northern	0.7	0.2	0.6	0.0	275
Southern Highlands	0.8	0.4	0.4	0.0	760
Enga	2.8	0.9	1.9	0.0	334
Western Highlands	4.2	0.3	4.0	0.0	362
Chimbu	5.3	1.7	3.6	0.0	651
Eastern Highlands	5.2	2.2	2.5	0.5	772
Morobe	5.3	3.7	1.6	0.1	936
Madang	0.2	0.2	0.0	0.0	729
East Sepik	0.8	0.0	0.8	0.0	564
West Sepik	1.8	1.3	0.4	0.1	446
Manus	1.7	0.7	0.8	0.3	87
New Ireland	2.5	0.7	1.4	0.4	271
East New Britain	2.0	0.4	1.6	0.0	409
West New Britain	3.1	0.7	2.4	0.0	317
Autonomous Region of Bougainville	2.5	0.6	1.7	0.1	332
Hela	1.9	0.4	1.4	0.0	533
Jiwaka	5.0	1.4	3.6	0.0	344
Mother's education					
No education	1.5	0.5	1.0	0.1	2,532
Elementary	2.9	2.1	0.8	0.0	493
Primary	2.0	0.7	1.2	0.1	4,377
Secondary	5.0	1.7	3.2	0.1	1,986
Higher	13.6	8.5	4.9	0.2	373
Wealth quintile					
Lowest	1.4	0.6	0.8	0.0	2,102
Second	1.8	0.8	0.8	0.2	1,995
Middle	2.9	1.2	1.6	0.1	2,011
Fourth	2.5	0.7	1.7	0.1	1,925
Highest	6.7	2.9	3.7	0.1	1,729
Total	3.0	1.2	1.6	0.1	9,761

Note: The question on C-section was asked only of women who delivered in a health facility. In this table, it is assumed that women who did not give birth in a health facility did not receive a C-section.

[1] Includes only the most recent birth in the 5 years preceding the survey

Table 9.8 Duration of stay in health facility after birth

Among women with a birth in the 5 years preceding the survey who delivered their most recent live birth in a health facility, percent distribution by duration of stay in the health facility following their most recent live birth, according to type of delivery, Papua New Guinea DHS 2016-18

Type of delivery	<6 hours	6-11 hours	12-23 hours	1-2 days	3+ days	Missing	Total	Number of women
Vaginal birth	14.7	6.0	5.2	47.6	25.7	0.8	100.0	3,594
Caesarean section	2.0	2.2	0.4	19.7	73.6	2.1	100.0	243

Table 9.9 Delivery complications

Percentage of live births in the 3 years preceding the survey by type of complications encountered at delivery, according to antenatal and delivery care received, early neonatal death status, and other background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Prolonged labour	Excessive bleeding following childbirth	High fever and foul-smelling vaginal discharge	Convulsions	Water breaking more than 6 hours before birth	Other complications	None	Number of live births
Medical maternity care[1]								
No antenatal care and no delivery care	23.8	27.8	8.6	8.4	28.8	1.0	46.8	235
Antenatal care and no delivery care	23.8	35.0	11.3	7.4	19.7	3.9	49.0	173
No antenatal care but delivery care	36.6	35.6	16.6	17.1	31.8	1.5	36.9	945
Antenatal care and delivery care	38.1	32.6	13.1	12.4	27.8	3.4	38.1	3,602
Early neonatal death status								
Surviving at survey date	35.5	32.0	12.7	12.2	27.7	2.7	39.4	5,522
Dead at age 1 month or older	34.4	34.0	13.6	6.1	20.7	12.3	40.4	110
Dead at less than age 1 month (neonatal deaths)	41.5	47.7	18.8	21.2	29.4	6.8	21.1	140
Residence								
Urban	39.5	35.5	14.2	14.3	32.3	7.5	30.1	638
Rural	35.2	32.0	12.7	12.1	27.0	2.4	40.1	5,134
Region								
Southern	36.5	31.0	11.4	10.6	32.8	4.4	37.1	1,160
Highlands	33.2	33.7	14.3	12.7	23.1	2.9	41.9	2,182
Momase	36.0	31.3	13.1	13.4	31.9	2.6	36.1	1,567
Islands	40.2	33.1	11.0	11.7	24.1	2.2	39.5	862
Wealth quintile								
Lowest	31.6	32.0	15.5	14.4	30.6	1.5	41.4	1,238
Second	34.4	35.1	12.9	12.1	29.9	2.9	38.7	1,167
Middle	34.7	32.3	14.0	13.3	23.7	2.9	40.3	1,212
Fourth	35.5	32.4	10.5	11.3	25.3	3.2	41.8	1,144
Highest	43.4	30.0	11.0	9.8	28.7	4.8	31.7	1,011
Total	35.7	32.4	12.9	12.3	27.6	3.0	39.0	5,771

[1] Includes only the most recent birth in the 3 years preceding the survey

Table 9.10 Timing of first postnatal check for the mother

Among women age 15-49 giving birth in the 2 years preceding the survey, percent distribution of the mother's first postnatal check for the most recent live birth by time after delivery, and percentage of women with a live birth during the 2 years preceding the survey who received a postnatal check in the first 2 days after giving birth, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Time after delivery of mother's first postnatal check[1]						No postnatal check[2]	Total	Percentage of women with a postnatal check during the first 2 days after birth[1]	Number of women
	Less than 4 hours	4-23 hours	1-2 days	3-6 days	7-41 days	Don't know/ missing				
Age at birth										
<20	26.3	8.5	12.2	0.6	0.8	2.8	48.7	100.0	47.1	364
20-34	24.9	11.4	10.5	0.8	1.6	1.5	49.4	100.0	46.8	2,683
35-49	21.3	9.3	7.9	1.2	1.9	0.5	57.9	100.0	38.5	595
Birth order										
1	30.6	12.4	11.3	1.0	1.5	2.3	40.8	100.0	54.4	874
2-3	22.6	11.3	11.4	0.5	1.5	1.5	51.1	100.0	45.3	1,443
4-5	24.6	8.9	10.1	1.0	1.3	1.1	53.0	100.0	43.8	827
6+	18.6	9.2	5.4	1.2	2.1	0.4	63.0	100.0	33.3	498
Place of delivery										
Health facility	39.7	17.7	15.7	0.8	0.8	2.6	22.7	100.0	73.2	2,031
Elsewhere	5.2	2.0	3.5	0.9	2.6	0.1	85.8	100.0	10.6	1,591
Residence										
Urban	34.8	19.9	17.5	1.5	2.1	1.9	22.4	100.0	72.2	409
Rural	23.1	9.6	9.4	0.8	1.5	1.4	54.3	100.0	42.1	3,233
Region										
Southern	36.2	10.8	7.4	1.0	2.2	1.0	41.2	100.0	54.6	727
Highlands	16.1	11.2	11.0	0.5	1.4	1.6	58.2	100.0	38.3	1,382
Momase	18.2	10.5	10.4	0.7	1.4	1.0	57.7	100.0	39.1	990
Islands	41.2	9.9	11.9	1.8	1.3	2.5	31.4	100.0	63.3	543
Province										
Western	34.2	4.9	4.5	0.0	2.6	1.5	52.3	100.0	43.6	94
Gulf	18.0	3.7	10.1	1.5	2.2	3.1	61.3	100.0	32.6	73
Central	41.3	11.5	7.3	1.4	2.9	0.2	35.4	100.0	60.1	147
National Capital District	45.9	30.4	9.6	0.4	2.7	0.9	10.0	100.0	86.0	95
Milne Bay	49.0	10.4	6.0	1.4	1.9	0.6	30.7	100.0	65.5	207
Northern	11.0	3.6	9.2	1.1	1.3	1.3	72.5	100.0	23.7	111
Southern Highlands	12.9	1.9	11.0	0.0	1.3	1.2	71.7	100.0	25.8	263
Enga	11.0	7.2	12.5	2.4	0.3	0.8	65.9	100.0	30.6	137
Western Highlands	11.2	13.9	23.1	0.5	2.0	0.0	49.3	100.0	48.3	122
Chimbu	18.0	22.1	8.1	0.0	1.4	1.0	49.3	100.0	48.2	246
Eastern Highlands	18.5	13.0	8.7	0.0	0.7	1.1	58.0	100.0	40.1	281
Morobe	25.3	13.6	13.7	1.1	2.9	0.2	43.3	100.0	52.5	357
Madang	16.1	13.1	13.4	0.4	0.6	3.0	53.4	100.0	42.6	260
East Sepik	9.1	6.9	6.4	0.8	0.8	0.5	75.5	100.0	22.4	204
West Sepik	17.5	4.2	3.9	0.1	0.5	0.3	73.4	100.0	25.7	170
Manus	38.1	12.9	29.7	2.7	2.5	0.5	13.6	100.0	80.7	32
New Ireland	44.9	15.0	13.7	3.0	0.0	1.2	22.1	100.0	73.6	91
East New Britain	42.3	18.2	8.1	0.0	3.7	1.6	26.1	100.0	69.7	151
West New Britain	36.1	3.7	7.1	3.7	0.5	5.9	43.1	100.0	46.9	125
Autonomous Region of Bougainville	42.7	2.8	14.9	0.9	0.2	1.8	36.7	100.0	60.4	144
Hela	19.0	10.4	10.5	0.0	3.4	6.1	50.5	100.0	39.9	199
Jiwaka	19.1	8.6	9.8	2.3	0.0	0.2	60.0	100.0	37.4	133
Education										
No education	10.7	6.3	6.9	1.1	1.7	1.2	72.2	100.0	23.9	897
Elementary	21.2	3.8	11.3	1.3	0.5	0.5	61.5	100.0	36.2	173
Primary	26.6	9.9	10.0	0.6	1.5	1.8	49.7	100.0	46.5	1,668
Secondary	34.9	16.1	13.9	1.0	1.4	1.7	31.0	100.0	65.0	743
Higher	33.6	27.2	14.5	1.2	3.0	0.1	20.4	100.0	75.3	161
Wealth quintile										
Lowest	13.5	2.6	6.5	0.8	1.6	0.9	74.0	100.0	22.7	740
Second	17.7	5.9	8.4	0.2	1.3	0.7	65.7	100.0	32.1	728
Middle	26.4	9.7	9.0	1.0	1.4	2.5	50.0	100.0	45.1	772
Fourth	30.1	11.4	14.9	1.5	1.9	1.2	39.1	100.0	56.6	736
Highest	35.2	25.6	12.8	0.7	1.6	2.1	21.9	100.0	73.7	666
Total	24.4	10.8	10.3	0.8	1.6	1.5	50.7	100.0	45.5	3,642

Note: Total includes 20 women with missing information on place of delivery.
[1] Includes women who received a check from a doctor, midwife, nurse (including trained community health workers), community health worker, or traditional birth attendant
[2] Includes women who received a check after 41 days

Table 9.11 Type of provider of first postnatal check for the mother

Among women age 15-49 giving birth in the 2 years preceding the survey, percent distribution by type of provider of the mother's first postnatal health check during the 2 days after the most recent live birth, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Type of health provider of mother's first postnatal check					No postnatal check during the first 2 days after birth	Total	Number of women
	Doctor	Midwife	Nurse[1]	Trained village health volunteer (VHV)	Traditional birth attendant			
Age at birth								
<20	11.5	5.0	27.5	1.5	1.6	52.9	100.0	364
20-34	11.9	4.6	28.9	0.7	0.7	53.2	100.0	2,683
35-49	10.9	3.8	20.9	0.8	2.1	61.5	100.0	595
Birth order								
1	15.2	6.5	30.6	1.0	1.0	45.6	100.0	874
2-3	11.1	5.0	28.2	0.5	0.7	54.7	100.0	1,443
4-5	12.4	3.3	26.1	1.3	0.8	56.2	100.0	827
6+	6.1	2.0	22.0	0.6	2.5	66.7	100.0	498
Place of delivery								
Health facility	20.4	7.3	44.5	0.8	0.1	26.8	100.0	2,031
Elsewhere	0.7	1.0	5.9	0.8	2.2	89.4	100.0	1,591
Residence								
Urban	35.8	6.2	29.5	0.7	0.0	27.8	100.0	409
Rural	8.6	4.3	27.2	0.8	1.2	57.9	100.0	3,233
Region								
Southern	15.4	2.9	34.2	1.3	0.8	45.4	100.0	727
Highlands	9.9	7.3	19.9	0.5	0.7	61.7	100.0	1,382
Momase	12.4	2.0	22.1	0.8	1.9	60.9	100.0	990
Islands	10.0	4.2	47.4	1.1	0.6	36.7	100.0	543
Province								
Western	4.0	5.5	32.6	0.7	0.8	56.4	100.0	94
Gulf	4.0	2.0	26.7	0.0	0.0	67.4	100.0	73
Central	19.4	0.8	35.3	3.7	1.0	39.9	100.0	147
National Capital District	48.0	6.1	31.8	0.1	0.0	14.0	100.0	95
Milne Bay	12.1	1.9	48.1	1.5	1.9	34.5	100.0	207
Northern	5.2	3.1	15.3	0.2	0.0	76.3	100.0	111
Southern Highlands	4.8	6.7	14.3	0.0	0.0	74.2	100.0	263
Enga	8.9	5.5	14.4	1.8	0.0	69.4	100.0	137
Western Highlands	26.9	3.7	17.7	0.0	0.0	51.7	100.0	122
Chimbu	13.9	17.3	15.3	0.2	1.5	51.8	100.0	246
Eastern Highlands	12.4	4.9	21.4	0.0	1.4	59.9	100.0	281
Morobe	24.3	1.7	24.0	1.5	1.0	47.5	100.0	357
Madang	8.0	3.1	26.2	0.0	5.3	57.4	100.0	260
East Sepik	4.4	1.4	16.5	0.0	0.0	77.6	100.0	204
West Sepik	3.7	1.9	18.3	1.3	0.5	74.3	100.0	170
Manus	21.6	1.7	48.8	8.6	0.0	19.3	100.0	32
New Ireland	13.0	3.0	56.8	0.0	0.9	26.4	100.0	91
East New Britain	13.1	1.2	54.8	0.7	0.0	30.3	100.0	151
West New Britain	4.4	6.9	34.6	1.0	0.0	53.1	100.0	125
Autonomous Region of Bougainville	7.2	6.3	44.6	0.6	1.7	39.6	100.0	144
Hela	1.1	2.7	34.2	1.9	0.0	60.1	100.0	199
Jiwaka	6.0	7.5	22.5	0.0	1.4	62.6	100.0	133
Education								
No education	5.5	1.5	15.0	0.9	1.0	76.1	100.0	897
Elementary	7.2	3.6	24.6	0.0	0.8	63.8	100.0	173
Primary	10.0	3.9	30.2	0.9	1.5	53.5	100.0	1,668
Secondary	18.5	7.1	38.4	0.6	0.3	35.0	100.0	743
Higher	36.7	17.1	20.0	1.6	0.0	24.7	100.0	161
Wealth quintile								
Lowest	3.3	1.8	15.0	1.2	1.4	77.3	100.0	740
Second	6.2	4.5	19.5	0.7	1.1	67.9	100.0	728
Middle	8.6	4.2	30.5	0.2	1.5	54.9	100.0	772
Fourth	13.8	3.8	36.6	1.6	0.8	43.4	100.0	736
Highest	28.3	8.7	36.2	0.2	0.2	26.3	100.0	666
Total	11.7	4.5	27.4	0.8	1.0	54.5	100.0	3,642

Note: Total includes 20 women with missing information on place of delivery.
[1] Includes trained community health workers

Table 9.12 Timing of first postnatal check for the newborn

Percent distribution of most recent live births in the 2 years preceding the survey by time after birth of first postnatal check, and percentage of births with a postnatal check during the first 2 days after birth, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Time after delivery of newborn's first postnatal check[1]								Percentage of births with a postnatal check during the first 2 days after birth[1]	Number of births
	Less than 1 hour	1-3 hours	4-23 hours	1-2 days	3-6 days	Don't know	No postnatal check[2]	Total		
Mother's age at birth										
<20	3.5	23.3	8.0	11.7	0.7	1.8	51.0	100.0	46.5	364
20-34	4.0	20.1	10.7	11.7	0.9	1.0	51.7	100.0	46.5	2,683
35-49	3.7	16.9	8.4	9.1	0.6	0.4	60.9	100.0	38.2	595
Birth order										
1	4.4	25.5	10.8	10.4	1.0	1.4	46.4	100.0	51.1	874
2-3	3.5	18.6	10.7	14.3	0.5	0.9	51.4	100.0	47.2	1,443
4-5	3.9	19.3	9.1	9.3	0.8	0.8	56.7	100.0	41.7	827
6+	3.7	15.0	8.6	7.1	1.2	0.5	63.9	100.0	34.4	498
Place of delivery										
Health facility	6.8	33.5	16.8	16.4	0.3	1.7	24.5	100.0	73.5	2,031
Elsewhere	0.2	2.8	1.6	4.8	1.4	0.1	89.1	100.0	9.4	1,591
Residence										
Urban	6.0	31.1	17.7	18.9	0.3	2.6	23.5	100.0	73.8	409
Rural	3.6	18.5	9.1	10.3	0.9	0.8	56.8	100.0	41.5	3,233
Region										
Southern	9.2	29.1	11.6	8.1	1.3	1.1	39.5	100.0	58.1	727
Highlands	1.2	12.8	9.7	13.5	0.3	0.4	61.9	100.0	37.3	1,382
Momase	1.6	15.7	8.8	11.1	0.8	0.7	61.2	100.0	37.3	990
Islands	7.5	33.5	11.2	9.8	1.4	2.5	34.0	100.0	62.0	543
Province										
Western	8.0	23.7	7.9	7.3	0.0	1.8	51.4	100.0	46.8	94
Gulf	0.0	13.4	3.3	11.0	0.6	2.4	69.2	100.0	27.8	73
Central	7.6	34.7	12.8	8.5	1.2	1.5	33.7	100.0	63.6	147
National Capital District	13.5	35.0	28.6	12.3	0.4	1.9	8.2	100.0	89.6	95
Milne Bay	16.9	38.8	11.0	5.8	2.0	0.2	25.3	100.0	72.5	207
Northern	0.7	13.3	5.3	7.1	2.7	0.2	70.8	100.0	26.3	111
Southern Highlands	1.1	11.0	3.0	8.4	0.3	0.4	75.9	100.0	23.5	263
Enga	0.3	10.9	6.0	14.0	0.6	0.1	68.0	100.0	31.2	137
Western Highlands	0.3	8.8	14.3	26.2	1.2	0.6	48.5	100.0	49.6	122
Chimbu	0.6	18.0	20.7	20.6	0.0	1.0	39.1	100.0	60.0	246
Eastern Highlands	0.1	11.6	11.8	9.5	0.0	0.0	66.9	100.0	33.1	281
Morobe	0.6	22.4	12.3	12.0	0.0	0.7	52.1	100.0	47.2	357
Madang	1.8	11.2	9.3	19.4	1.3	1.0	56.0	100.0	41.7	260
East Sepik	2.0	10.5	6.1	5.6	1.3	1.0	73.6	100.0	24.1	204
West Sepik	3.2	14.8	4.0	3.4	1.0	0.0	73.6	100.0	25.4	170
Manus	4.8	33.5	11.9	26.3	3.0	1.9	18.6	100.0	76.4	32
New Ireland	1.2	45.6	18.1	6.5	1.2	0.8	26.7	100.0	71.3	91
East New Britain	22.0	23.5	17.9	7.1	0.2	0.2	29.1	100.0	70.5	151
West New Britain	2.8	32.2	6.0	6.3	3.0	7.4	42.2	100.0	47.4	125
Autonomous Region of Bougainville	0.8	37.4	4.2	14.3	1.2	2.0	40.1	100.0	56.8	144
Hela	0.1	13.0	5.2	12.3	0.0	0.6	68.9	100.0	30.6	199
Jiwaka	8.3	14.7	4.7	9.3	1.0	0.4	61.6	100.0	37.0	133
Mother's education										
No education	0.8	9.3	5.3	8.0	0.7	0.8	75.1	100.0	23.5	897
Elementary	1.4	13.8	4.4	9.8	2.3	0.0	68.3	100.0	29.4	173
Primary	4.1	21.8	9.9	10.3	0.8	1.2	51.7	100.0	46.3	1,668
Secondary	7.1	26.9	14.2	15.2	0.6	1.0	35.0	100.0	63.4	743
Higher	5.7	33.9	25.0	22.3	0.7	0.6	11.7	100.0	87.0	161
Wealth quintile										
Lowest	1.6	9.3	2.3	8.4	0.7	0.4	77.3	100.0	21.6	740
Second	1.9	12.6	6.2	7.4	0.7	0.5	70.7	100.0	28.1	728
Middle	3.4	23.5	9.0	12.1	1.1	0.7	50.3	100.0	47.9	772
Fourth	5.1	24.9	11.5	12.9	1.1	1.4	43.2	100.0	54.4	736
Highest	7.7	30.2	22.6	15.9	0.4	1.9	21.3	100.0	76.5	666
Total	3.9	19.9	10.1	11.3	0.8	1.0	53.1	100.0	45.1	3,642

Note: Total includes 20 cases with missing information on place of delivery.
[1] Includes newborns who received a check from a doctor, midwife, nurse (including trained community health workers), trained village health volunteer, or village birth attendant
[2] Includes newborns who received a check after the first week of life

Table 9.13 Type of provider of first postnatal check for the newborn

Percent distribution of most recent live births in the 2 years preceding the survey by type of provider of the newborn's first postnatal health check during the 2 days after the most recent live birth, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Type of health provider of newborn's first postnatal check				No postnatal check during the first 2 days after birth	Total	Number of births
	Doctor	Midwife/nurse[1]	Trained village health volunteer	Village birth attendant			
Mother's age at birth							
<20	11.6	33.1	0.2	1.5	53.5	100.0	364
20-34	13.2	32.4	0.7	0.3	53.5	100.0	2,683
35-49	10.3	25.9	0.9	1.1	61.8	100.0	595
Birth order							
1	15.9	34.2	0.5	0.5	48.9	100.0	874
2-3	12.3	33.8	0.7	0.3	52.8	100.0	1,443
4-5	12.6	27.8	0.6	0.7	58.3	100.0	827
6+	7.0	25.3	0.9	1.2	65.6	100.0	498
Place of delivery							
Health facility	21.5	51.4	0.7	0.0	26.5	100.0	2,031
Elsewhere	1.3	6.2	0.7	1.3	90.6	100.0	1,591
Residence							
Urban	37.7	34.9	1.1	0.0	26.2	100.0	409
Rural	9.3	30.9	0.6	0.6	58.5	100.0	3,233
Region							
Southern	16.9	39.1	1.1	0.9	41.9	100.0	727
Highlands	10.5	26.1	0.4	0.3	62.7	100.0	1,382
Momase	13.9	22.2	0.5	0.7	62.7	100.0	990
Islands	9.4	51.2	0.9	0.5	38.0	100.0	543
Province							
Western	5.8	40.3	0.7	0.0	53.2	100.0	94
Gulf	3.5	24.3	0.0	0.0	72.2	100.0	73
Central	21.3	37.8	4.6	0.0	36.4	100.0	147
National Capital District	46.9	42.6	0.1	0.0	10.4	100.0	95
Milne Bay	15.9	52.9	0.4	3.3	27.5	100.0	207
Northern	5.4	20.9	0.0	0.0	73.7	100.0	111
Southern Highlands	3.0	20.2	0.3	0.0	76.5	100.0	263
Enga	5.7	22.0	3.6	0.0	68.8	100.0	137
Western Highlands	27.6	22.0	0.0	0.0	50.4	100.0	122
Chimbu	18.7	39.7	0.0	1.5	40.0	100.0	246
Eastern Highlands	13.8	19.2	0.0	0.0	66.9	100.0	281
Morobe	24.2	21.8	1.3	0.0	52.8	100.0	357
Madang	12.2	26.6	0.0	2.8	58.3	100.0	260
East Sepik	6.0	18.1	0.0	0.0	75.9	100.0	204
West Sepik	4.1	20.9	0.3	0.0	74.6	100.0	170
Manus	20.2	48.5	7.7	0.0	23.6	100.0	32
New Ireland	11.8	58.6	0.0	0.9	28.7	100.0	91
East New Britain	11.0	58.7	0.8	0.0	29.5	100.0	151
West New Britain	5.1	41.4	0.9	0.0	52.6	100.0	125
Autonomous Region of Bougainville	7.5	47.8	0.0	1.4	43.2	100.0	144
Hela	1.7	28.9	0.0	0.0	69.4	100.0	199
Jiwaka	5.7	31.3	0.0	0.0	63.0	100.0	133
Mother's education							
No education	5.5	16.6	0.9	0.6	76.5	100.0	897
Elementary	7.7	21.7	0.0	0.0	70.6	100.0	173
Primary	10.8	34.1	0.6	0.8	53.7	100.0	1,668
Secondary	21.5	40.8	0.8	0.4	36.6	100.0	743
Higher	33.8	53.2	0.0	0.0	13.0	100.0	161
Wealth quintile							
Lowest	3.9	16.4	0.9	0.4	78.4	100.0	740
Second	5.7	20.9	0.7	0.8	71.9	100.0	728
Middle	10.1	36.0	0.5	1.3	52.1	100.0	772
Fourth	15.8	37.7	0.8	0.1	45.6	100.0	736
Highest	28.7	47.2	0.4	0.2	23.5	100.0	666
Total	12.5	31.4	0.7	0.6	54.9	100.0	3,642

Note: Total includes 20 cases with missing information on place of delivery.
[1] Includes trained community health workers

Table 9.14 Content of postnatal care for newborns

Among most recent live births in the 2 years preceding the survey, percentage for whom selected functions were performed during the first 2 days after the birth and percentage with at least two signal functions performed during the first 2 days after birth, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Among most recent live births in the 2 years preceding the survey, percentage for whom the selected function was performed during the first 2 days after birth: Cord examined	Temperature measured	Counselling on danger signs	Counselling on breast-feeding	Observation of breast-feeding	Weighed[1]	Percentage with at least two signal functions performed during the first 2 days after birth	Number of births
Mother's age at birth								
<20	41.8	39.9	33.8	39.6	40.4	54.4	48.5	364
20-34	43.8	41.3	37.1	38.9	39.2	53.7	47.2	2,683
35-49	35.6	33.6	30.7	26.2	28.9	41.6	36.9	595
Birth order								
1	48.7	46.5	39.9	44.4	45.8	63.1	54.9	874
2-3	43.4	40.7	37.5	38.9	38.1	55.2	46.9	1,443
4-5	39.0	36.0	33.7	33.0	34.3	44.7	41.2	827
6+	33.4	32.3	26.5	24.1	27.5	34.0	33.3	498
Place of delivery								
Health facility	61.6	59.5	52.7	54.6	55.3	85.0	67.3	2,031
Elsewhere	18.2	15.3	14.4	14.8	15.5	9.9	18.6	1,591
Residence								
Urban	61.6	60.8	54.7	59.6	57.7	86.6	68.5	409
Rural	39.8	37.2	33.3	34.0	35.1	47.4	42.8	3,233
Region								
Southern	52.3	51.4	46.6	47.9	48.6	61.6	55.4	727
Highlands	33.5	30.6	29.2	30.9	30.9	47.0	37.4	1,382
Momase	33.7	31.1	25.6	27.4	28.8	39.3	36.3	990
Islands	66.9	64.1	56.0	54.6	56.3	73.7	70.8	543
Province								
Western	59.2	58.4	56.4	53.5	54.5	58.8	59.3	94
Gulf	34.2	31.3	27.1	26.6	26.2	36.5	33.6	73
Central	49.3	46.6	36.6	42.7	47.2	70.7	51.1	147
National Capital District	74.7	76.1	70.8	73.6	69.7	99.4	79.7	95
Milne Bay	60.4	59.8	57.7	56.2	55.4	63.5	65.9	207
Northern	28.1	27.9	22.7	26.5	29.7	32.6	31.6	111
Southern Highlands	21.3	19.4	17.6	19.4	18.2	28.8	21.1	263
Enga	25.4	26.7	19.6	23.3	25.1	46.8	32.1	137
Western Highlands	49.5	43.1	46.6	50.8	42.9	60.5	53.3	122
Chimbu	57.0	40.8	54.7	55.2	54.7	57.1	57.7	246
Eastern Highlands	21.5	27.4	16.2	17.9	22.9	47.2	30.5	281
Morobe	35.2	32.1	23.5	28.0	26.4	53.7	38.9	357
Madang	45.6	40.0	36.5	36.2	40.7	36.5	47.3	260
East Sepik	19.3	18.9	15.7	17.0	18.8	28.0	22.1	204
West Sepik	29.3	29.9	25.2	25.5	27.5	27.0	31.2	170
Manus	78.9	76.7	65.2	72.5	76.2	87.7	86.4	32
New Ireland	66.8	67.8	61.6	55.5	58.5	75.2	72.9	91
East New Britain	73.4	70.8	65.9	65.2	61.8	83.0	76.5	151
West New Britain	59.2	59.5	46.9	44.2	49.0	59.6	62.4	125
Autonomous Region of Bougainville	64.3	55.8	47.8	48.1	51.1	72.2	67.3	144
Hela	36.3	33.7	31.1	32.0	33.7	45.2	40.5	199
Jiwaka	29.4	29.1	23.9	24.3	19.6	54.3	32.9	133
Mother's education								
No education	21.2	20.1	16.8	17.1	17.0	25.3	23.1	897
Elementary	25.9	21.5	22.1	24.8	25.6	30.1	27.9	173
Primary	43.1	41.1	36.8	37.4	39.8	50.3	46.3	1,668
Secondary	60.4	58.6	52.2	55.7	54.1	82.2	66.0	743
Higher	85.6	71.1	67.7	67.9	66.8	98.6	89.8	161
Wealth quintile								
Lowest	22.6	18.9	19.1	19.4	20.4	20.7	23.8	740
Second	30.7	28.3	25.6	25.8	26.7	34.3	33.0	728
Middle	42.5	41.2	36.6	37.0	38.1	49.8	45.8	772
Fourth	54.1	52.6	48.2	49.4	50.1	67.0	58.8	736
Highest	63.6	60.1	50.3	54.5	54.5	91.0	69.2	666
Total	42.3	39.9	35.7	36.9	37.6	51.8	45.7	3,642

Note: Total includes 20 cases with missing information on place of delivery.
[1] Captures newborns who were weighed "at birth." May exclude some newborns who were weighed during the 2 days after birth.

Table 9.15 Cord cutting

Among most recent births in the 2 years preceding the survey that were delivered outside a health facility, percent distribution by instrument used to cut the umbilical cord, and percentage with umbilical cord cut with a clean instrument, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Instrument used to cut the cord				Total	Percentage with cord cut with clean instrument[2]	Number of most recent live births delivered outside a facility in the past 2 years
	New metal instrument[1]	Used metal instrument boiled[1]	Used metal instrument not boiled[1]	Other instrument			
Mother's age at birth							
<20	81.0	0.0	13.4	5.6	100.0	81.0	108
20-34	75.8	0.5	16.9	6.8	100.0	76.3	1,039
35-49	72.7	0.7	18.8	7.8	100.0	73.4	309
Birth order							
1	79.2	0.7	12.7	7.3	100.0	80.0	236
2-3	81.3	0.4	12.9	5.4	100.0	81.7	549
4-5	70.3	0.7	20.3	8.7	100.0	70.9	366
6+	68.7	0.1	24.2	7.0	100.0	68.8	303
Residence							
Urban	86.5	0.0	11.5	2.0	100.0	86.5	45
Rural	75.2	0.5	17.3	7.0	100.0	75.7	1,410
Region							
Southern	69.7	1.5	18.0	10.9	100.0	71.1	233
Highlands	73.6	0.5	18.5	7.4	100.0	74.1	524
Momase	78.3	0.2	17.3	4.2	100.0	78.5	552
Islands	81.4	0.0	9.9	8.7	100.0	81.4	146
Mother's education							
No education	70.1	0.5	21.0	8.3	100.0	70.6	527
Elementary	70.1	0.9	13.7	15.3	100.0	71.0	98
Primary	78.6	0.3	15.8	5.2	100.0	78.9	689
Secondary	83.9	0.9	11.3	3.9	100.0	84.8	136
Higher	*	*	*	*	*	*	5
Wealth quintile							
Lowest	70.4	0.4	20.8	8.3	100.0	70.9	466
Second	75.4	0.5	19.1	4.9	100.0	75.9	396
Middle	79.1	0.9	12.6	7.4	100.0	80.0	315
Fourth	81.1	0.0	11.6	7.3	100.0	81.1	239
Highest	75.4	0.0	21.8	2.8	100.0	75.4	39
Total	75.5	0.5	17.1	6.9	100.0	76.0	1,455

Note: Provincial estimates are not shown due to the small number of cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Razor blade, knife, or scissors
[2] Clean instruments are new metal instruments and used metal instruments that were boiled.

Table 9.16 Cord care

Among most recent births in the 2 years preceding the survey, percentage with different substances applied to the stump of the umbilical cord and percentage with nothing harmful applied to the umbilical cord, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Substances applied to the cord				Percentage with nothing harmful applied to the cord[3]	Number of births
	Nothing	Chlorhexidine	Other antiseptic[1]	Other substance[2]		
Mother's age at birth						
<20	49.1	20.9	20.5	8.0	89.6	364
20-34	50.7	21.0	20.7	5.6	91.0	2,683
35-49	56.3	17.9	15.5	8.3	88.9	595
Birth order						
1	44.7	21.2	24.3	6.7	89.5	874
2-3	51.0	22.2	19.8	5.3	91.8	1,443
4-5	54.2	20.2	18.7	5.8	91.0	827
6+	60.3	14.7	14.0	9.2	87.8	498
Residence						
Urban	25.6	34.1	37.6	2.6	95.3	409
Rural	54.8	18.8	17.6	6.7	89.9	3,233
Region						
Southern	45.9	29.8	19.9	5.0	93.5	727
Highlands	59.4	15.5	16.4	5.0	90.2	1,382
Momase	56.2	18.5	15.1	9.2	89.5	990
Islands	30.2	24.6	37.1	5.7	89.1	543
Province						
Western	43.2	28.6	20.6	5.5	92.2	94
Gulf	58.9	23.4	8.6	9.3	90.7	73
Central	47.0	28.7	22.4	1.6	95.7	147
National Capital District	19.0	39.7	40.1	1.8	96.7	95
Milne Bay	39.1	37.3	18.9	6.9	91.4	207
Northern	73.5	13.8	7.8	5.6	94.7	111
Southern Highlands	71.9	6.9	15.7	1.9	94.1	263
Enga	54.3	12.5	20.9	11.6	86.0	137
Western Highlands	45.4	34.7	12.1	3.4	91.1	122
Chimbu	37.1	22.2	34.7	4.4	94.0	246
Eastern Highlands	74.0	13.8	7.4	3.7	91.8	281
Morobe	47.4	17.3	27.9	7.1	92.1	357
Madang	56.8	23.9	5.9	11.5	86.6	260
East Sepik	63.2	17.9	9.4	9.3	89.9	204
West Sepik	65.4	13.3	9.4	10.2	88.1	170
Manus	6.9	41.8	60.7	1.5	96.7	32
New Ireland	25.2	31.0	43.7	5.2	93.7	91
East New Britain	21.8	8.5	63.6	5.8	91.2	151
West New Britain	42.0	23.5	27.4	6.2	92.9	125
Autonomous Region of Bougainville	37.1	34.7	8.5	6.5	79.2	144
Hela	68.4	13.5	7.4	5.3	89.2	199
Jiwaka	50.0	12.1	16.0	9.0	77.6	133
Mother's education						
No education	70.6	10.8	8.1	6.9	89.2	897
Elementary	64.9	15.5	17.0	5.0	91.6	173
Primary	52.5	20.0	18.4	7.1	90.1	1,668
Secondary	31.6	31.1	30.8	4.9	91.5	743
Higher	11.1	36.4	52.9	1.2	97.1	161
Wealth quintile						
Lowest	78.1	7.4	6.5	6.4	91.8	740
Second	63.9	14.6	10.8	8.5	88.6	728
Middle	51.7	19.4	20.9	6.5	90.2	772
Fourth	38.7	25.4	26.3	8.0	88.4	736
Highest	22.2	37.5	36.2	1.5	94.1	666
Total	51.5	20.5	19.9	6.3	90.5	3,642

Note: Mothers can report more than one substance applied to the stump of the umbilical cord.
[1] Includes alcohol, spirit, or gentian violet
[2] Includes olive oil, ash, animal dung, turmeric, toothpaste, or other substances
[3] Either nothing applied to the cord or nothing other than chlorhexidine or another antiseptic applied

Table 9.17 Use of chlorhexidine

Among most recent live births in the 2 years preceding the survey, percentage with chlorhexidine applied to the stump of the umbilical cord and percentage with chlorhexidine applied to the stump of the umbilical cord within 24 hours after birth, and among most recent live births in the 2 years preceding the survey with chlorhexidine applied to the stump of the umbilical cord, percent distribution by number of days chlorhexidine was applied, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage with chlorhexidine applied to the cord	Percentage with chlorhexidine applied within 24 hours after birth	Number of births	Number of days chlorhexidine applied to the cord				Total	Number of births with chlorhexidine applied to the cord
				1	2-7	8+	Don't know		
Mother's age at birth									
<20	20.9	14.4	364	40.7	42.6	3.7	13.0	100.0	76
20-34	21.0	14.9	2,683	43.0	42.6	9.0	5.4	100.0	564
35-49	17.9	11.5	595	25.9	54.4	8.4	11.3	100.0	106
Place of delivery									
Health facility	34.9	24.6	2,031	41.4	43.6	8.0	7.0	100.0	710
Elsewhere	2.3	1.3	1,591	(20.2)	(57.7)	(14.9)	(7.2)	100.0	37
Birth order									
1	21.2	13.5	874	43.5	41.0	7.3	8.2	100.0	186
2-3	22.2	16.1	1,443	42.2	44.1	9.4	4.3	100.0	321
4-5	20.2	14.7	827	42.0	39.4	9.5	9.1	100.0	167
6+	14.7	9.5	498	20.6	64.6	3.8	10.9	100.0	73
Residence									
Urban	34.1	24.8	409	41.1	45.8	8.3	4.7	100.0	139
Rural	18.8	12.9	3,233	40.2	44.0	8.4	7.5	100.0	607
Region									
Southern	29.8	22.0	727	32.7	53.9	8.7	4.7	100.0	216
Highlands	15.5	9.4	1,382	54.7	26.1	5.6	13.7	100.0	214
Momase	18.5	14.0	990	42.4	42.6	12.3	2.6	100.0	183
Islands	24.6	16.8	543	26.9	60.2	6.9	6.0	100.0	134
Mother's education									
No education	10.8	6.8	897	55.2	29.4	4.1	11.2	100.0	97
Elementary	15.5	10.9	173	(70.9)	(13.2)	(6.4)	(9.5)	100.0	27
Primary	20.0	13.9	1,668	36.1	50.7	5.7	7.4	100.0	333
Secondary	31.1	21.7	743	40.8	40.5	14.7	4.0	100.0	231
Higher	36.4	28.9	161	24.2	61.6	6.1	8.1	100.0	58
Wealth quintile									
Lowest	7.4	4.4	740	(34.9)	(34.6)	(3.1)	(27.4)	100.0	54
Second	14.6	10.2	728	37.3	48.7	6.3	7.8	100.0	107
Middle	19.4	12.7	772	42.1	43.3	6.7	7.8	100.0	150
Fourth	25.4	18.6	736	37.2	49.0	10.3	3.4	100.0	187
Highest	37.5	26.7	666	44.2	41.6	9.9	4.4	100.0	250
Total	20.5	14.3	3,642	40.4	44.3	8.4	7.0	100.0	747

Note: Total number of births includes 20 births missing place of birth. Figures in parentheses are based on 25-49 unweighted cases.

Table 9.18 Problems in accessing health care

Percentage of women age 15-49 who reported that they have serious problems in accessing health care for themselves when they are sick, by type of problem, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Problems in accessing health care					
	Getting permission to go for treatment	Getting money for treatment	Distance to health facility	Not wanting to go alone	At least one problem accessing health care	Number of women
Age						
15-19	36.3	64.7	54.2	53.8	77.8	2,945
20-34	30.7	63.0	55.6	43.2	73.8	7,482
35-49	30.3	63.0	56.6	39.6	72.7	4,771
Number of living children						
0	32.8	63.3	52.0	49.0	75.4	4,957
1-2	31.0	62.3	55.4	41.3	72.6	4,273
3-4	29.4	63.9	58.0	40.9	73.7	3,554
5+	33.6	64.6	59.9	44.0	75.5	2,414
Marital status						
Never married	33.1	62.1	50.7	49.8	74.2	3,968
Married or living together	31.1	63.0	57.8	42.8	74.0	10,052
Divorced/separated/widowed	30.8	70.6	54.0	36.1	76.6	1,179
Employed last 12 months						
Not employed	31.7	65.0	57.6	46.7	75.6	10,228
Employed for cash	26.4	48.5	36.4	25.2	60.9	2,391
Employed not for cash	36.1	71.3	66.3	51.6	81.0	2,531
Residence						
Urban	18.0	40.4	22.8	26.3	53.9	2,018
Rural	33.7	66.9	60.7	46.9	77.3	13,180
Region						
Southern	23.3	56.4	51.3	41.1	69.9	2,899
Highlands	31.9	68.8	56.0	45.0	75.6	6,213
Momase	36.0	64.1	61.0	47.5	77.1	3,919
Islands	34.0	55.6	50.8	39.6	70.8	2,167
Province						
Western	20.1	55.4	52.7	46.3	68.8	352
Gulf	46.0	83.3	75.5	67.9	89.4	277
Central	18.5	52.0	51.2	42.5	70.2	557
National Capital District	12.6	32.7	18.1	24.7	46.3	526
Milne Bay	22.5	65.3	60.7	35.6	78.0	767
Northern	32.4	58.9	58.5	47.6	72.4	421
Southern Highlands	46.2	84.4	71.1	56.0	87.0	1,089
Enga	44.8	77.1	63.3	52.5	82.3	563
Western Highlands	22.9	58.1	41.0	23.4	65.5	746
Chimbu	25.5	65.8	51.7	37.4	75.8	1,038
Eastern Highlands	20.4	66.9	52.7	44.2	76.0	1,310
Morobe	32.3	55.6	52.2	46.8	71.7	1,514
Madang	26.5	64.3	63.1	36.9	77.0	987
East Sepik	46.8	70.5	65.7	49.7	82.8	872
West Sepik	46.2	77.1	74.0	65.3	83.6	545
Manus	17.5	63.1	56.9	46.3	75.0	135
New Ireland	21.2	56.2	49.3	26.2	63.5	385
East New Britain	58.4	66.4	49.0	39.5	80.2	572
West New Britain	22.9	55.0	52.1	38.2	69.8	532
Autonomous Region of Bougainville	32.6	42.5	50.8	48.9	65.9	544
Hela	44.7	75.8	70.1	69.0	82.8	874
Jiwaka	22.4	45.1	34.5	24.8	49.4	594
Education						
No education	39.4	78.5	74.0	58.8	85.4	3,488
Elementary	32.3	76.8	68.9	53.0	85.0	676
Primary	33.1	66.1	59.1	45.5	77.4	6,969
Secondary	23.9	47.5	34.8	30.2	60.8	3,460
Higher	13.3	20.1	14.7	14.2	37.5	605
Wealth quintile						
Lowest	44.1	84.0	80.6	64.9	89.9	2,783
Second	37.1	76.9	72.1	53.6	84.5	2,831
Middle	30.8	69.0	62.5	47.1	79.5	2,897
Fourth	30.1	57.7	49.8	37.1	71.5	3,118
Highest	19.6	36.8	22.6	24.1	52.0	3,569
Total	31.6	63.4	55.7	44.1	74.2	15,198

Note: Total includes 48 women with missing information on employment status in the last 12 months.

Table 9.19.1 Visits to health facilities: Women

Percentage of women age 15-49 who visited a health facility to seek advice or treatment in the past 12 months and percent distribution of women who visited the health facility by reason for visiting, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage of women who visited a health facility	Number of women	Among women who visited a health facility, reason for visit						Number of women
			Illness	Accident	Health checkup	Family planning consultation/ method	Missing	Total	
Age									
15-19	32.1	2,945	89.1	2.3	5.7	2.3	0.7	100.0	945
20-24	39.5	2,759	74.8	1.1	16.3	6.8	1.0	100.0	1,091
25-29	36.5	2,543	70.7	2.0	14.2	12.3	0.7	100.0	927
30-39	34.6	4,239	73.1	1.1	12.3	12.1	1.4	100.0	1,467
40-49	38.5	2,712	86.8	1.3	6.9	4.4	0.6	100.0	1,044
Marital status									
Never married	33.1	3,968	92.0	1.7	4.9	0.9	0.5	100.0	1,315
Married or living together	37.5	10,052	73.5	1.4	13.6	10.5	1.0	100.0	3,765
Divorced/separated/widowed	33.5	1,179	79.8	1.4	10.1	6.7	2.0	100.0	395
Residence									
Urban	45.3	2,018	80.0	1.1	12.1	6.0	0.7	100.0	913
Rural	34.6	13,180	78.1	1.6	11.0	8.3	1.0	100.0	4,561
Region									
Southern	41.9	2,899	71.0	1.8	14.4	11.9	0.8	100.0	1,214
Highlands	33.1	6,213	80.5	2.1	10.0	6.3	1.1	100.0	2,059
Momase	34.3	3,919	81.5	0.4	8.7	8.9	0.5	100.0	1,344
Islands	39.6	2,167	79.0	1.2	13.7	4.8	1.3	100.0	858
Province									
Western	43.4	352	70.0	3.0	5.8	19.6	1.7	100.0	152
Gulf	31.2	277	73.9	0.2	12.4	12.5	1.0	100.0	87
Central	36.1	557	60.5	1.5	19.7	17.7	0.5	100.0	201
National Capital District	42.1	526	73.3	2.1	15.7	8.6	0.3	100.0	221
Milne Bay	53.5	767	70.9	1.4	17.0	9.7	1.0	100.0	410
Northern	33.8	421	81.4	2.8	8.3	6.8	0.7	100.0	142
Southern Highlands	32.9	1,089	83.3	2.7	8.6	5.3	0.1	100.0	359
Enga	28.0	563	85.3	4.2	5.5	1.3	3.7	100.0	158
Western Highlands	26.2	746	80.0	0.5	9.2	9.4	0.9	100.0	195
Chimbu	36.7	1,038	75.9	1.6	13.4	8.4	0.7	100.0	380
Eastern Highlands	38.9	1,310	81.6	3.0	7.9	7.5	0.0	100.0	509
Morobe	46.3	1,514	83.7	0.0	6.2	9.2	0.9	100.0	701
Madang	30.6	987	70.5	0.2	18.9	10.4	0.1	100.0	302
East Sepik	21.6	872	90.8	0.9	3.8	4.3	0.2	100.0	188
West Sepik	28.0	545	82.1	1.9	5.7	10.0	0.3	100.0	152
Manus	37.3	135	79.4	1.3	14.4	3.5	1.4	100.0	50
New Ireland	39.6	385	77.0	1.5	18.7	2.1	0.7	100.0	153
East New Britain	49.0	572	78.6	0.5	14.7	4.3	1.9	100.0	280
West New Britain	32.7	532	74.2	0.6	12.4	12.6	0.2	100.0	174
Autonomous Region of Bougainville	37.0	544	85.1	2.5	9.3	1.4	1.7	100.0	201
Hela	30.1	874	83.7	1.7	6.0	4.1	4.4	100.0	263
Jiwaka	32.7	594	73.7	0.6	21.3	4.1	0.3	100.0	194
Education									
No education	26.1	3,488	76.7	1.8	9.3	10.4	1.7	100.0	910
Elementary	31.1	676	75.5	2.5	9.5	9.8	2.7	100.0	210
Primary	35.3	6,969	78.5	1.2	11.4	8.2	0.7	100.0	2,457
Secondary	44.4	3,460	79.4	1.7	11.1	7.0	0.8	100.0	1,535
Higher	59.9	605	79.6	1.1	16.1	3.0	0.1	100.0	363
Wealth quintile									
Lowest	25.8	2,783	74.5	0.9	10.5	11.4	2.7	100.0	717
Second	29.4	2,831	78.7	1.3	11.0	8.4	0.6	100.0	832
Middle	34.6	2,897	76.5	1.3	12.3	9.2	0.7	100.0	1,002
Fourth	41.6	3,118	78.7	1.7	10.8	7.9	0.9	100.0	1,298
Highest	45.5	3,569	80.9	1.8	11.3	5.5	0.5	100.0	1,625
Total	36.0	15,198	78.4	1.5	11.2	7.9	0.9	100.0	5,474

Table 9.19.2 Visits to health facilities: Men

Percentage of men age 15-49 who visited a health facility to seek advice or treatment in the past 12 months and percent distribution of men who visited the health facility by reason for visiting, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage of men who visited a health facility	Number of men	Among men who visited a health facility, reason for visit						Number of men
			Illness	Accident	Health checkup	Family planning consultation/ method	Missing	Total	
Age									
15-19	35.3	1,435	90.4	5.0	3.5	0.7	0.5	100.0	507
20-24	34.3	1,454	86.2	6.4	5.9	1.2	0.2	100.0	498
25-29	30.8	1,325	81.6	7.3	7.9	2.7	0.6	100.0	409
30-39	32.5	2,062	85.5	5.8	6.8	1.3	0.7	100.0	671
40-49	34.9	1,056	79.4	5.9	13.5	0.7	0.5	100.0	369
Marital status									
Never married	30.9	3,114	86.4	7.5	5.3	0.2	0.6	100.0	961
Married or living together	35.6	3,947	84.2	4.8	8.4	2.1	0.5	100.0	1,406
Divorced/separated/widowed	31.7	272	84.9	8.7	6.4	0.0	0.0	100.0	86
Residence									
Urban	42.0	976	83.1	6.0	9.4	0.9	0.6	100.0	410
Rural	32.1	6,357	85.5	6.0	6.6	1.3	0.5	100.0	2,043
Region									
Southern	35.9	1,490	86.7	4.7	7.9	0.7	0.0	100.0	535
Highlands	26.6	2,871	79.2	7.7	9.0	3.1	1.0	100.0	763
Momase	40.3	1,999	89.5	4.2	5.7	0.2	0.4	100.0	805
Islands	35.9	973	85.4	8.4	5.0	0.8	0.4	100.0	350
Province									
Western	24.4	182	89.8	1.2	8.9	0.0	0.0	100.0	44
Gulf	27.5	137	87.8	7.3	4.3	0.0	0.5	100.0	38
Central	36.0	272	89.5	4.5	5.9	0.0	0.0	100.0	98
National Capital District	41.8	251	83.6	3.0	13.4	0.0	0.0	100.0	105
Milne Bay	46.8	423	85.9	5.7	6.8	1.6	0.0	100.0	198
Northern	23.3	223	86.6	6.1	6.8	0.5	0.0	100.0	52
Southern Highlands	23.1	457	83.7	8.5	5.6	0.0	2.2	100.0	106
Enga	22.9	306	92.0	1.7	0.3	5.1	0.9	100.0	70
Western Highlands	25.2	378	77.5	4.0	15.3	1.8	1.3	100.0	95
Chimbu	28.7	397	78.1	8.9	7.7	5.3	0.0	100.0	114
Eastern Highlands	37.1	587	80.5	5.5	11.4	2.0	0.6	100.0	218
Morobe	38.3	796	82.8	3.8	13.1	0.3	0.0	100.0	305
Madang	38.1	493	95.1	1.6	2.1	0.2	1.0	100.0	188
East Sepik	50.3	435	92.7	6.4	0.3	0.0	0.6	100.0	219
West Sepik	33.9	276	92.4	6.2	1.5	0.0	0.0	100.0	94
Manus	44.4	64	90.5	2.9	5.1	0.0	1.4	100.0	28
New Ireland	38.3	171	81.9	15.1	2.9	0.0	0.0	100.0	66
East New Britain	37.7	247	90.8	7.4	1.4	0.0	0.4	100.0	93
West New Britain	31.0	260	88.8	6.4	1.9	2.7	0.3	100.0	81
Autonomous Region of Bougainville	35.6	231	77.0	8.1	13.8	0.7	0.5	100.0	82
Hela	18.8	438	(77.6)	(15.4)	(7.0)	(0.0)	(0.0)	100.0	82
Jiwaka	25.3	309	63.8	13.0	10.8	10.0	2.5	100.0	78
Education									
No education	18.6	941	88.4	5.5	5.1	0.4	0.5	100.0	175
Elementary	33.9	253	87.5	5.3	5.1	2.2	0.0	100.0	86
Primary	32.2	3,593	86.6	7.2	4.7	0.9	0.6	100.0	1,157
Secondary	38.6	2,156	84.4	5.0	8.5	1.7	0.3	100.0	832
Higher	52.3	389	75.3	4.4	17.7	2.0	0.7	100.0	204
Wealth quintile									
Lowest	23.7	1,366	87.8	7.0	3.3	1.2	0.6	100.0	324
Second	31.1	1,384	88.6	4.1	6.2	0.8	0.3	100.0	431
Middle	33.4	1,528	85.9	6.4	4.9	2.1	0.6	100.0	511
Fourth	38.1	1,399	86.1	6.7	6.6	0.6	0.1	100.0	533
Highest	39.6	1,656	80.0	6.0	11.7	1.6	0.8	100.0	655
Total	33.5	7,333	85.1	6.0	7.1	1.3	0.5	100.0	2,453

Note: Figures in parentheses are based on 25-49 unweighted cases.

Table 9.20 Source for advice or treatment

Percentage of women and men age 15-49 who sought advice or treatment from specific sources in the past 12 months, according to specific sources, Papua New Guinea DHS 2016-18

Specific sources	Women	Men
Public sector		
Government hospital	23.0	25.2
Government health centre	36.6	34.2
Government aid post	14.0	16.3
Church hospital	3.4	2.2
Church health centre	9.3	8.9
Church aid post	3.4	4.0
Mobile clinic	0.8	1.2
Trained village health volunteer	0.2	0.1
Other public sector	1.8	0.5
Private medical sector		
Private hospital/clinic/private doctor	5.2	8.1
Pharmacy	0.6	1.2
Other private medical sector	0.6	0.0
Other source		
Traditional practitioner	0.0	0.1
Other	0.6	1.2
Missing	0.5	0.8
Number	5,474	2,453

CHILD HEALTH 10

Key Findings

- ***Birth weight:*** Information on birth weight was available for about half of births occurring in the 5 years before the survey. Among children with known birth weights, 14% weighed less than 2.5 kg at birth.
- ***Vaccinations:*** 35% of children age 12-23 months had received all basic vaccinations by the time of the survey.
- ***Symptoms of acute respiratory infection (ARI):*** Advice or treatment was sought for 63% of children under age 5 who had symptoms of ARI in the 2 weeks before the survey.
- ***Fever:*** Advice or treatment was sought for 50% of children under age 5 who had a fever in the 2 weeks before the survey.
- ***Diarrhoea:*** Advice or treatment was sought for 38% of children under age 5 who had diarrhoea in the 2 weeks before the survey. Sixty-five percent of children with diarrhoea received ORT, while 24% received no treatment.

Information on child health and survival can help policymakers and programme managers assess the efficacy of current strategies, formulate appropriate interventions to prevent deaths from childhood illnesses, and improve the health of children in Papua New Guinea.

This chapter presents information on birth weight and vaccination status for young children. The chapter also looks at the prevalence of and treatment practices for three common childhood illnesses: symptoms of acute respiratory infection (ARI), fever, and diarrhoea. In addition, because appropriate sanitary practices can help prevent and reduce the severity of diarrhoeal disease, information is provided on the disposal of children's faecal matter.

10.1 BIRTH WEIGHT

Low birth weight is associated with foetal and neonatal morbidity, inhibited growth and cognitive development, and chronic diseases later in life. Birth weight is a good summary measure of multifaceted public health problems that include long-term maternal malnutrition, ill health, and poor health care during pregnancy.

In this survey, information on birth weight was collected through either a written record or the mother's report. Children are considered to have a low birth weight if they weigh less than 2.5 kilogrammes (kg) at birth.

Low birth weight

Percentage of births with a reported birth weight below 2.5 kilogrammes regardless of gestational age.

Sample: Live births in the 5 years before the survey that have a reported birth weight, from either a written record or the mother's report

Information on birth weight was obtained for 49% of births (**Table 10.1**). Among children with known birth weights, 14% weighed less than 2.5 kg at birth. Among all births in the 5 years before the survey, almost one-fifth (19%) were reported by the mother to have been either very small or smaller than average.

Patterns by background characteristics

- Infants born to mothers who smoke tobacco are more likely to have a low birth weight (17%) than infants born to mothers who do not smoke (12%).
- Infants born to mothers age 35-49 are more likely to be of low birth weight (18%) than those born to mothers age 20-34 (13%).
- The percentage of infants with a low birth weight ranges from 10% in the Highlands region to 16% in the Southern region.

10.2 Vaccination of Children

All basic vaccinations coverage

Percentage of children age 12-23 months who received specific vaccines at any time before the survey (according to a vaccination card or the mother's report). To have received all basic vaccinations, a child must receive at least:

- One dose of BCG vaccine, which protects against tuberculosis
- Three doses of DPT vaccine, which protects against diphtheria, pertussis (whooping cough), and tetanus
- Three doses of oral polio vaccine
- One dose of measles vaccine

Sample: Living children age 12-23 months

Universal immunisation of children against six common vaccine-preventable diseases, namely tuberculosis, diphtheria, whooping cough (pertussis), tetanus, polio, and measles, is crucial to reducing infant and child mortality. The vaccine given in Papua New Guinea against diphtheria, whooping cough, and tetanus (DPT) also protects against hepatitis B (HepB) and *Haemophilus influenzae* type b (Hib); it is known as DPT-HepB-Hib, or the pentavalent vaccine, and was introduced in the country in 2009 (National Department of Health 2016). The pneumococcal conjugate vaccine (PCV-13) protects against *Streptococcus pneumoniae* bacteria, which cause severe pneumonia, meningitis, and other illnesses; this vaccine was introduced in 2014. On August 12, 2015, Papua New Guinea introduced one dose of inactivated poliomyelitis vaccine (IPV) at 14 weeks of age into its national routine immunisation schedule, which coincided with the launch of a nationwide measles and rubella (MR) vaccine. IPV does not replace the oral polio vaccine but is used with that vaccine to strengthen a child's immune system and protect against polio.

Historically, an important measure of vaccination coverage has been the proportion of children age 12-23 months who have received all "basic" vaccinations. A child is considered to have received all basic vaccinations if he or she has received a bacille Calmette-Guérin (BCG) vaccination against tuberculosis; three doses of pentavalent (DPT-HepB-Hib) to prevent diphtheria, pertussis, and tetanus; at least three doses of polio vaccine; and one dose of measles vaccine. These vaccinations should be received during the first year of life. Papua New Guinea has established a schedule for the administration of all basic childhood vaccines based on the World Health Organization's guidelines. BCG should be given shortly

after birth or at first clinical contact. The polio and pentavalent (DPT-HepB-Hib) vaccines should be given at approximately age 6, 10, and 14 weeks. The first dose of the measles and rubella vaccine should be given at or soon after the child reaches age 6-8 months, while the second dose should be given at age 9-11 months (National Department of Health 2016).

A second, more critical measure of vaccination coverage is the proportion of children age 12-23 months and 24-35 months who have received all age-appropriate vaccinations. A child age 12-23 months is considered to have received all age-appropriate vaccinations if the child has received all basic vaccinations along with a birth dose of hepatitis B, one dose of inactivated polio vaccine, and three doses of pneumococcal vaccine (also given at age 6, 10, and 14 weeks). Similarly, a child who is age 24-35 months has received all age-appropriate vaccinations if the child has received a third dose of measles given at 18-24 months in addition to all of the age-appropriate vaccinations relevant for a child age 12-23 months. However, the third dose of the measles and rubella vaccine had not yet been rolled out when the fieldwork for the PNG DHS started in 2016. Therefore, the survey was not able to capture the third dose of measles and rubella vaccine at 18 months, preventing the presentation of results on all age-appropriate vaccinations for children in the 24- to 35-month age group.

In the 2016-18 PNG DHS, information on vaccination coverage was obtained in two ways—from health cards and from mothers' verbal reports. Mothers were asked to show the interviewer the cards on which vaccination dates were recorded for their children who were born in the 3 years before the survey. If the card was available, the interviewer then recorded from the card the dates of each vaccination received. In cases in which the card indicated that the child had not received all basic vaccinations, the mother was asked whether the child had received other vaccinations that were not recorded on the card, and, if so, they too were recorded. If there was no card, or if the mother was unable to show the card to the interviewer, the child's vaccination information was based on the mother's recall. The mother was asked to recall whether the child had received the BCG, hepatitis B (birth dose), polio, pentavalent, pneumococcal, inactivated polio, and measles and rubella vaccines. If she indicated that the child had received the polio, pentavalent, pneumococcal, or measles and rubella vaccine, she was asked the number of doses that the child received. The results presented here are based on the vaccination card and, for those children without a card, the information provided by the mother. Although 80% of children age 12-23 months were reported to have ever had a vaccination card, interviewers were able to see a vaccination card, booklet, or other home-based record for only 61% of children (**Table 10.4**).

Children age 12-23 months are the youngest cohort to have reached the age by which a child should have received all basic vaccinations. Overall, 35% of children age 12-23 months have received all basic vaccinations, and 20% have received all age-appropriate vaccinations (**Table 10.2**).

Sixty-nine percent of children have received BCG, 64% have received the first dose of pentavalent, and 69% have received polio 1. Forty-two percent of children have received the third doses of the pentavalent and polio vaccines. Coverage of the pentavalent vaccine is an indicator of routine immunisation performance in a country. The proportion of children receiving the first dose of pentavalent and BCG is an indicator of access to immunisation, and the proportion of children receiving the third dose of pentavalent is an indicator of use of immunisation services (WHO 2015b). Access to pentavalent 1 is at 64%, while utilisation is at 42% **(Table 10.2)**. A difference of more than 10% reflects poor use of services. Similarly, the fact that less than 80% of children have received the first does indicates poor access.

Fifty-nine percent of children have received the first dose of measles and rubella, while 40% have received the second dose. Twenty-four percent of children age 12-23 months in Papua New Guinea have not received any vaccinations (**Table 10.3** and **Figure 10.1**).

Trends: The proportion of children age 12-23 months who have received all basic vaccinations decreased from 52% in 2006 to 35% in 2016-18. The percentage of children who have received no vaccinations increased over the same period, from 7% to 24%. This trend also reflects the results from the programme data of the government indicating that routine immunisation coverage has been steadily declining. According to the WHO/UNICEF Joint Reporting Form, coverage of the third dose of the pentavalent vaccine dropped steadily from 61% in 2016 to 50% in 2018 (WHO 2019).

Patterns by background characteristics

- Basic vaccination coverage differs by residence, with urban children more likely to receive all basic vaccinations than rural children (49% versus 33%). In urban areas, coverage of the first dose of pentavalent is 82%, which shows good access. However, coverage of the third dose drops to 57%, indicating poor utilisation due to a more than 10% dropout rate. In rural areas, access to and utilisation of both pentavalent and routine immunisation services are poor.
- Children in the Highlands region (28%) are less likely to receive all basic vaccinations than children in the Islands (47%) and Southern (46%) regions.
- Vaccination coverage improves with increasing mother's education and household wealth. For example, the proportion of children age 12-23 months who received all basic vaccinations ranges from 15% in the lowest wealth quintile to 53% in the highest quintile **(Figure 10.2)**.

Figure 10.1 **Childhood vaccinations**

Percentage of children age 12-23 months vaccinated at any time before the survey

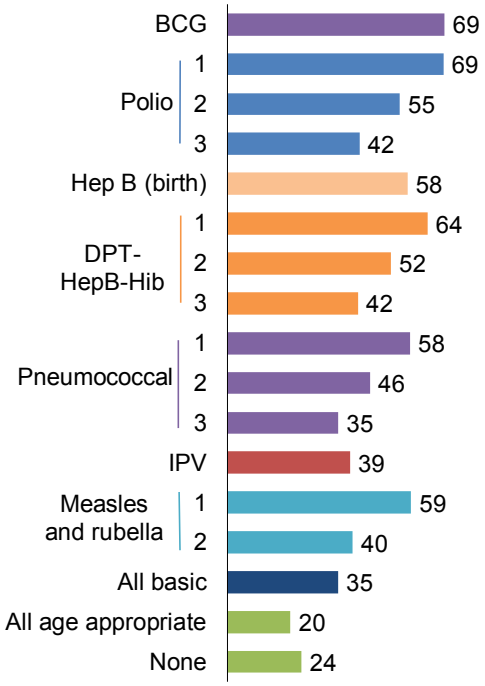
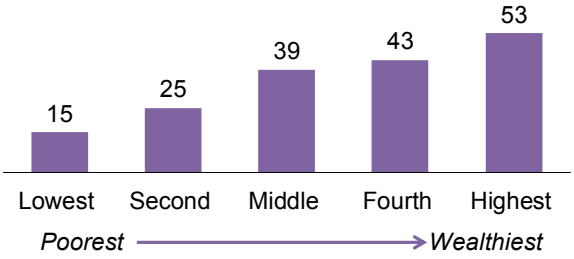


Figure 10.2 **Vaccination coverage by household wealth**

Percentage of children age 12-23 months who received all basic vaccines at any time before the survey



10.3 Symptoms of Acute Respiratory Infection

Acute respiratory infection (ARI), in particular pneumonia, is one of the leading causes of childhood morbidity and mortality. Improving early care is a key strategy for early diagnosis and treatment. In the 2016-18 PNG DHS, for each child under age 5, mothers were asked if the child had experienced short, rapid breathing or difficulty in breathing as a result of a chest-related problem (symptoms of ARI) in the 2 weeks preceding the survey. Respondents were also asked if treatment was sought when the child was ill. It should be noted that the morbidity data collected are subjective because they are based on mothers' perceptions of illnesses without validation by medical personnel.

Treatment of symptoms of acute respiratory infection (ARI)

Children with symptoms of ARI for whom advice or treatment was sought. ARI symptoms consist of short, rapid breathing that is chest-related and/or difficult breathing that is chest-related.

Sample: Children under age 5 with symptoms of ARI in the 2 weeks before the survey

In Papua New Guinea, only 3% of children under age 5 were reported to have had symptoms of ARI in the 2 weeks preceding the survey, with only minor differences by background characteristics. Among children with ARI symptoms, advice or treatment was sought for 63%. Because of the small number of children with recent ARI symptoms, it is difficult to draw meaningful results regarding differences in treatment-seeking behaviour (**Table 10.5**). As shown in **Table 10.6**, public sector facilities, especially government health centres and hospitals, are the primary sources of advice or treatment for ARI symptoms.

Trends: There has been no change since 2006 in either the proportion of children with symptoms of ARI or the proportion for whom advice or treatment was sought. The data are not strictly comparable since the 2006 PNG DHS results were based on children under age 3 instead of age 5.

10.4 FEVER

Fever is an abnormally high body temperature that is usually accompanied by shivering, headache, and restlessness. Fever indicates the presence of various illnesses such as malaria, pneumonia, ear problems, the common cold, influenza, and other infections.

Treatment of fever

Children with fever for whom advice or treatment was sought.

Sample: Children under age 5 with a fever in the 2 weeks before the survey

Almost 1 in 5 children under age 5 (18%) were reported by their mothers to have had a fever in the 2 weeks before the survey. Treatment from a health facility or provider was sought for half (50%) of children with fever; however, only 28% were taken for treatment the same day or the day after they developed the fever. Nineteen percent of children with fever were given antibiotics for the illness (**Table 10.7**).

Patterns by background characteristics

- Fever is most prevalent among children age 6-23 months.
- The proportion of children with fever for whom advice or treatment was sought is higher in urban than rural areas (67% and 47%, respectively). The proportion who were treated the same day or the next day and the proportion who received antibiotics are also higher among urban than rural children.
- The proportion of children with fever for whom advice or treatment was sought and the proportion who took antibiotic drugs both generally increase with increasing mother's education and household wealth (**Table 10.7**).

10.5 DIARRHOEAL DISEASE

10.5.1 Prevalence of Diarrhoea and Treatment-seeking Behaviour

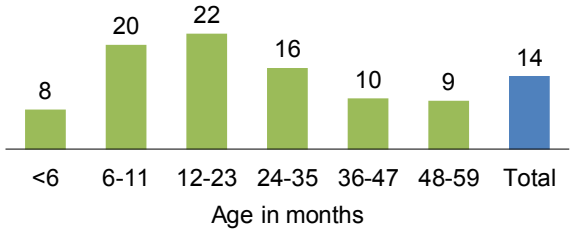
Diarrhoea is one of the major contributors to deaths among children under age 5 in Papua New Guinea. In the 2016-18 PNG DHS, mothers reported that 14% of children under age 5 had a diarrhoeal episode in the 2 weeks before the survey. Treatment was sought from a health facility or health provider for 38% of children with diarrhoea (**Table 10.8**).

Patterns by background characteristics

- The prevalence of diarrhoea is highest among children age 12-23 months (22%) (**Figure 10.3**).
- The percentage of children with diarrhoea is higher in urban areas than in rural areas (22% and 13%, respectively). The percentage for whom advice or treatment was sought is also higher in urban (52%) than rural (36%) areas.
- The proportion of children who were taken for treatment is highest in the Southern region (54%) and lowest in the Highlands region (28%).

Figure 10.3 **Diarrhoea prevalence by age**

Percentage of children under age 5 who had diarrhoea in the 2 weeks before the survey



10.5.2 Feeding Practices

Appropriate feeding practices

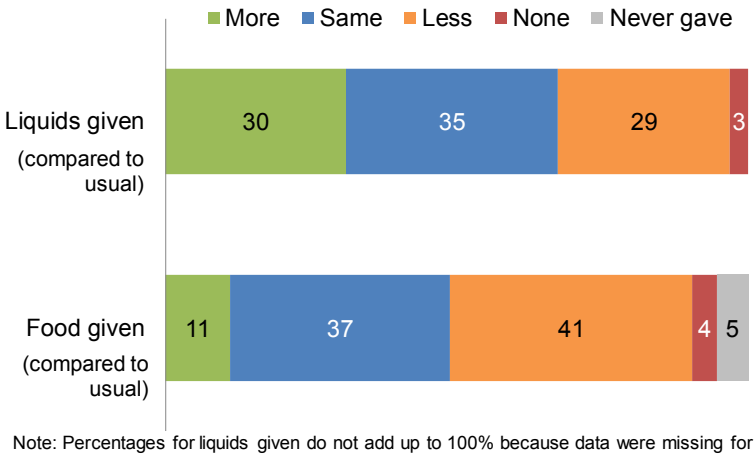
Children with diarrhoea are given more liquids than usual and as much food or more than usual.

Sample: Children under age 5 with diarrhoea in the 2 weeks before the survey

To reduce dehydration and minimise the effects of diarrhoea on nutritional status, parents are encouraged to continue normal feeding of children with diarrhoea and to increase the amount of fluids given. Mothers in the 2016-18 PNG DHS reported that 30% of children under age 5 with diarrhoea in the 2 weeks before the survey were given more liquids than usual, 35% were given the usual amount, and 29% were given a somewhat lower or much less lower amount; 3% of children received no liquids at all (**Table 10.9** and **Figure 10.4**).

Figure 10.4 **Feeding practices during diarrhoea**

Percentage of children under age 5 with diarrhoea in the 2 weeks before the survey



Note: Percentages for liquids given do not add up to 100% because data were missing for 3% of cases. Percentages for food given do not add up to 100% because data were missing for 2% of cases.

With regard to food intake during a diarrhoea episode in the 2 weeks before the survey, 11% of children were given more food than usual, 37% were fed the usual amount, and 45% were given less food (24% were fed somewhat less than usual, 17% were fed much less than usual, and 4% were not fed at all) (**Figure 10.4**).

10.5.3 Oral Rehydration Therapy and Other Treatments for Diarrhoea

Deaths from diarrhoea can be averted with early and proper treatment. Oral rehydration therapy (ORT) is the simplest and most commonly used therapy for treating diarrhoea. Depending on the severity of the illness, treatment may involve administration of antibiotics, oral rehydration therapy, and anti-motility and intravenous solutions. Zinc supplementation can also help to reduce the severity, frequency, and duration of the diarrhoea episode.

Oral rehydration therapy

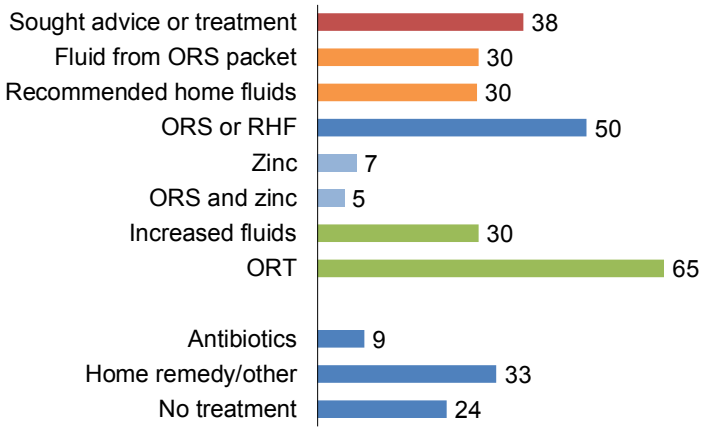
Children with diarrhoea are given increased fluids, a fluid made from a special packet of oral rehydration salts (ORS), or government-recommended homemade fluids (RHF).

Sample: Children under age 5 with diarrhoea in the 2 weeks before the survey

As noted, all children with diarrhoea should receive increased fluids, continued feeding, and oral zinc. In Papua New Guinea, 65% of children under age 5 with diarrhoea in the 2 weeks before the survey received some form of ORT: a solution made from ORS packets, a recommended homemade fluid, or increased fluids (30% each) (**Figure 10.4**). Seven percent of children with diarrhoea received zinc supplements, and 5% received both ORS and zinc supplements. Antibiotics were given to 9% of children with diarrhoea. Almost 1 in 4 (24%) children with diarrhoea did not receive any treatment (**Table 10.10** and **Figure 10.5**).

***Figure 10.5* Treatment of diarrhoea**

Percentage of children under age 5 with diarrhoea in the 2 weeks before the survey



Patterns by background characteristics

- Children with diarrhoea are most likely to receive some sort of ORT if they are from urban areas, their mother has a higher education, and they are from the highest wealth quintile.

Almost 9 in 10 children (88%) under age 5 with diarrhoea for whom advice or treatment was sought were taken to a public sector health facility, while 7% were treated in the private medical sector (**Table 10.11**). Thirty-two percent were taken to a government health centre.

10.5.4 Knowledge of ORS Packets

Oral rehydration salts (ORS), which can be given at home and are available in pharmacies without requiring a prescription, prevent dehydration through the replenishment of water and the replacement of electrolytes in the body. In the 2016-18 PNG DHS, women age 15-49 who had a birth in the 5 years before the survey were asked if they had heard of a special product called ORS that could be used for treating diarrhoea.

The results showed that 57% of these recent mothers have heard about ORS packets for treatment of diarrhoea (**Table 10.12**).

Patterns by background characteristics

- Knowledge of ORS packets is higher among urban (72%) than rural (55%) mothers.
- The proportion of women who have heard of ORS packets increases with increasing education, from 41% among those with no education to 77% among those with a higher education.
- Similarly, knowledge of ORS ranges from 39% among women in the lowest wealth quintile to 73% among those in the highest quintile.

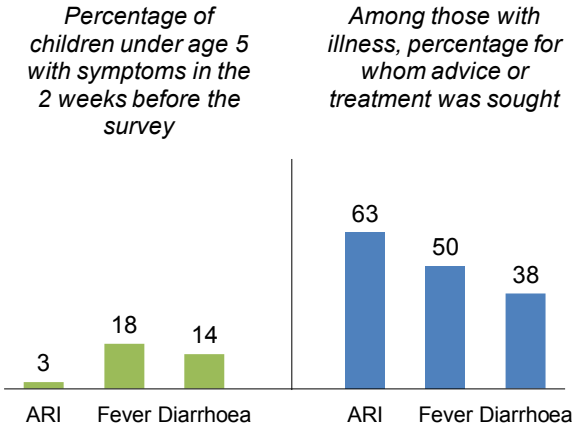
10.6 Treatment of Childhood Illness

Figure 10.6 presents a summary of the survey results regarding the prevalence and treatment of childhood illnesses. During the 2 weeks before the survey, 18% of children under age 5 had a fever, while 14% had diarrhoea and 3% had ARI symptoms. Advice or treatment was sought for 63% of children with ARI symptoms, 50% of children with fever, and 38% of children with diarrhoea.

10.7 Disposal of Children's Stools

Proper disposal of children's faeces is important in preventing the spread of diseases. If faeces are left uncontained, diseases may spread by direct contact or animal contact.

Figure 10.6 **Prevalence and treatment of childhood illness**



Appropriate disposal of children's stools

The child's last stools were put or rinsed into a toilet or latrine or buried, or the child used a toilet or latrine.

Sample: Youngest children under age 2 living with their mother

In Papua New Guinea, 44% of children under age 2 had their last stool disposed of appropriately (they used a toilet or latrine or their last stool was rinsed or put into a toilet or latrine or buried). In contrast, 52% of children had their last stool disposed of unsafely, mostly thrown into a drain or ditch (30%) (**Table 10.13).**

Patterns by background characteristics

- Appropriate disposal of stools increases with increasing age of the child.
- Children from households with an improved toilet facility were more likely to have had their stools disposed of appropriately (43%) than children from households practicing open defecation (36%); 48% of children from households with an unimproved toilet facility had their last stool disposed of appropriately.
- Thirty-six percent of children in urban areas had their last stool disposed of appropriately, as compared with 45% of children in rural areas.

List of Tables

For more information on low birth weight, vaccinations, childhood illness, and disposal of children's stools, see the following tables:

Table 10.1 Child's size and weight at birth

Percent distribution of live births in the 5 years preceding the survey by mother's estimate of baby's size at birth, percentage of live births in the 5 years preceding the survey that have a reported birth weight, and among live births in the 5 years preceding the survey with a reported birth weight, percentage less than 2.5 kg, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percent distribution of births by size of baby at birth					Percentage of births that have a reported birth weight[1]	Number of births	Among births with a reported birth weight[1]	
	Very small	Smaller than average	Average or larger	Don't know/ missing	Total			Percentage less than 2.5 kg	Number of births
Mother's age at birth									
<20	4.9	15.8	74.2	5.0	100.0	49.2	1,122	15.3	552
20-34	4.7	12.8	75.3	7.1	100.0	50.5	7,093	12.5	3,579
35-49	6.3	15.3	72.4	6.0	100.0	40.8	1,547	17.9	631
Birth order									
1	6.3	14.1	73.6	5.9	100.0	59.0	2,426	13.2	1,431
2-3	4.5	12.8	75.4	7.3	100.0	50.6	3,762	13.7	1,902
4-5	4.3	13.5	75.9	6.3	100.0	44.5	2,271	15.5	1,010
6+	5.3	15.0	72.8	6.8	100.0	32.2	1,304	9.5	419
Mother's smoking status									
Smokes cigarettes/ tobacco	6.1	15.7	71.8	6.4	100.0	46.6	2,729	17.1	1,271
Does not smoke	4.6	12.8	76.1	6.5	100.0	49.8	6,920	12.3	3,443
Residence									
Urban	4.0	10.8	82.2	3.0	100.0	82.1	1,017	10.9	835
Rural	5.1	13.9	73.9	7.1	100.0	44.9	8,745	14.1	3,927
Region									
Southern	5.4	14.0	73.0	7.6	100.0	59.4	1,914	16.2	1,137
Highlands	4.2	14.0	75.9	5.9	100.0	42.5	3,757	10.2	1,596
Momase	5.3	12.4	75.8	6.6	100.0	37.3	2,675	14.4	996
Islands	6.1	14.0	72.0	7.9	100.0	73.0	1,416	15.0	1,033
Province									
Western	3.4	16.7	57.0	22.9	100.0	56.9	253	15.8	144
Gulf	9.1	15.2	63.0	12.8	100.0	35.0	204	13.8	72
Central	4.2	11.5	78.6	5.7	100.0	66.8	411	14.2	275
National Capital District	3.9	9.5	84.2	2.3	100.0	97.2	228	11.6	222
Milne Bay	6.7	10.8	79.0	3.6	100.0	62.2	543	22.6	338
Northern	4.8	24.4	65.7	5.2	100.0	32.0	275	12.3	88
Southern Highlands	2.4	13.4	78.9	5.2	100.0	24.9	760	3.5	189
Enga	3.1	16.0	74.4	6.5	100.0	34.2	334	10.9	114
Western Highlands	3.4	11.1	79.1	6.4	100.0	52.8	362	9.6	191
Chimbu	2.1	13.9	77.6	6.5	100.0	56.0	651	11.7	365
Eastern Highlands	8.5	15.4	70.5	5.6	100.0	46.9	772	13.4	362
Morobe	3.4	13.6	79.5	3.6	100.0	49.8	936	9.5	466
Madang	6.0	10.8	76.1	7.2	100.0	34.9	729	22.3	255
East Sepik	6.7	9.8	77.1	6.4	100.0	26.7	564	15.1	150
West Sepik	6.3	15.6	66.2	11.9	100.0	28.0	446	16.2	125
Manus	5.7	13.0	77.5	3.7	100.0	82.9	87	21.5	72
New Ireland	7.0	17.9	71.8	3.3	100.0	75.1	271	12.1	204
East New Britain	3.9	15.6	68.7	11.8	100.0	80.9	409	13.2	331
West New Britain	9.7	15.5	66.5	8.2	100.0	58.8	317	24.4	186
Autonomous Region of Bougainville	4.7	7.8	80.1	7.4	100.0	72.3	332	10.8	240
Hela	3.9	17.5	71.7	6.9	100.0	42.6	533	10.3	227
Jiwaka	5.1	8.7	82.4	3.7	100.0	42.7	344	7.3	147
Mother's education									
No education	6.4	16.6	67.6	9.5	100.0	21.8	2,532	11.8	552
Elementary	5.2	18.2	69.6	7.0	100.0	31.2	493	13.5	154
Primary	4.8	12.9	75.3	7.0	100.0	48.1	4,377	14.8	2,106
Secondary	4.4	10.4	81.9	3.3	100.0	80.4	1,986	12.5	1,597
Higher	1.4	12.3	84.7	1.6	100.0	94.6	373	13.6	353
Wealth quintile									
Lowest	6.9	17.6	66.1	9.4	100.0	21.1	2,102	16.5	444
Second	4.9	13.2	73.5	8.4	100.0	30.9	1,995	15.0	616
Middle	5.0	13.2	75.3	6.5	100.0	46.2	2,011	11.4	929
Fourth	3.4	12.8	77.8	6.0	100.0	64.1	1,925	14.1	1,234
Highest	4.6	10.4	82.5	2.5	100.0	89.0	1,729	13.1	1,539
Total	5.0	13.6	74.7	6.7	100.0	48.8	9,761	13.6	4,762

Note: Total includes 48 births with missing information on mother's smoking status.
[1] Based on either a written record or the mother's recall

Table 10.2 Vaccinations by source of information

Percentage of children age 12-23 months who received specific vaccines at any time before the survey, by source of information (vaccination card or mother's report), and percentage who received specific vaccines by the appropriate age, Papua New Guinea DHS 2016-18

Vaccine	Vaccination card[1]	Mother's report	Either source	Vaccinated by appropriate age[2,3]
BCG	52.9	16.5	69.4	67.1
HepB (birth dose)[4]	43.3	14.2	57.5	55.5
Within 1 day of birth	21.3	na	na	na
After 1 day of birth	16.8	na	na	na
DPT-HepB-Hib				
1	50.0	13.9	63.9	60.9
2	42.1	10.2	52.2	47.0
3	35.9	5.8	41.7	35.0
Polio				
1	52.1	16.9	69.0	66.0
2	42.8	12.3	55.1	50.2
3	36.2	6.0	42.2	35.9
IPV	26.4	12.7	39.1	33.4
Pneumococcal				
1	46.3	12.0	58.3	54.2
2	37.7	7.9	45.5	39.5
3	31.3	4.0	35.4	28.7
Measles and rubella				
1	45.5	13.2	58.7	50.1
2	32.1	8.0	40.1	23.5
All basic vaccinations[5]	31.2	4.1	35.3	27.8
All age-appropriate vaccinations[6]	18.3	1.9	20.2	10.8
No vaccinations	2.7	21.0	23.7	na
Number of children	1,069	695	1,763	1,763

na = Not applicable
BCG = Bacille Calmette-Guérin
DPT = Diphtheria-pertussis-tetanus
HepB = Hepatitis B
Hib = *Haemophilus influenzae* type b
IPV = Inactivated polio vaccine
[1] Vaccination card, booklet, or other home-based record
[2] Received by age 12 months
[3] For children whose vaccination information is based on the mother's report, date of vaccination is not collected. The proportions of vaccinations given during the first and second years of life are assumed to be the same as for children with a written record of vaccination.
[4] For children whose vaccination information is based on the mother's report, children reported to have received hepatitis B (birth dose) received the vaccine within 24 hours after birth. For children whose vaccination information is based on the written record of vaccination, children are considered to have received hepatitis B (birth dose) if this vaccine is recorded on their card, regardless of when the dose was administered.
[5] BCG, three doses of DPT-HepB-Hib, three doses of oral polio vaccine, and one dose of measles and rubella
[6] BCG, hepatitis B (birth dose), three doses of DPT-HepB-Hib, three doses of oral polio vaccine, one dose of inactivated polio vaccine, three doses of pneumococcal vaccine, and two doses of measles and rubella

Table 10.3 Vaccinations by background characteristics

Percentage of children age 12-23 months who received specific vaccines at any time before the survey (according to a vaccination card or the mother's report), percentage with all basic vaccinations, and percentage with all age-appropriate vaccinations, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	BCG	HepB (birth dose)[1]	DPT-HepB-Hib 1	DPT-HepB-Hib 2	DPT-HepB-Hib 3	Polio 1	Polio 2	Polio 3	IPV	Pneumococcal 1	Pneumococcal 2	Pneumococcal 3	Measles and rubella 1	Measles and rubella 2	All basic vaccinations[2]	All age-appropriate vaccinations[3]	No vaccinations	Number of children
Sex																		
Male	69.1	57.4	62.9	50.7	39.2	69.1	52.6	40.0	40.0	59.2	45.1	34.3	57.9	40.9	33.4	19.7	23.3	955
Female	69.7	57.6	65.0	54.0	44.6	68.9	57.9	44.8	38.1	57.2	46.0	36.7	59.7	39.1	37.5	20.9	24.1	808
Birth order																		
1	72.7	63.3	62.6	52.9	44.0	68.4	53.2	43.5	44.2	54.2	46.0	37.7	58.6	41.3	36.3	22.5	23.1	395
2-3	73.7	60.5	67.0	55.0	43.9	72.1	60.1	45.4	41.2	62.7	49.7	39.4	62.5	44.1	37.8	22.2	20.9	722
4-5	65.0	53.3	60.3	49.6	39.8	66.9	53.9	40.0	34.8	54.6	42.8	32.0	55.8	38.1	34.2	16.8	25.6	396
6+	58.5	46.5	62.5	47.2	34.6	64.3	45.3	34.5	32.0	58.1	37.4	25.5	52.8	29.5	28.0	16.3	29.5	251
Vaccination card[4]																		
Seen	87.3	71.5	82.4	69.4	59.1	86.0	70.6	59.7	43.6	76.4	62.2	51.7	75.0	52.9	51.5	30.2	4.4	1,069
Not seen/no card	43.0	37.1	36.4	26.6	15.3	44.1	32.1	15.6	33.3	31.4	20.6	10.6	34.7	20.9	10.6	5.0	51.9	674
Residence																		
Urban	90.9	81.0	82.2	71.2	57.4	85.2	72.5	60.8	50.1	71.9	59.2	49.9	74.6	54.0	48.8	27.3	7.2	215
Rural	66.4	54.2	61.3	49.6	39.5	66.8	52.6	39.6	37.6	56.4	43.6	33.4	56.5	38.1	33.4	19.2	26.0	1,548
Region																		
Southern	79.3	67.7	75.4	64.5	52.0	80.6	67.0	53.9	50.2	71.8	58.7	46.0	69.5	51.4	45.8	30.5	16.0	369
Highlands	62.5	52.8	54.6	42.2	33.3	61.1	47.3	33.5	30.0	49.9	37.3	28.8	51.6	34.7	27.8	14.4	28.2	648
Momase	61.6	45.9	58.5	46.6	36.4	63.1	47.8	36.6	35.7	53.0	39.5	30.2	51.6	31.3	30.4	15.8	30.5	467
Islands	85.2	74.3	79.4	68.5	56.2	81.9	69.4	56.3	51.2	69.0	57.3	45.2	72.9	52.2	46.8	27.5	11.8	279
Province																		
Western	71.6	58.0	72.7	53.1	37.0	75.1	52.4	36.0	37.7	62.0	44.1	28.1	60.7	37.3	30.1	16.1	20.0	58
Gulf	49.1	38.3	41.4	28.2	21.2	47.2	30.1	24.1	27.5	33.2	22.6	18.9	30.5	21.6	19.4	17.3	46.4	34
Central	89.9	66.6	82.0	70.9	56.3	88.0	75.2	61.1	48.3	77.4	64.2	48.3	74.3	50.6	52.4	23.7	8.8	79
National Capital District	96.1	94.8	88.7	85.4	67.7	93.5	89.7	73.8	67.2	91.0	79.3	63.5	85.1	75.0	62.0	47.6	3.9	52
Milne Bay	83.7	78.9	83.4	81.3	76.0	90.5	85.3	74.8	72.2	85.0	79.0	71.4	83.3	70.1	66.1	53.7	9.5	95
Northern	66.6	51.7	62.0	39.1	22.5	66.2	38.1	23.8	24.5	55.8	32.2	15.8	56.2	29.8	17.1	6.0	26.7	52
Southern Highlands	55.0	37.5	47.8	38.5	28.0	62.8	51.3	29.1	22.1	52.1	40.3	24.8	46.8	33.4	22.9	13.6	32.5	120
Enga	(57.3)	(48.4)	(53.8)	(42.2)	(26.1)	(70.5)	(52.7)	(20.8)	(30.0)	(41.4)	(33.0)	(16.0)	(44.8)	(27.3)	(14.7)	(5.3)	(24.1)	64
Western Highlands	73.4	54.1	61.9	52.0	45.5	60.7	53.7	39.4	36.3	61.5	56.6	50.7	58.8	33.2	33.4	17.8	22.7	64
Chimbu	75.6	69.4	71.3	50.2	38.0	75.0	50.2	42.2	47.8	66.6	40.8	34.5	68.3	57.1	38.0	16.3	20.7	137
Eastern Highlands	70.3	63.8	50.9	44.7	37.7	59.1	49.3	39.2	25.7	45.6	37.4	30.2	48.2	33.5	36.4	18.0	24.4	116
Morobe	68.9	55.4	65.4	50.3	43.4	71.6	50.8	43.4	36.1	61.5	49.1	39.9	63.5	31.9	38.4	15.3	19.5	161
Madang	50.3	38.7	49.4	40.5	31.7	55.7	43.2	36.3	30.0	41.2	27.7	17.8	39.4	23.8	24.9	10.3	40.5	113
East Sepik	56.5	37.0	49.9	44.8	28.7	52.8	43.4	26.8	30.1	44.8	35.1	22.8	41.5	30.3	21.8	12.2	42.1	106
West Sepik	69.1	48.5	67.9	50.0	39.1	69.3	53.7	36.3	49.0	62.4	42.4	37.2	57.7	41.3	33.2	28.4	24.1	87
Manus	88.3	90.4	92.8	89.5	81.2	97.4	94.2	82.3	75.5	86.2	83.5	72.5	93.7	77.3	67.2	43.3	2.6	17
New Ireland	89.6	82.0	83.2	75.8	73.0	84.6	77.5	73.7	56.0	73.6	67.2	62.2	75.7	63.2	68.7	38.7	6.1	45
East New Britain	95.1	88.2	89.1	82.2	68.2	93.7	88.4	74.2	67.6	81.4	72.5	53.7	83.8	59.4	59.7	40.4	4.3	86
West New Britain	78.9	61.9	74.9	61.6	48.5	75.4	57.0	42.0	40.3	59.8	47.7	39.6	66.7	42.7	34.2	19.6	17.0	66

Continued...

Table 10.3—*Continued*

Background characteristic	BCG	HepB (birth dose)[1]	DPT-HepB-Hib 1	DPT-HepB-Hib 2	DPT-HepB-Hib 3	Polio 1	Polio 2	Polio 3	IPV	Pneumococcal 1	Pneumococcal 2	Pneumococcal 3	Measles and rubella 1	Measles and rubella 2	All basic vaccinations[2]	All age-appropriate vaccinations[3]	No vaccinations	Number of children
Autonomous Region of Bougainville	74.7	59.3	65.4	47.3	30.5	67.0	45.4	28.7	31.4	54.7	33.5	21.2	57.6	38.2	22.4	6.9	22.9	66
Hela	44.8	37.9	45.3	32.7	29.9	50.4	37.5	29.9	16.5	32.7	23.4	20.8	47.2	19.5	17.8	11.1	37.9	90
Jiwaka	52.4	49.8	43.2	30.1	24.1	35.0	30.2	23.4	27.4	37.2	27.9	23.4	34.4	19.7	20.2	15.8	40.1	57
Mother's education																		
No education	46.8	31.3	44.7	32.9	21.2	49.9	36.3	22.3	22.0	38.7	28.9	17.6	39.3	21.4	17.1	9.6	43.0	428
Elementary	73.2	56.9	62.9	46.1	37.1	73.2	56.1	39.6	21.6	52.5	32.7	21.9	48.8	36.5	34.6	11.0	14.0	96
Primary	70.3	57.1	63.8	53.0	43.6	70.1	55.6	43.4	39.3	60.7	46.6	37.5	59.0	39.5	36.2	21.0	22.3	795
Secondary	86.3	80.4	79.7	72.9	59.1	81.4	72.5	59.7	59.1	69.5	61.9	49.5	75.6	54.5	50.9	33.8	11.5	355
Higher	98.2	96.1	94.5	61.9	57.7	97.2	69.8	60.3	58.3	92.1	64.4	59.2	92.6	80.5	52.5	20.3	1.6	90
Wealth quintile																		
Lowest	43.5	28.5	39.3	27.9	20.4	48.0	35.0	20.7	19.3	40.1	26.7	16.9	38.7	19.8	15.4	8.1	43.6	342
Second	59.7	47.5	54.4	41.4	31.2	61.2	42.5	30.4	31.6	48.9	36.1	27.9	49.9	28.6	24.7	14.7	31.8	348
Middle	71.9	62.0	66.2	57.1	45.6	70.3	59.6	46.9	40.1	57.1	46.9	35.8	55.8	39.5	39.2	22.4	21.0	353
Fourth	78.4	62.3	71.6	59.3	48.5	74.9	60.4	49.5	45.3	64.1	51.8	40.7	64.1	43.9	42.9	24.3	16.9	366
Highest	92.0	85.9	86.6	74.1	61.6	89.5	76.7	62.3	58.1	80.3	65.1	54.6	83.9	67.4	53.0	30.9	6.2	355
Total	69.4	57.5	63.9	52.2	41.7	69.0	55.1	42.2	39.1	58.3	45.5	35.4	58.7	40.1	35.3	20.2	23.7	1,763

Note: Children are considered to have received the vaccine if it was either written on the child's vaccination card or reported by the mother. For children whose vaccination information is based on the mother's report, date of vaccination is not collected. The proportions of vaccinations given during the first and second years of life are assumed to be the same as for children with a written record of vaccination. Total includes 21 children with missing information on whether their vaccination card was seen. Figures in parentheses are based on 25-49 unweighted cases.
BCG = Bacille Calmette-Guérin
DPT = Diphtheria-pertussis-tetanus
HepB = Hepatitis B
Hib = *Haemophilus influenzae* type b
IPV = Inactivated polio vaccine
[1] For children whose vaccination information is based on the mother's report, children reported to have received HepB (birth dose) received the vaccine within 24 hours after birth. For children whose vaccination information is based on the written record of vaccination, children are considered to have received hepatitis B (birth dose) if this vaccine is recorded on their card, regardless of when the dose was administered.
[2] BCG, three doses of DPT-HepB-Hib, three doses of oral polio vaccine, and one dose of measles and rubella vaccine
[3] BCG, hepatitis B (birth dose), three doses of DPT-HepB-Hib, three doses of oral polio vaccine, one dose of inactivated polio vaccine, three doses of pneumococcal vaccine, and two doses of measles and rubella
[4] Vaccination card, booklet, or other home-based record

Table 10.4 Possession and observation of vaccination cards according to background characteristics

Percentage of children age 12-23 months who ever had a vaccination card, and percentage with a vaccination card seen, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage who ever had a vaccination card[1]	Percentage with a vaccination card seen[1]	Number of children
Sex			
Male	79.0	60.0	955
Female	81.3	61.3	808
Birth order			
1	79.6	56.9	395
2-3	81.3	60.3	722
4-5	79.4	63.3	396
6+	78.2	63.1	251
Residence			
Urban	92.7	74.3	215
Rural	78.3	58.7	1,548
Region			
Southern	85.5	67.6	369
Highlands	75.9	49.0	648
Momase	76.4	63.8	467
Islands	88.7	73.1	279
Province			
Western	78.8	69.6	58
Gulf	69.8	47.2	34
Central	90.3	74.4	79
National Capital District	97.1	72.4	52
Milne Bay	94.8	71.1	95
Northern	67.4	56.9	52
Southern Highlands	63.0	42.2	120
Enga	(77.6)	(44.5)	64
Western Highlands	84.4	52.5	64
Chimbu	92.3	44.6	137
Eastern Highlands	78.3	63.9	116
Morobe	85.0	74.8	161
Madang	72.4	57.9	113
East Sepik	68.5	53.5	106
West Sepik	75.2	63.4	87
Manus	98.8	82.8	17
New Ireland	93.2	80.4	45
East New Britain	92.5	83.7	86
West New Britain	80.5	65.6	66
Autonomous Region of Bougainville	86.2	59.3	66
Hela	64.9	46.4	90
Jiwaka	65.0	48.5	57
Mother's education			
No education	63.4	45.3	428
Elementary	82.6	68.8	96
Primary	81.9	65.1	795
Secondary	91.5	67.5	355
Higher	95.8	57.9	90
Wealth quintile			
Lowest	62.6	41.7	342
Second	74.4	56.1	348
Middle	84.1	65.1	353
Fourth	85.5	71.7	366
Highest	92.9	67.3	355
Total	80.1	60.6	1,763

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] Vaccination card, booklet, or other home-based record

Table 10.5 Prevalence and treatment of symptoms of ARI

Among children under age 5, percentage who had symptoms of acute respiratory infection (ARI) in the 2 weeks preceding the survey, and among children with symptoms of ARI in the 2 weeks preceding the survey, percentage for whom advice or treatment was sought, according to background characteristics, Papua New Guinea DHS 2016-18

	Among children under age 5:		Among children under age 5 with symptoms of ARI:		
Background characteristic	Percentage with symptoms of ARI[1]	Number of children	Percentage for whom advice or treatment was sought[2]	Percentage for whom treatment was sought same or next day	Number of children
Age in months					
<6	3.0	919	(67.9)	(36.3)	27
6-11	5.0	996	(71.2)	(24.8)	49
12-23	3.9	1,763	54.7	22.3	69
24-35	2.3	1,843	63.1	42.4	43
36-47	2.3	1,984	59.5	38.6	46
48-59	1.3	1,865	(70.4)	(28.7)	25
Sex					
Male	2.5	4,916	67.8	39.2	122
Female	3.1	4,455	58.8	23.9	138
Mother's smoking status					
Smokes cigarettes/tobacco	3.1	2,609	52.3	26.9	82
Does not smoke	2.7	6,663	67.9	33.1	178
Residence					
Urban	2.8	984	85.7	43.1	27
Rural	2.8	8,387	60.3	29.7	232
Region					
Southern	2.9	1,850	63.0	39.7	54
Highlands	2.7	3,564	60.4	23.0	96
Momase	2.9	2,578	(69.0)	(34.2)	75
Islands	2.5	1,378	57.0	33.5	34
Mother's education					
No education	2.8	2,405	39.8	15.8	68
Elementary	4.2	476	*	*	20
Primary	2.8	4,206	70.1	34.6	119
Secondary	2.2	1,918	83.6	49.4	41
Higher	3.0	366	*	*	11
Wealth quintile					
Lowest	2.4	1,977	(47.7)	(13.1)	48
Second	2.8	1,918	(70.3)	(36.3)	53
Middle	3.3	1,931	49.0	26.0	65
Fourth	2.4	1,861	76.7	49.1	45
Highest	2.9	1,683	76.0	33.4	48
Total	2.8	9,371	63.0	31.1	260

Note: Total includes 99 children with missing information on mother's smoking status. Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Symptoms of ARI include short, rapid breathing that is chest-related and/or difficult breathing that is chest-related.

[2] Includes advice or treatment from the following sources: public sector, private medical sector, shop, and market. Excludes advice or treatment from a traditional practitioner.

Table 10.6 Source of advice or treatment for children with symptoms of ARI

Percentage of children under age 5 with symptoms of ARI in the 2 weeks preceding the survey for whom advice or treatment was sought from specific sources, and among children under age 5 with symptoms of ARI in the 2 weeks preceding the survey for whom advice or treatment was sought, percentage for whom advice or treatment was sought from specific sources, Papua New Guinea DHS 2016-18

	Percentage for whom advice or treatment was sought from each source:	
Source	Among children with symptoms of ARI[1]	Among children with symptoms of ARI for whom advice or treatment was sought[1]
Public sector	60.8	95.8
Government hospital	12.6	19.9
Government health centre	15.2	24.0
Government sub-health centre	6.7	10.6
Community aid/health post	8.0	12.6
Church hospital	3.7	5.8
Church health centre	8.0	12.7
Church sub-health centre	3.3	5.2
Church aid post	2.5	4.0
Trained VHV	0.4	0.6
Other public sector	0.8	1.3
Private sector	2.4	3.7
Private hospital/clinic	2.0	3.1
Pharmacy	0.6	1.0
Other private sector	0.5	0.8
Shop	0.1	0.1
Traditional practitioner	0.5	0.8
Number of children	260	165

VHV = Village health volunteer

[1] Symptoms of ARI include short, rapid breathing that is chest-related and/or difficult breathing that is chest-related.

Table 10.7 Prevalence and treatment of fever

Among children under age 5, percentage who had a fever in the 2 weeks preceding the survey, and among children with a fever in the 2 weeks preceding the survey, percentage for whom advice or treatment was sought and percentage who received antibiotics as treatment, according to background characteristics, Papua New Guinea DHS 2016-18

	Among children under age 5:		Among children under age 5 with fever:			
Background characteristic	Percentage with fever	Number of children	Percentage for whom advice or treatment was sought[1]	Percentage for whom treatment was sought same or next day	Percentage who took antibiotic drugs	Number of children with fever
Age in months						
<6	14.1	919	49.2	28.4	20.1	129
6-11	24.7	996	53.0	25.3	25.9	246
12-23	23.5	1,763	52.5	32.4	18.8	414
24-35	20.9	1,843	44.0	27.9	15.6	385
36-47	13.6	1,984	48.1	25.0	16.7	270
48-59	13.7	1,865	51.5	28.0	19.1	256
Sex						
Male	17.5	4,916	51.8	28.9	17.7	859
Female	18.9	4,455	47.3	27.5	20.2	842
Residence						
Urban	21.1	984	66.7	39.4	33.3	207
Rural	17.8	8,387	47.2	26.7	16.9	1,494
Region						
Southern	17.1	1,850	65.2	38.0	25.1	316
Highlands	15.9	3,564	40.6	20.7	20.2	565
Momase	21.6	2,578	47.1	25.4	15.1	556
Islands	19.2	1,378	54.9	38.5	16.8	264
Province						
Western	14.6	241	69.2	43.1	19.5	35
Gulf	22.9	197	62.2	39.0	8.5	45
Central	16.0	396	67.9	44.5	29.4	63
National Capital District	23.8	223	66.4	37.9	38.8	53
Milne Bay	13.4	533	69.9	38.4	27.0	71
Northern	18.4	261	53.3	24.6	20.8	48
Southern Highlands	18.1	712	42.0	25.3	24.3	129
Enga	11.9	301	(30.0)	(11.1)	(18.7)	36
Western Highlands	7.5	357	(33.1)	(7.4)	(28.7)	27
Chimbu	14.3	628	42.9	22.1	28.0	90
Eastern Highlands	18.8	733	50.4	23.8	19.9	137
Morobe	21.5	904	43.4	19.2	22.0	194
Madang	23.2	704	45.4	27.6	20.6	163
East Sepik	21.8	542	53.8	27.2	2.4	118
West Sepik	18.6	427	50.0	33.0	5.8	79
Manus	15.9	85	60.5	34.6	24.5	13
New Ireland	26.2	263	41.7	32.6	9.9	69
East New Britain	20.1	398	52.9	37.7	25.5	80
West New Britain	16.3	305	60.4	41.6	18.3	50
Autonomous Region of Bougainville	15.8	327	68.5	45.7	9.0	52
Hela	20.2	509	29.3	13.6	4.4	103
Jiwaka	13.6	324	(41.2)	(27.6)	(26.6)	44
Mother's education						
No education	16.1	2,405	33.6	15.4	8.9	387
Elementary	15.2	476	42.5	16.8	9.7	72
Primary	19.2	4,206	53.3	31.6	20.9	808
Secondary	19.7	1,918	58.0	36.1	25.7	377
Higher	15.4	366	58.3	30.1	25.2	56
Wealth quintile						
Lowest	18.7	1,977	31.4	14.9	9.3	370
Second	17.9	1,918	44.4	23.0	12.4	344
Middle	17.9	1,931	47.8	26.7	19.6	346
Fourth	18.4	1,861	62.0	38.7	26.3	342
Highest	17.8	1,683	65.6	40.5	29.1	300
Total	18.2	9,371	49.5	28.2	18.9	1,701

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] Includes advice or treatment from the following sources: public sector, private medical sector, shop, and market. Excludes advice or treatment from a traditional practitioner.

Table 10.8 Prevalence and treatment of diarrhoea

Percentage of children under age 5 who had diarrhoea in the 2 weeks preceding the survey, and among children with diarrhoea in the 2 weeks preceding the survey, percentage for whom advice or treatment was sought, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage with diarrhoea	Number of children	Among children under age 5 with diarrhoea: Percentage for whom advice or treatment was sought[1]	Among children under age 5 with diarrhoea: Number of children with diarrhoea
Age in months				
<6	7.6	919	25.0	70
6-11	20.0	996	32.3	199
12-23	22.2	1,763	38.3	391
24-35	15.6	1,843	43.7	288
36-47	9.8	1,984	39.1	194
48-59	9.3	1,865	41.5	173
Sex				
Male	13.5	4,916	38.6	664
Female	14.6	4,455	38.2	650
Source of drinking water[2]				
Improved	14.4	4,290	39.5	618
Unimproved	13.7	5,064	37.2	695
Type of toilet facility[3]				
Improved facility	13.1	2,653	42.8	348
Unimproved facility	15.2	4,933	33.4	748
Open defecation	12.3	1,758	48.3	216
Residence				
Urban	21.8	984	51.5	214
Rural	13.1	8,387	35.8	1,100
Region				
Southern	12.6	1,850	54.4	233
Highlands	16.3	3,564	28.4	580
Momase	14.3	2,578	39.2	368
Islands	9.7	1,378	51.6	134
Province				
Western	8.9	241	(49.2)	22
Gulf	15.1	197	68.8	30
Central	12.5	396	63.1	50
National Capital District	22.0	223	46.9	49
Milne Bay	10.1	533	55.8	54
Northern	11.1	261	38.8	29
Southern Highlands	14.7	712	36.0	104
Enga	23.7	301	14.0	71
Western Highlands	11.0	357	(31.2)	39
Chimbu	16.1	628	26.9	101
Eastern Highlands	19.6	733	29.2	143
Morobe	18.4	904	40.6	167
Madang	10.3	704	35.3	73
East Sepik	13.8	542	45.4	75
West Sepik	12.6	427	31.4	54
Manus	11.9	85	(57.6)	10
New Ireland	9.7	263	(40.1)	26
East New Britain	8.7	398	60.0	34
West New Britain	13.4	305	53.8	41
Autonomous Region of Bougainville	7.1	327	(45.0)	23
Hela	16.3	509	(31.3)	83
Jiwaka	11.5	324	(26.5)	37
Mother's education				
No education	13.5	2,405	34.6	326
Elementary	17.1	476	33.0	81
Primary	14.0	4,206	42.4	589
Secondary	13.9	1,918	38.4	267
Higher	14.4	366	24.9	53
Wealth quintile				
Lowest	13.8	1,977	35.7	272
Second	13.1	1,918	33.0	251
Middle	12.1	1,931	32.4	233
Fourth	14.3	1,861	41.3	266
Highest	17.4	1,683	47.7	292
Total	14.0	9,371	38.4	1,315

Note: Total includes 17 children with missing information on source of household drinking water and 27 children with missing information on type of household toilet facility. Figures in parentheses are based on 25-49 unweighted cases.

[1] Includes advice or treatment from the following sources: public sector, private medical sector, shop, and market. Excludes advice or treatment from a traditional practitioner.

[2] See Table 2.1.1 for definition of categories.

[3] See Table 2.3.1 for definition of categories.

Table 10.9 Feeding practices during diarrhoea

Percent distribution of children under age 5 who had diarrhoea in the 2 weeks preceding the survey by amount of liquids and food offered compared with normal practice, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Amount of liquids given							Amount of food given								Number of children with diarrhoea
	More	Same as usual	Some-what less	Much less	None	Don't know/ missing	Total	More	Same as usual	Some-what less	Much less	None	Never gave food	Don't know/ missing	Total	
Age in months																
<6	25.6	47.7	9.2	7.6	6.8	3.0	100.0	6.4	30.8	7.6	3.8	9.4	39.1	3.0	100.0	70
6-11	35.5	37.8	11.9	10.4	1.3	3.1	100.0	13.8	34.4	21.0	15.6	4.1	9.0	2.1	100.0	199
12-23	27.8	34.9	11.6	22.2	1.1	2.3	100.0	10.2	35.4	23.3	19.3	7.3	3.4	1.0	100.0	391
24-35	33.2	31.4	14.4	16.8	1.5	2.8	100.0	10.4	33.7	31.9	20.5	1.0	1.4	1.1	100.0	288
36-47	24.9	38.6	12.1	13.3	6.6	4.5	100.0	12.3	46.5	24.7	11.8	2.4	0.8	1.6	100.0	194
48-59	30.6	30.8	14.1	13.8	6.5	4.2	100.0	10.1	41.9	24.5	14.8	2.1	3.1	3.5	100.0	173
Sex																
Male	29.4	36.2	11.9	16.3	2.3	3.9	100.0	11.1	37.1	23.6	17.6	3.0	5.7	1.9	100.0	664
Female	30.6	34.3	13.1	15.8	3.8	2.4	100.0	10.7	37.1	25.1	15.4	5.3	4.9	1.5	100.0	650
Breastfeeding status																
Breastfeeding	30.8	36.4	12.2	16.4	1.6	2.5	100.0	9.3	33.8	24.3	16.9	5.8	8.7	1.3	100.0	727
Not breastfeeding	30.1	33.3	12.4	15.0	5.8	3.4	100.0	12.5	41.5	23.7	16.4	2.2	1.4	2.3	100.0	493
Missing	23.3	36.5	15.2	18.6	0.0	6.5	100.0	14.9	40.2	28.4	13.5	1.3	0.0	1.7	100.0	94
Residence																
Urban	38.5	31.2	9.9	12.5	3.6	4.3	100.0	11.9	32.5	26.3	19.9	2.0	4.4	3.2	100.0	214
Rural	28.3	36.0	13.0	16.7	2.9	2.9	100.0	10.7	38.0	24.0	15.8	4.6	5.5	1.4	100.0	1,100
Region																
Southern	30.7	21.2	19.7	19.6	4.6	4.2	100.0	10.1	29.1	23.9	23.3	2.5	8.2	2.8	100.0	233
Highlands	34.0	36.8	8.7	16.1	2.3	2.0	100.0	14.1	37.1	25.3	11.6	5.6	5.1	1.2	100.0	580
Momase	24.6	42.5	12.1	13.0	3.3	4.5	100.0	6.3	44.5	20.8	19.5	3.0	4.4	1.5	100.0	368
Islands	26.1	33.0	17.5	18.0	2.8	2.6	100.0	10.8	31.0	30.6	17.4	3.9	3.6	2.6	100.0	134
Mother's education																
No education	27.7	38.8	11.2	15.9	2.8	3.7	100.0	4.4	42.9	23.9	13.9	5.8	7.1	2.0	100.0	326
Elementary	28.6	22.9	12.6	25.8	3.0	7.1	100.0	10.1	37.7	28.5	6.1	11.9	4.9	0.8	100.0	81
Primary	28.3	37.6	14.9	13.1	3.7	2.4	100.0	10.7	37.1	22.2	19.8	2.9	5.8	1.5	100.0	589
Secondary	34.0	32.2	10.0	18.3	1.9	3.5	100.0	18.5	29.7	26.0	17.7	3.3	2.6	2.3	100.0	267
Higher	45.5	20.5	6.9	23.7	3.1	0.3	100.0	15.6	38.0	36.6	5.7	0.4	2.6	1.1	100.0	53
Wealth quintile																
Lowest	22.8	39.9	15.1	16.6	3.2	2.5	100.0	4.6	42.6	25.5	16.1	3.8	6.0	1.5	100.0	272
Second	35.8	35.2	11.4	16.1	0.5	0.9	100.0	11.2	34.8	26.1	13.6	7.5	6.2	0.6	100.0	251
Middle	26.3	33.8	10.9	21.2	4.1	3.7	100.0	11.3	36.4	17.3	21.2	6.5	6.5	0.9	100.0	233
Fourth	28.5	37.4	17.3	9.8	3.5	3.5	100.0	14.4	39.3	24.1	13.4	2.5	4.1	2.3	100.0	266
Highest	36.0	30.2	8.1	17.0	3.8	4.9	100.0	13.0	32.6	27.6	18.4	1.3	4.1	3.0	100.0	292
Total	30.0	35.2	12.5	16.0	3.1	3.2	100.0	10.9	37.1	24.4	16.5	4.1	5.3	1.7	100.0	1,315

Note: It is recommended that children be given more liquids to drink during diarrhoea and that food not be reduced. Provincial-level estimates are not shown separately due to the small number of cases.

Table 10.10 Oral rehydration therapy, zinc, and other treatments for diarrhoea

Among children under age 5 who had diarrhoea in the 2 weeks preceding the survey, percentage given fluid from an ORS packet, recommended homemade fluids (RHF), ORS or RHF, zinc, ORS and zinc, ORS or increased fluids, oral rehydration therapy (ORT), continued feeding and ORT, and other treatments, and percentage given no treatment, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage of children with diarrhoea who were given:														Number of children with diarrhoea
	Fluid from ORS packets	Recommended home fluids (RHF)	Either ORS or RHF	Zinc	ORS and zinc	ORS or increased fluids	ORT (ORS, RHF, or increased fluids)	Continued feeding and ORT[1]	Antibiotic drugs	Antimotility drugs	Intravenous solution	Home remedy/ other	Missing	No treatment	
Age in months															
<6	11.4	15.8	24.5	5.8	2.9	36.9	49.3	20.2	6.9	0.0	0.0	15.7	0.0	45.4	70
6-11	26.4	24.1	45.1	7.0	4.7	56.7	71.4	49.1	7.0	0.0	0.3	34.4	3.5	20.1	199
12-23	30.9	30.7	50.8	8.9	7.2	50.4	62.1	43.4	9.5	0.0	1.5	35.7	2.8	24.3	391
24-35	35.7	35.9	57.6	9.7	5.5	52.0	66.8	50.9	8.8	0.8	0.9	35.8	1.7	20.5	288
36-47	28.3	26.8	49.8	3.5	2.6	47.7	63.9	53.4	10.7	0.0	1.0	31.7	1.4	26.6	194
48-59	31.9	32.3	53.0	5.1	3.1	49.7	66.7	52.3	7.6	0.0	0.0	32.0	2.3	22.6	173
Sex															
Male	31.3	26.4	47.9	7.4	5.1	50.5	62.6	45.4	10.2	0.3	0.3	28.4	2.1	25.8	664
Female	28.6	33.1	52.5	7.3	4.9	50.5	66.9	49.3	7.3	0.0	1.3	38.5	2.4	22.3	650
Residence															
Urban	42.3	35.9	61.3	9.9	7.5	63.2	74.7	55.9	13.6	1.0	1.2	41.9	2.0	14.9	214
Rural	27.6	28.5	48.0	6.8	4.5	48.0	62.8	45.6	7.8	0.0	0.8	31.7	2.3	25.9	1,100
Region															
Southern	39.1	25.6	51.6	11.8	6.4	60.0	67.3	43.8	12.4	0.9	0.8	35.3	1.8	14.5	233
Highlands	24.2	25.6	42.8	7.2	5.9	49.3	61.9	47.3	5.6	0.0	1.5	29.8	3.2	27.3	580
Momase	30.3	35.4	56.7	3.7	1.8	44.7	65.1	47.0	10.1	0.0	0.0	39.0	1.4	27.4	368
Islands	38.4	38.6	61.7	10.1	7.7	55.0	71.2	54.3	12.6	0.0	0.4	30.2	1.7	17.9	134
Mother's education															
No education	23.0	21.3	38.9	6.2	3.3	43.2	54.4	36.0	4.9	0.0	1.2	22.5	4.1	35.3	326
Elementary	28.1	26.7	47.2	7.6	6.5	42.1	57.2	50.0	6.2	0.0	0.0	42.4	0.1	25.1	81
Primary	32.4	31.0	53.2	6.8	4.4	51.9	67.5	47.7	10.2	0.4	1.0	35.0	1.3	21.9	589
Secondary	33.7	35.9	55.9	9.4	7.3	57.5	69.4	53.1	10.7	0.0	0.2	37.5	2.9	18.2	267
Higher	30.2	40.9	61.8	9.5	8.8	57.2	85.5	79.9	11.4	0.0	1.1	47.8	1.4	6.8	53
Wealth quintile															
Lowest	23.5	21.8	38.8	7.2	2.7	40.1	52.4	37.2	6.9	0.0	1.4	28.2	4.0	34.7	272
Second	28.5	27.8	49.8	3.7	2.9	53.2	68.1	48.0	3.3	0.0	0.0	32.6	1.1	25.1	251
Middle	20.5	30.6	44.7	7.8	5.2	40.3	59.9	40.3	4.2	0.0	0.6	38.2	1.2	26.3	233
Fourth	34.4	32.2	54.3	5.1	3.8	53.7	66.6	52.0	10.2	0.3	0.2	27.6	3.4	20.9	266
Highest	40.8	35.7	61.7	12.3	10.0	63.1	75.5	57.4	17.5	0.5	1.7	40.3	1.5	14.4	292
Total	30.0	29.7	50.2	7.3	5.0	50.5	64.7	47.3	8.8	0.2	0.8	33.4	2.3	24.1	1,315

Note: Provincial-level estimates are not shown separately due to the small number of cases.
ORS = Oral rehydration salts
[1] Continued feeding includes children who were given more, the same as usual, or somewhat less food during the diarrhoea episode.

Table 10.11 Source of advice or treatment for children with diarrhoea

Percentage of children under age 5 with diarrhoea in the 2 weeks preceding the survey for whom advice or treatment was sought from specific sources; among children under age 5 with diarrhoea in the 2 weeks preceding the survey for whom advice or treatment was sought, percentage for whom advice or treatment was sought from specific sources; and among children with diarrhoea who received ORS, percentage for whom advice or treatment was sought from specific sources, Papua New Guinea DHS 2016-18

	Percentage for whom advice or treatment was sought from each source:		
Source	Among children with diarrhoea	Among children with diarrhoea for whom advice or treatment was sought	Among children with diarrhoea who received ORS[1]
Public sector	34.7	88.1	83.4
Government hospital	6.8	17.3	15.3
Government health centre	12.7	32.2	31.3
Government sub-health centre	3.4	8.6	9.2
Community aid/health post	5.7	14.5	12.8
Church hospital	0.2	0.5	0.4
Church health centre	3.4	8.7	8.5
Church sub-health centre	1.7	4.3	4.8
Church aid post	0.7	1.8	1.6
Trained VHV	0.3	0.8	0.1
Other public sector	0.2	0.5	0.6
Private sector	2.7	7.0	5.7
Private hospital/clinic	2.1	5.2	4.2
Pharmacy	0.2	0.6	0.2
Other private medical sector	0.4	1.1	1.3
Other private sector	1.2	3.0	0.2
Traditional practitioner	1.2	3.0	0.2
Other	1.2	3.1	0.1
Number of children	1,315	518	394

ORS = Oral rehydration salts
VHV = Village health volunteer
[1] Fluids from ORS packet

Table 10.12 Knowledge of ORS packets

Percentage of women age 15-49 with a live birth in the 5 years preceding the survey who know about ORS packets for treatment of diarrhoea, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage of women who know about ORS packets	Number of women
Age		
15-19	42.6	283
20-24	53.4	1,432
25-34	58.9	3,212
35-49	58.1	1,833
Residence		
Urban	72.3	761
Rural	54.9	5,998
Region		
Southern	47.0	1,327
Highlands	61.1	2,621
Momase	55.0	1,851
Islands	62.4	961
Province		
Western	48.3	167
Gulf	38.9	134
Central	52.8	290
National Capital District	66.9	176
Milne Bay	38.1	379
Northern	41.6	181
Southern Highlands	44.2	527
Enga	69.5	234
Western Highlands	55.2	281
Chimbu	66.6	420
Eastern Highlands	71.1	540
Morobe	70.2	686
Madang	47.7	499
East Sepik	50.4	377
West Sepik	37.4	289
Manus	58.5	59
New Ireland	61.3	182
East New Britain	82.3	271
West New Britain	42.1	222
Autonomous Region of Bougainville	60.6	227
Hela	45.8	361
Jiwaka	86.2	258
Education		
No education	41.0	1,717
Elementary	54.3	314
Primary	57.4	3,027
Secondary	71.5	1,423
Higher	76.8	278
Wealth quintile		
Lowest	39.2	1,417
Second	50.6	1,357
Middle	56.5	1,341
Fourth	66.4	1,358
Highest	73.3	1,286
Total	56.9	6,759

ORS = Oral rehydration salts

Table 10.13 Disposal of children's stools

Percent distribution of youngest children under age 2 living with their mother by the manner of disposal of the child's last faecal matter, and percentage of children whose stools are disposed of appropriately, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Manner of disposal of children's stools								Total	Percentage of children whose stools are disposed of appropriately[1]	Number of children
	Child used toilet or latrine	Put/rinsed into toilet or latrine	Buried	Put/rinsed into drain or ditch	Thrown into garbage	Left in the open	Other	Missing			
Age of child in months											
0-1	2.4	17.2	4.0	52.0	7.0	3.2	2.4	11.9	100.0	23.6	327
2-3	2.1	20.8	9.6	45.8	11.7	7.5	0.5	2.1	100.0	32.5	294
4-5	4.6	17.1	15.0	41.9	16.0	4.2	0.2	1.0	100.0	36.7	282
6-8	1.8	20.8	14.5	36.5	16.2	3.4	4.9	1.9	100.0	37.1	515
9-11	2.8	19.8	19.7	32.1	13.5	9.1	0.1	2.9	100.0	42.3	434
12-17	3.0	20.1	28.5	21.6	14.3	8.9	0.2	3.5	100.0	51.5	872
18-23	5.9	21.7	30.7	13.8	14.7	7.9	0.4	4.9	100.0	58.4	728
6-23	3.5	20.7	24.8	24.2	14.6	7.5	1.2	3.5	100.0	49.0	2,549
Type of toilet facility[2]											
Improved facility	4.2	19.8	18.4	23.7	21.7	4.9	2.7	4.6	100.0	42.5	975
Unimproved facility	2.9	25.8	19.5	30.5	10.3	6.2	0.6	4.2	100.0	48.2	1,795
Open defecation	3.5	5.3	27.0	38.3	11.7	11.4	0.3	2.4	100.0	35.8	675
Residence											
Urban	1.8	19.5	15.1	20.6	38.7	1.8	0.3	2.1	100.0	36.4	383
Rural	3.6	20.1	21.5	31.3	10.7	7.5	1.3	4.2	100.0	45.2	3,070
Region											
Southern	2.2	13.5	19.1	31.3	20.8	10.0	1.1	2.0	100.0	34.8	691
Highlands	5.4	22.3	14.6	29.3	14.8	6.7	0.3	6.6	100.0	42.3	1,306
Momase	1.5	22.6	21.8	31.9	10.2	6.7	2.7	2.5	100.0	46.0	939
Islands	3.3	18.4	36.5	27.2	8.4	3.2	0.5	2.5	100.0	58.2	516
Province											
Western	0.1	15.9	28.0	37.9	10.2	5.9	0.0	1.9	100.0	44.0	89
Gulf	8.5	13.8	18.3	24.2	8.3	23.3	0.0	3.6	100.0	40.6	70
Central	0.3	10.5	19.6	11.5	26.4	25.1	5.2	1.5	100.0	30.4	141
National Capital District	2.8	10.0	5.6	8.0	70.4	0.2	0.5	2.5	100.0	18.4	92
Milne Bay	1.1	13.9	14.1	55.1	10.1	3.8	0.0	1.9	100.0	29.1	195
Northern	4.1	17.9	32.3	33.0	7.0	4.3	0.0	1.4	100.0	54.2	103
Southern Highlands	2.7	28.7	18.9	29.1	9.8	5.2	0.3	5.4	100.0	50.2	250
Enga	0.7	39.0	9.9	34.6	3.7	7.0	0.0	5.1	100.0	49.6	126
Western Highlands	5.6	31.3	15.9	18.1	16.7	2.3	0.6	9.3	100.0	52.9	119
Chimbu	9.0	7.4	11.3	39.7	10.2	8.9	0.0	13.6	100.0	27.7	234
Eastern Highlands	3.2	13.2	19.6	29.0	20.7	7.8	0.9	5.6	100.0	36.0	267
Morobe	0.6	24.7	16.6	37.6	10.0	0.8	7.4	2.5	100.0	41.9	336
Madang	0.6	15.6	31.6	33.1	3.8	10.8	0.0	4.5	100.0	47.8	242
East Sepik	3.2	35.8	20.8	10.9	14.3	13.7	0.5	0.6	100.0	59.8	196
West Sepik	2.7	13.1	19.4	43.6	15.0	4.1	0.0	2.1	100.0	35.2	165
Manus	5.7	28.1	8.5	47.4	8.6	0.4	0.0	1.3	100.0	42.3	30
New Ireland	0.7	11.4	27.4	55.8	1.9	1.8	0.9	0.1	100.0	39.5	83
East New Britain	0.7	27.9	37.3	26.8	4.2	0.2	0.2	2.5	100.0	66.0	145
West New Britain	10.0	23.9	24.7	16.1	14.7	8.9	0.6	1.2	100.0	58.6	115
Autonomous Region of Bougainville	1.6	6.4	56.3	15.3	11.4	3.2	0.5	5.2	100.0	64.3	142
Hela	8.3	23.0	9.3	25.7	24.7	7.4	0.0	1.6	100.0	40.6	188
Jiwaka	9.1	30.6	13.1	21.3	15.1	6.8	0.0	4.1	100.0	52.7	122
Mother's education											
No education	3.0	18.6	18.9	36.0	10.8	10.7	0.0	2.1	100.0	40.4	860
Elementary	1.0	15.2	23.4	27.0	13.6	10.0	0.0	9.8	100.0	39.5	165
Primary	3.1	21.2	23.3	30.9	10.5	6.7	0.6	3.7	100.0	47.6	1,568
Secondary	2.6	22.0	20.4	25.8	22.9	3.2	0.5	2.7	100.0	44.9	705
Higher	15.2	12.9	4.7	11.7	22.5	0.0	17.0	16.0	100.0	32.8	155
Wealth quintile											
Lowest	2.7	24.6	17.3	32.6	9.5	9.5	0.0	3.8	100.0	44.6	693
Second	2.6	17.2	23.3	35.6	7.9	9.8	0.3	3.3	100.0	43.0	690
Middle	3.3	19.8	23.9	29.9	10.9	7.4	0.1	4.7	100.0	47.0	747
Fourth	2.7	20.4	25.4	32.7	10.5	5.7	0.7	1.9	100.0	48.5	694
Highest	6.0	18.1	12.8	18.6	32.0	1.3	5.1	6.2	100.0	36.8	628
Total	3.4	20.1	20.7	30.1	13.8	6.8	1.2	4.0	100.0	44.2	3,452

Note: Total includes 8 children with missing information on type of household toilet facility.
[1] Children's stools are considered to be disposed of appropriately if the child used a toilet or latrine, if the faecal matter was put/rinsed into a toilet or latrine, or if it was buried.
[2] See Table 2.3.1 for definition of categories.

NUTRITION OF CHILDREN AND WOMEN 11

Key Findings

- ***Breastfeeding:*** The majority (91%) of children born in the 2 years before the survey were breastfed at some point. Fifty-four percent of children started breastfeeding within 1 hour of birth, and 62% of children under age 6 months are exclusively breastfed.
- ***Complementary feeding:*** 32% of children have an adequately diverse diet (i.e., they are given food from at least five food groups), 44% receive meals at the minimum frequency, and 18% are fed a minimum acceptable diet.
- ***Coverage of vitamin A and deworming in children:*** During the 6 months before the survey, 31% of children age 6-59 months received a vitamin A capsule and 20% received deworming medication.
- ***Coverage of iron supplementation and deworming in women:*** 8% of women age 15-49 with a child born in the past 5 years took iron tablets for at least 90 days, and 18% took deworming medication during the pregnancy of their last child.
- ***Salt iodisation:*** All households with tested salt have iodised salt.

The problem of malnutrition continues to be a significant impediment in the health, social, and economic development of Papua New Guinea. Stunting, the biggest nutrition challenge facing Papua New Guinea, affects child growth and cognitive development, leading to poor community socioeconomic development. The National Nutrition Policy 2016-26 lays down a multisectoral approach to tackle the problem of malnutrition in Papua New Guinea (National Department of Health 2018a).

This chapter reports on infant and young child feeding practices, including breastfeeding and complementary feeding, micronutrient supplementation and deworming for children and pregnant women, and the presence of iodine in household cooking salt. Although the survey included data collection on anthropometry, the results are not presented in this report due to data quality concerns. Information on the quality of the anthropometry data is presented in Appendix C, Table C.7.

11.1 Infant and Young Child Feeding Practices

Appropriate infant and young child feeding (IYCF) practices include early initiation of breastfeeding (within the first hour of life), exclusive breastfeeding for the first 6 months of life, continued breastfeeding for 2 years or more, and introduction of safe, appropriate, and adequate complementary foods at age 6 months (WHO 2008).

11.1.1 Early Initiation of Breastfeeding

Initiation of breastfeeding within the first hour of life is important for both the mother and the child. The Infant and Young Child Feeding Policy 2014-2024 specifically mentions the need for early breastfeeding initiation (National Department of Health 2014b). The first breast milk contains colostrum, which is highly nutritious and has antibodies that protect the newborn from diseases. Early initiation of breastfeeding also encourages bonding between the mother and her newborn, facilitating the production of regular breast milk.

Early initiation of breastfeeding
Initiation of breastfeeding within 1 hour of birth.
Sample: Last-born children who were born in the 2 years before the survey

Table 11.1 shows that 91% of last-born children born in the 2 years before the survey were breastfed at some point. Over half (54%) of children were breastfed within 1 hour of birth, and 86% were breastfed within 1 day of birth. Ten percent of children received a prelacteal feed.

Patterns by background characteristics

- Early breastfeeding is more common among children whose deliveries were assisted by health personnel (52%) than among those whose deliveries were assisted by traditional birth attendants (47%).
- The prevalence of early breastfeeding is lowest in the Morobe and West New Britain provinces (36% each) and highest in the East New Britain (75%) and Central (74%) provinces.
- Children born to mothers with a higher education were less likely to start breastfeeding within an hour of birth (37%) than children born to mothers with no education (54%). Similarly, children born to mothers with no education were less likely to receive a prelacteal feed (7%) than those born to mothers with a higher education (12%).
- The prevalence of early breastfeeding decreases from 56% among children in the lowest wealth quintile to 45% among those in the highest quintile.

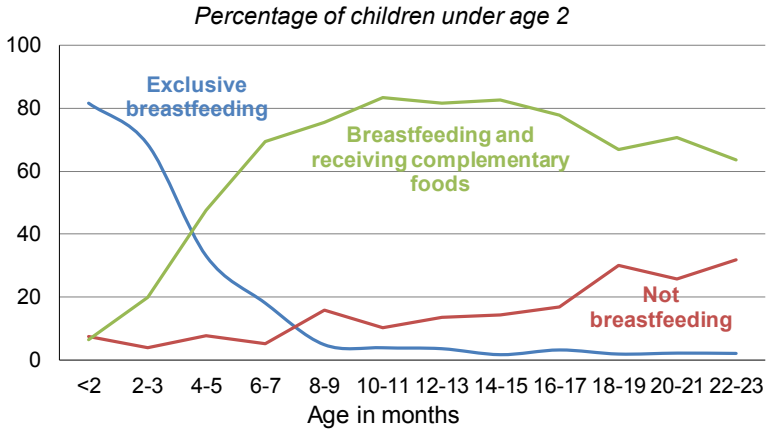
11.1.2 Exclusive Breastfeeding

Breast milk contains all of the nutrients needed by children during their first 6 months of life. It is recommended that children be exclusively breastfed in the first 6 months of their life; that is, they should be given nothing but breast milk. Exclusive breastfeeding for 6 months prevents infections such as diarrhoea and respiratory illnesses and provides all of the nutrients and liquid an infant requires for optimal growth and development. Feeding complementary foods within the first 6 months will have the adverse effect of reducing breast milk output, because the production and release of breast milk are modulated by the frequency and intensity of suckling. The Policy on Infant and Young Child Feeding Practices highlights these guidelines (National Department of Health 2014b).

Exclusive breastfeeding
Proportion of children age 0-5 months who are fed exclusively with breast milk.
Sample: Last-born children who were born in the 2 years before the survey

Breastfeeding status was ascertained for last-born children under age 2 who are currently living with their mother. Sixty-two percent of children under age 6 months are exclusively breastfed. Exclusive breastfeeding declines with age, from 82% among children age 0-1 months to 69% among those age 2-3 months and 33% among those age 4-5 months. The proportion of children who are breastfeeding and consuming complementary foods first increases with age (peaking at 85% among children age 9-11 months) and then declines gradually among children age 12-23 months (as older children stop breastfeeding). The proportion of children who are not breastfeeding increases from 7% among those age 0-1 months to 29% among those age 18-23 months (**Table 11.2** and **Figure 11.1**).

***Figure 11.1* Breastfeeding practices by age**



Median Duration of Breastfeeding

Table 11.4 shows that the median duration of any breastfeeding among children born in the 3 years before the survey is 24.1 months. Overall, the median duration of exclusive breastfeeding is 3.9 months, and the median duration of predominant breastfeeding (either exclusively breastfed or breastfed and receiving plain water and/or non-milk liquids) is 4.6 months.

Patterns by background characteristics

- The median duration of any breastfeeding (24.1 months), exclusive breastfeeding (4.0 months), and predominant breastfeeding (4.6 months) is higher in rural than urban areas.
- The median durations of exclusive breastfeeding and predominant breastfeeding are longer among children in the Southern and Islands regions than among children in the Highlands and Momase regions.

11.1.3 Bottle Feeding

The nipple on a feeding bottle is susceptible to contamination and increases the risk of disease among children. Thus, bottle feeding is not recommended for children under age 2 (WHO 2005).

Bottle feeding
Proportion of children age 0-23 months who are fed from a bottle with a nipple
Sample: Last-born children who were born in the 2 years before the survey

Only 6% of children age 0-1 months are fed using a bottle with a nipple. The proportion of children using a bottle with a nipple peaks at age 6-8 months (14%). Overall, 11% of children age 0-23 months are fed from a bottle with a nipple (**Table 11.2** and **Table 11.3**).

11.1.4 Introduction of Complementary Foods

After the first 6 months, breast milk alone is no longer sufficient to meet the nutritional needs of an infant. After 6 months, appropriate complementary foods should be introduced while breastfeeding is continued until age 2 or older. The transition from exclusive breastfeeding to complementing breastfeeding with

family foods is when children are most vulnerable to becoming undernourished, and during this time it is important that they receive solid, semisolid, or soft foods.

Appropriate complementary feeding should include feeding children a variety of foods to ensure that nutrient requirements are met. Fruits and vegetables rich in vitamin A should be consumed daily. Eating a range of fruits and vegetables, in addition to those rich in vitamin A, is also important. Studies have shown that plant-based complementary foods by themselves are insufficient to meet the needs for certain micronutrients. Therefore, it has been recommended that meat, poultry, fish, or eggs be part of the daily diet or eaten as often as possible (WHO 2003).

Table 11.5 indicates the types of foods and liquids consumed by children under age 2 during the day and night before the interview by their age and breastfeeding status. Overall, the food items most commonly given to children 6-23 months, irrespective of their breastfeeding status, were solid or semisolid food (91% among breastfeeding children and 89% among nonbreastfeeding children), fruits and vegetables rich in vitamin A (84% among breastfeeding children and 85% among nonbreastfeeding children), and food made from grains (52% among breastfeeding children and 55% among non-breastfeeding children).

Patterns by background characteristics

- Generally, consumption of all types of foods is higher among nonbreastfeeding children age 6-23 months than among breastfeeding children in the same age group.
- Consumption of infant formula is low among both breastfeeding (4%) and nonbreastfeeding (5%) children age 6-23 months.
- Forty-nine percent of breastfed children age 6-23 months consumed food made from roots and tubers, 24% consumed eggs, 84% consumed fruits and vegetables rich in vitamin A, and 30% consumed meat products.
- Fifty-two percent of nonbreastfeeding children age 6-23 months consumed food made from roots and tubers, 33% consumed eggs, 85% consumed vitamin A-rich fruits and vegetables, and 35% consumed meat products.

11.1.5 Minimum Dietary Diversity, Minimum Meal Frequency, and Minimum Acceptable Diet

Infants and young children should be fed a minimum acceptable diet to ensure appropriate growth and development. Without adequate diversity and meal frequency, infants and young children are vulnerable to undernutrition, especially stunting and micronutrient deficiencies, and to increased morbidity and mortality. The WHO minimum acceptable diet recommendation is a combination of minimum dietary diversity and minimum meal frequency. The indicators are defined in the box below.

Minimum dietary diversity is a proxy for adequate micronutrient density of foods. By consuming food from at least five food groups, the child has a high likelihood of consuming at least one animal source of food and at least one fruit or vegetable in addition to a staple food such as grains, roots, or tubers (WHO 2008). The five groups should come from a list of eight food groups: breast milk; grains, roots, and tubers; legumes and nuts; dairy products (milk, yogurt, and cheese); flesh foods (meat, fish, poultry, and liver/organ meat); eggs; vitamin A-rich fruits and vegetables; and other fruits and vegetables.

Minimum meal frequency is a proxy for meeting energy requirements. Breastfed children age 6-8 months are considered to be fed with a minimum meal frequency if they receive solid, semisolid, or soft foods at least twice a day. Breastfed children age 6-23 months are considered to be fed with a minimum meal frequency if they receive solid, semisolid, or soft foods at least three times a day. Nonbreastfed children age 6-23 months are considered to be fed with a minimum meal frequency if they receive solid, semisolid,

or soft foods or milk feeds at least four times a day and if at least one of the feeds is a solid, semisolid, or soft food.

Minimum dietary diversity

Proportion of children age 6-23 months who received a minimum of five out of eight food groups during the previous day.

Minimum meal frequency

Proportion of children age 6-23 months who received solid, semisolid, or soft food (including milk feeds for nonbreastfed children) the minimum number of times or more during the previous day.

Minimum acceptable diet

Proportion of children age 6-23 months who receive a minimum acceptable diet. This indicator is a composite of children fed with a minimum dietary diversity and a minimum meal frequency.

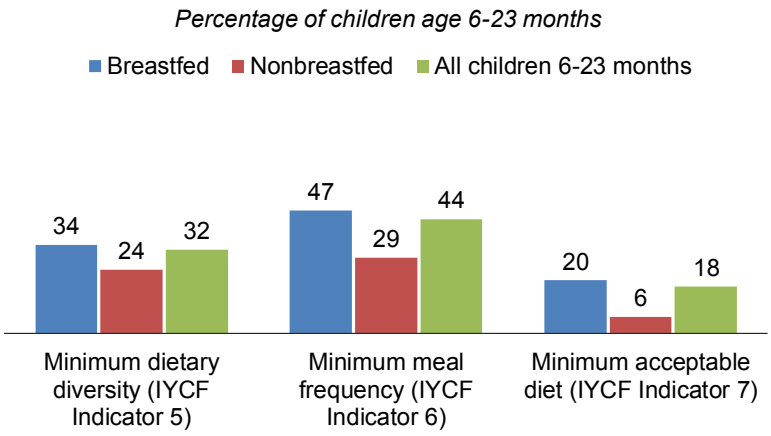
Sample: Youngest children age 6-23 months living with their mother

Minimum dietary diversity, minimum meal frequency, and appropriate milk feeds together constitute a child's minimum acceptable diet. Eighteen percent of children age 6-23 months living with their mother were fed a minimum acceptable diet in the 24 hours preceding the interview. Thirty-two percent of children had an adequately diverse diet in which they had been given foods from at least five food groups, and 44% had been fed the minimum number of times appropriate for their age (**Table 11.6** and **Figure 11.2**).

Patterns by background characteristics

- Nonbreastfed children are much less likely than breastfed children to be fed a minimum acceptable diet (6% versus 20%) (**Figure 11.2**).
- Children in urban areas (27%) are more likely to be fed according to the minimum acceptable dietary standards than those in rural areas (17%) (**Table 11.6**).

Figure 11.2 **IYCF indicators on minimum acceptable diet**



- There is little regional variation in the overall proportion of children receiving a minimum acceptable diet; 17% of children in the Highlands and Momase regions are fed according to the minimum acceptable dietary standards, as compared with 21% in the Southern region.
- The proportion of children receiving a minimum acceptable diet rises with increasing mother's education, from 13% among children whose mothers have no education to 26% among those whose mothers have a higher education. Similarly, the proportion of children fed a minimum acceptable diet increases from 12% among those in the lowest wealth quintile to 21% among those in the highest quintile.

11.2 PRESENCE OF IODISED SALT IN HOUSEHOLDS

Iodine is a micronutrient that plays an important role in thyroid function. In line with food and drug regulations, household salt should be fortified with iodine. Sufficient iodine prevents goitre, brain damage, and other thyroid-related health problems. Papua New Guinea enacted universal salt iodisation (USI) legislation in June 1995 that prohibits the importation and sale of non-iodised salt (National Department of Health 2007).

The 2016-18 PNG DHS tested for the presence of iodine in household salt in the form of potassium iodate. Salt was collected from households and taken to the Micronutrient Research Laboratory (MRL) in the Division of the Basic Medical Sciences (BMS), School of Medicine and Health Sciences (SMHS), University of Papua New Guinea. The assessment was carried out using the WYD Iodine Checker, which is specifically used to measure concentrations of iodine in iodised salt.

The results of tests were merged with the data file to link to the appropriate households from where salt samples were collected. Fifteen percent of households did not have salt collected for assessment, while 31% did not have salt in the household. Salt was taken for assessment from 52% of households. However, the results could not be aligned for 20% of the households due to missing household IDs in the data sent by the laboratory. Therefore, results are available for 32% of households (**Table 11.7**).

Among households in which salt was tested, all households had iodised salt. Eighty-eight percent of households where salt was tested had adequately iodised salt (i.e., salt fortified with iodine to 15 parts per million or more). By region, the percentage of households with adequately iodised salt is lowest in Momase (83%) and highest in Highlands (95%) (**Table 11.7**).

11.3 MICRONUTRIENT INTAKE AND SUPPLEMENTATION AMONG CHILDREN

Micronutrient deficiency is a major contributor to childhood morbidity and mortality. Micronutrients are available in foods and can also be provided through direct supplementation.

The information collected on food consumption among children age 6-23 months is useful in assessing the extent to which children are consuming food groups rich in two key micronutrients in their daily diet: iron and vitamin A. Iron plays an important role in numerous biological systems and iron deficiency is one of the primary causes of anaemia, which has serious health consequences for children. Vitamin A supports the immune system and plays an important role in maintaining the epithelial tissue in the body. Severe vitamin A deficiency (VAD) can cause eye damage and is the leading cause of childhood blindness. VAD also increases the severity of infections such as measles and diarrhoeal disease and slows recovery from illness.

Table 11.8 presents information on micronutrient intake in the 24 hours preceding the survey among children age 6-23 months who are living with their mothers. It also provides information on micronutrient supplementation and deworming among children age 6-59 months. Overall, 86% of children age 6-23 months consumed foods rich in vitamin A in the 24 hours preceding the survey, and 41% consumed foods rich in iron. Seven percent of children age 6-59 months were given iron supplements in the past 7 days, 31% were given vitamin A supplements in the past 6 months, and 20% were given deworming medications in the past 6 months.

Patterns by background characteristics

- Children's intake of both vitamin A-rich and iron-rich foods increases with increasing age.
- Children in urban areas (11%) are twice as likely to receive iron supplements as those in rural areas (6%). Also, provision of deworming medication and vitamin A supplements is higher in urban areas (32% and 44%, respectively) than in rural areas (19% and 29%, respectively).

- Provision of iron supplements ranges from a low of 2% in Chimbu to a high of 20% in Manus, provision of vitamin A supplements ranges from 17% in Western Highlands to 55% in Manus, and provision of deworming medication ranges from 9% in East Sepik to 44% in East New Britain.

- The proportion of children consuming vitamin A-rich and iron-rich foods and the proportion receiving vitamin A supplements, iron supplements, and deworming medications generally increase with increasing mother's education and household wealth.

11.4 Micronutrient Supplementation and Deworming during Pregnancy

During pregnancy, women are at a higher risk of anaemia due to an increase in blood volume. Severe anaemia can place both the mother and the baby in danger through increased risks of blood loss during labour, preterm delivery, low birth weight, and perinatal mortality. To prevent anaemia, pregnant women are advised to take iron folate supplements, eat iron-rich foods, and prevent intestinal worms and malaria infection.

The 2016-18 PNG DHS asked women age 15-49 who gave birth in the 5 years before the survey whether they took iron supplements and/or deworming medication during their most recent pregnancy. Twenty-eight percent of women with a child born in the last 5 years did not take any iron tablets during their most recent pregnancy. Also, only 8% of women took iron tablets for 90 days or more during their most recent pregnancy, and only 18% of women took deworming medication (**Table 11.9**).

Patterns by background characteristics

- Women in urban areas were twice as likely as those in rural areas to have taken iron supplements during pregnancy for at least 90 days (14% versus 7%).

- Women in the Southern region (17%) were most likely to have taken iron supplements during pregnancy for at least 90 days, while women in the Island region were most likely to have taken deworming medication during pregnancy (29%).

- The proportion of women taking iron tablets for 90 days or more was highest in the National Capital District (32%) and lowest in the Northern and Western Highlands provinces (1% each), while the proportion taking deworming medication was highest in New Ireland (41%) and lowest in Southern Highlands and Hela (10% each).

- The proportion of women taking iron tablets for 90 days or more generally increases with increasing education and household wealth. Eleven percent of women with a higher education took iron tablets for 90 days or more, as compared with 3% of women with no education. Similarly, 5% of women in the lowest wealth quintile took iron tablets for at least 90 days, compared with 15% of women in the highest quintile.

List of Tables

For more information on nutrition of children and women, see the following tables:

Table 11.1 Initial breastfeeding

Among last-born children who were born in the 2 years preceding the survey, percentage who were ever breastfed and percentages who started breastfeeding within 1 hour and within 1 day of birth, and among last-born children born in the 2 years preceding the survey who were ever breastfed, percentage who received a prelacteal feed, according to background characteristics, Papua New Guinea DHS 2016-18

	Among last-born children born in the past 2 years:				Among last-born children born in the past 2 years who were ever breastfed:	
Background characteristic	Percentage ever breastfed	Percentage who started breastfeeding within 1 hour of birth	Percentage who started breastfeeding within 1 day of birth[1]	Number of last-born children	Percentage who received a prelacteal feed[2]	Number of last-born children ever breastfed
Sex						
Male	89.4	54.0	84.9	1,942	10.8	1,737
Female	92.7	53.6	87.2	1,700	8.8	1,576
Assistance at delivery						
Health personnel[3]	90.3	51.6	85.3	2,096	9.9	1,892
Traditional birth attendant	91.7	46.6	86.8	164	13.7	150
Other	93.3	58.3	87.6	1,053	9.9	983
No one	92.2	60.0	89.0	305	7.1	281
Place of delivery						
Health facility	90.2	51.2	85.3	2,031	9.8	1,832
At home	92.3	58.3	87.2	1,455	10.5	1,343
Other	99.8	50.5	93.6	136	3.6	136
Residence						
Urban	90.1	51.0	85.6	409	14.3	368
Rural	91.1	54.1	86.0	3,233	9.3	2,944
Region						
Southern	92.7	59.1	88.1	727	9.7	674
Highlands	89.4	53.2	85.3	1,382	8.8	1,236
Momase	90.9	51.9	84.4	990	6.6	900
Islands	92.5	51.4	87.7	543	18.6	502
Province						
Western	92.4	60.4	88.3	94	1.3	87
Gulf	93.1	44.0	84.2	73	8.5	68
Central	92.2	73.6	88.9	147	14.5	135
National Capital District	89.7	59.5	87.3	95	14.0	85
Milne Bay	95.4	55.8	92.7	207	9.8	197
Northern	90.8	54.9	81.3	111	7.8	101
Southern Highlands	83.7	65.4	81.8	263	4.8	220
Enga	93.5	59.2	92.9	137	5.9	129
Western Highlands	91.6	53.1	89.9	122	0.9	111
Chimbu	88.6	57.5	87.3	246	10.2	218
Eastern Highlands	94.6	48.2	87.0	281	11.5	266
Morobe	85.7	35.9	78.2	357	14.0	306
Madang	93.6	53.7	86.0	260	3.1	243
East Sepik	95.0	71.4	87.9	204	2.1	193
West Sepik	92.9	59.4	90.7	170	2.9	158
Manus	92.8	37.9	83.8	32	8.4	30
New Ireland	95.4	49.5	90.4	91	11.6	86
East New Britain	96.0	74.5	93.1	151	8.9	145
West New Britain	91.4	36.0	86.8	125	2.1	114
Autonomous Region of Bougainville	88.0	44.7	82.1	144	51.6	127
Hela	90.7	37.2	82.9	199	13.7	180
Jiwaka	83.4	50.0	76.4	133	10.3	111
Mother's education						
No education	92.6	54.4	88.6	897	7.0	831
Elementary	93.1	55.9	89.1	173	4.1	161
Primary	92.0	54.8	86.6	1,668	11.6	1,535
Secondary	91.6	54.0	85.9	743	10.4	681
Higher	65.2	37.1	62.2	161	11.7	105
Wealth quintile						
Lowest	93.8	56.1	88.8	740	8.6	694
Second	92.1	56.4	87.9	728	9.3	670
Middle	92.4	56.7	87.1	772	8.7	713
Fourth	92.0	53.8	86.4	736	12.3	677
Highest	83.7	44.9	79.0	666	10.7	558
Total	91.0	53.8	86.0	3,642	9.9	3,313

Note: Table is based on last-born children born in the 2 years preceding the survey regardless of whether the children are living or dead at the time of the interview. Total includes 23 children with missing information on assistance at delivery and 20 children with missing information on place of delivery.

[1] Includes children who started breastfeeding within 1 hour of birth

[2] Children given something other than breast milk during the first 3 days of life

[3] Doctor, midwife, nurse (including trained community health workers), or trained village health volunteer

Table 11.2 Breastfeeding status by age

Percent distribution of youngest children under age 2 who are living with their mother by breastfeeding status and percentage currently breastfeeding, and percentage of all children under age 2 using a bottle with a nipple, according to age in months, Papua New Guinea DHS 2016-18

	Breastfeeding status										
Age in months	Not breast-feeding	Exclusively breastfed	Breast-feeding and consuming plain water only	Breast-feeding and consuming non-milk liquids[1]	Breast-feeding and consuming other milk	Breast-feeding and consuming comple-mentary foods	Total	Percentage currently breast-feeding	Number of youngest children under age 2 living with their mother	Percentage using a bottle with a nipple	Number of all children under age 2
0-1	7.4	81.6	1.5	1.7	1.5	6.3	100.0	92.6	327	5.5	333
2-3	3.8	68.6	5.0	1.9	0.9	19.8	100.0	96.2	294	9.0	299
4-5	7.6	33.0	8.4	2.0	1.6	47.5	100.0	92.4	282	10.2	287
6-8	12.1	13.7	3.9	1.9	0.3	68.2	100.0	87.9	515	13.8	540
9-11	8.6	3.6	0.9	1.1	0.9	84.8	100.0	91.4	434	12.8	455
12-17	14.8	2.8	1.0	0.6	0.0	80.8	100.0	85.2	872	12.2	919
18-23	29.3	2.1	0.5	1.2	0.0	67.0	100.0	70.7	728	11.2	845
0-3	5.7	75.5	3.2	1.8	1.2	12.7	100.0	94.3	621	7.2	632
0-5	6.3	62.2	4.8	1.9	1.3	23.6	100.0	93.7	903	8.1	919
6-9	10.6	11.4	3.3	1.6	0.7	72.4	100.0	89.4	656	14.1	689
12-15	13.8	2.6	0.5	0.9	0.0	82.2	100.0	86.2	601	12.8	623
12-23	21.4	2.5	0.8	0.9	0.0	74.5	100.0	78.6	1,600	11.7	1,763
20-23	28.8	2.2	0.7	1.2	0.0	67.1	100.0	71.2	437	7.9	530

Note: Breastfeeding status refers to a "24-hour" period (yesterday and last night). Children who are classified as breastfeeding and consuming plain water only consumed no liquid or solid supplements. The categories of not breastfeeding, exclusively breastfed, breastfeeding and consuming plain water, non-milk liquids, other milk, and complementary foods (solids and semisolids) are hierarchical and mutually exclusive, and their percentages add to 100%. Thus, children who receive breast milk and non-milk liquids and who do not receive other milk and who do not receive complementary foods are classified in the non-milk liquid category even though they may also get plain water. Any children who get complementary food are classified in that category as long as they are breastfeeding as well.

[1] Non-milk liquids include juice, juice drinks, clear broth, or other liquids.

Table 11.3 Infant and young child feeding (IYCF) indicators on breastfeeding status

Percentage of children fed according to various IYCF practices, Papua New Guinea DHS 2016-18

Indicator	Percentage	Number
Exclusive breastfeeding under 6 months	62.2	903
Exclusive breastfeeding at 4-5 months	33.0	282
Continued breastfeeding at 1 year	86.2	601
Introduction of solid, semisolid, or soft foods (6-8 months)	79.0	515
Continued breastfeeding at 2 years	71.2	437
Age-appropriate breastfeeding (0-23 months)[1]	71.6	3,452
Predominant breastfeeding (0-5 months)[2]	68.9	903
Mixed breast and non-breast milk feeding (0-5 months)[3]	5.0	903
Bottle feeding (0-23 months)	11.3	3,678

[1] For children age 0-5 months: exclusive breastfeeding; for children age 6-23 months: received breast milk and complementary foods

[2] Either exclusively breastfed or received breast milk and plain water and/or non-milk liquids only

[3] Received breast milk and fresh, tinned, or powdered animal milk or commercial infant formula

Table 11.4 Median duration of breastfeeding

Median duration of any breastfeeding, exclusive breastfeeding, and predominant breastfeeding among children born in the 3 years preceding the survey, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Median duration (months) of breastfeeding among children born in the past 3 years[1]		
	Any breastfeeding	Exclusive breast-feeding	Predominant breast-feeding[2]
Sex			
Male	23.5	3.8	4.5
Female	24.4	4.0	4.7
Residence			
Urban	23.9	3.3	3.9
Rural	24.1	4.0	4.6
Region			
Southern	21.4	4.5	5.3
Highlands	22.5	3.5	4.0
Momase	27.0	3.9	4.6
Islands	24.1	4.6	5.4
Mother's education			
No education	26.7	3.9	4.7
Elementary	(19.8)	(4.5)	(4.6)
Primary	23.1	3.8	4.5
Secondary	22.9	4.1	4.6
Higher	(6.7)	(3.9)	(4.4)
Wealth quintile			
Lowest	26.8	3.8	4.5
Second	21.4	4.7	5.2
Middle	24.7	3.5	4.2
Fourth	24.4	3.8	4.7
Highest	18.1	3.9	4.3
Total	24.1	3.9	4.6
Mean for all children	23.9	5.3	6.0

Note: Median and mean durations are based on breastfeeding status of the child at the time of the survey (current status). Includes living and deceased children. Figures in parentheses are based on 25-49 unweighted cases.

[1] For last-born children under age 24 months who live with their mother and are breastfeeding, information to determine exclusive and predominant breastfeeding comes from a 24-hour dietary recall. Tabulations assume that last-born children age 24 months or older who live with their mother and are breastfeeding are neither exclusively nor predominantly breastfed. It is assumed that last-born children not currently living with their mother and all non-last-born children are not currently breastfeeding.

[2] Either exclusively breastfed or received breast milk and plain water and/or non-milk liquids only

Table 11.5 Foods and liquids consumed by children in the day or night preceding the interview

Percentage of youngest children under age 2 who are living with their mother by type of foods consumed in the day or night preceding the interview, according to breastfeeding status and age, Papua New Guinea DHS 2016-18

	Liquids			Solid or semisolid foods										
Age in months	Infant formula	Other milk[1]	Other liquids[2]	Fortified baby foods	Food made from grains[3]	Fruits and vege-tables rich in vitamin A[4]	Other fruits and vege-tables	Food made from roots and tubers	Food made from legumes and nuts	Meat, fish, poultry	Eggs	Cheese, yogurt, other milk products	Any solid or semi-solid food	Number of children under age 2
BREASTFEEDING CHILDREN														
0-1	2.0	0.7	4.1	0.0	2.4	4.9	1.9	2.9	2.1	1.5	2.0	0.4	6.8	303
2-3	1.7	1.1	12.0	0.0	3.7	17.9	4.3	5.4	1.9	2.1	3.5	0.8	20.6	282
4-5	3.5	11.2	28.5	0.0	15.8	43.2	16.2	10.8	5.5	7.9	19.0	3.1	51.4	261
6-8	5.1	8.4	52.3	0.0	34.5	69.1	30.7	34.6	12.7	20.3	26.4	4.5	77.6	453
9-11	6.0	9.3	65.5	0.0	52.8	85.7	36.8	50.6	23.4	27.5	23.4	5.4	92.8	397
12-17	2.5	7.9	69.4	0.0	59.4	89.3	43.2	49.9	28.9	32.9	24.0	4.5	94.8	743
18-23	2.9	9.3	68.5	0.0	54.1	88.2	46.0	57.5	29.3	35.6	21.1	6.6	94.7	515
6-23	3.8	8.6	64.8	0.0	51.5	84.0	40.0	48.6	24.5	29.8	23.7	5.2	90.7	2,108
Total	3.4	7.3	50.3	0.0	38.7	66.0	30.6	36.5	18.4	22.3	19.1	4.1	71.9	2,954
NONBREASTFEEDING CHILDREN														
0-1	*	*	*	*	*	*	*	*	*	*	*	*	*	24
2-3	*	*	*	*	*	*	*	*	*	*	*	*	*	11
4-5	*	*	*	*	*	*	*	*	*	*	*	*	*	21
6-8	(5.2)	(61.7)	(27.6)	(0.0)	(40.6)	(88.6)	(30.7)	(9.9)	(1.8)	(12.1)	(55.6)	(1.6)	(89.6)	62
9-11	(19.0)	(12.4)	(63.9)	(0.0)	(48.8)	(68.2)	(36.0)	(41.9)	(21.4)	(38.8)	(27.3)	(12.0)	(71.7)	37
12-17	5.8	14.7	68.0	0.0	60.8	90.3	46.8	55.8	26.5	33.6	29.6	11.9	94.0	129
18-23	2.5	10.8	72.3	0.0	57.3	83.6	54.0	63.4	33.5	42.3	29.6	18.2	89.3	213
6-23	5.2	19.2	64.0	0.0	55.2	85.0	47.1	51.8	26.0	35.2	33.0	13.5	89.2	442
Total	5.1	17.4	59.7	0.0	51.3	78.0	42.2	47.8	23.5	32.3	30.2	12.3	82.8	498

Note: Breastfeeding status refers to a "24-hour" period (yesterday and last night). Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Other milk includes fresh, tinned, and powdered animal milk.

[2] Does not include plain water. Includes juice, juice drinks, clear soup, or other non-milk liquids.

[3] Includes bread, rice, noodles, or other foods made from grains

[4] Includes pumpkin, carrots, ripe or cooked banana, squash, sweet potatoes, dark green leafy vegetables (e.g., aupa, kumu, and aibika), and ripe mangoes or pawpaw

Table 11.6 Minimum acceptable diet

Percentage of youngest children age 6-23 months living with their mother who are fed a minimum acceptable diet based on breastfeeding status, number of food groups, and times they are fed during the day or night preceding the survey, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Among breastfed children age 6-23 months, percentage fed:				Among nonbreastfed children age 6-23 months, percentage fed:					Among all children age 6-23 months, percentage fed:				
	Minimum dietary diversity[1]	Minimum meal frequency[2]	Minimum acceptable diet[3]	Number of breastfed children age 6-23 months	Milk or milk products[4]	Minimum dietary diversity[1]	Minimum meal frequency[5]	Minimum acceptable diet[6]	Number of nonbreastfed children age 6-23 months	Breast milk, milk, or milk products[7]	Minimum dietary diversity[1]	Minimum meal frequency[8]	Minimum acceptable diet[9]	Number of all children age 6-23 months
Age in months														
6-11	28.9	45.6	18.2	850	24.5	13.7	27.5	6.4	100	92.1	27.3	43.7	17.0	949
6-8	24.8	51.3	18.6	453	(25.7)	(7.9)	(27.5)	(5.3)	62	91.0	22.8	48.4	17.0	515
9-11	33.5	39.0	17.9	397	(22.6)	(23.5)	(27.5)	(8.3)	37	93.3	32.6	38.0	17.0	434
12-17	37.1	46.2	20.3	743	14.2	24.6	27.5	7.8	129	87.3	35.3	43.4	18.5	872
18-23	37.3	50.8	23.8	515	7.3	29.0	30.5	4.9	213	72.9	34.9	44.9	18.3	728
Sex														
Male	34.3	47.9	19.8	1,100	11.6	25.6	30.7	6.5	253	83.5	32.7	44.7	17.3	1,354
Female	33.3	46.2	20.9	1,007	15.3	22.4	26.5	5.7	188	86.7	31.6	43.1	18.5	1,196
Residence														
Urban	46.6	50.7	27.2	229	44.6	42.3	52.2	25.4	60	88.6	45.7	51.0	26.9	289
Rural	32.3	46.6	19.5	1,879	8.3	21.4	25.3	3.1	382	84.5	30.5	43.0	16.7	2,261
Region														
Southern	35.7	47.9	23.7	400	25.9	24.3	36.0	12.1	103	84.8	33.4	45.4	21.3	503
Highlands	37.1	46.7	19.7	779	9.8	29.4	34.1	3.1	179	83.2	35.7	44.3	16.6	958
Momase	28.6	47.1	18.8	594	10.7	17.7	15.9	7.2	111	85.9	26.8	42.2	16.9	705
Islands	33.4	47.0	20.6	335	4.4	19.9	24.8	2.1	49	87.9	31.7	44.2	18.3	384
Mother's education														
No education	26.4	43.3	14.2	521	6.1	17.0	24.6	3.4	82	87.2	25.2	40.7	12.7	603
Elementary	31.0	52.8	20.3	102	(2.3)	(6.3)	(7.8)	(2.3)	36	74.8	24.6	41.2	15.6	138
Primary	33.0	46.0	20.0	977	4.8	18.6	19.0	3.7	167	86.1	30.9	42.1	17.6	1,144
Secondary	40.2	50.4	24.9	460	37.1	34.8	45.0	13.5	89	89.8	39.3	49.5	23.0	549
Higher	75.8	65.1	50.7	48	(16.8)	(42.5)	(48.8)	(7.7)	67	51.4	56.4	55.6	25.6	115
Wealth quintile														
Lowest	29.7	42.8	14.3	443	1.6	10.1	15.6	0.0	74	85.9	26.9	38.9	12.2	517
Second	32.5	45.6	22.4	413	6.9	13.4	19.8	5.4	82	84.5	29.3	41.3	19.6	496
Middle	28.6	49.5	18.8	491	5.0	14.5	15.3	4.8	57	90.2	27.2	46.0	17.4	548
Fourth	35.0	47.1	21.9	454	7.2	22.1	22.9	2.1	68	87.8	33.3	43.9	19.3	523
Highest	48.4	51.4	26.5	306	27.3	40.8	47.3	11.5	160	75.0	45.8	50.0	21.3	466
Total	33.8	47.1	20.3	2,108	13.2	24.3	29.0	6.1	442	85.0	32.2	43.9	17.9	2,549

Note: Figures in parentheses are based on 25-49 unweighted cases.

[1] Children received foods from five or more of the following food groups: a. breast milk; b. infant formula, milk other than breast milk, cheese or yogurt or other milk products; c. foods made from grains, roots, and tubers, including porridge and fortified baby food from grains; d. vitamin A-rich fruits and vegetables; e. other fruits and vegetables; f. eggs; g. meat, poultry, fish, and shellfish (and organ meats); h. legumes and nuts.

[2] For breastfed children, minimum meal frequency is receiving solid, semisolid, or soft food at least twice a day for infants age 6-8 months and at least three times a day for children age 9-23 months.

[3] Breastfed children age 6-23 months are considered to be fed a minimum acceptable diet if they are fed the minimum dietary diversity as described in footnote 1 and the minimum meal frequency as defined in footnote 2.

[4] Includes two or more feedings of commercial infant formula and fresh, tinned, and powdered animal milk

[5] For nonbreastfed children age 6-23 months, minimum meal frequency is receiving solid, semisolid, or soft food or milk feeds at least four times a day. At least one of the feeds must be a solid, semisolid, or soft feed.

[6] Nonbreastfed children age 6-23 months are considered to be fed a minimum acceptable diet if they receive other milk or milk products at least twice a day, receive the minimum meal frequency as defined in footnote 5, and receive solid, semisolid, or soft foods from at least four food groups not including the milk or milk products food group.

[7] Breastfeeding, or not breastfeeding and receiving two or more feedings of commercial infant formula and fresh, tinned, and powdered animal milk

[8] Children are fed the minimum recommended number of times per day according to their age and breastfeeding status as described in footnotes 2 and 5.

[9] Children age 6-23 months are considered to be fed a minimum acceptable diet if they receive breast milk, receive other milk or milk products as described in footnote 7, are fed the minimum dietary diversity as described in footnote 1, and are fed the minimum meal frequency as described in footnotes 2 and 5.

Table 11.7 Presence of iodised salt in household

Among all households, percentage with salt tested for iodine content, and among households with salt tested, percentage with iodised salt, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Among all households, percentage					Among households with tested salt:	
	With salt tested and results available	With salt tested but no results available	With salt but salt not tested[1]	With no salt in the household	Number of households	Percentage with adequately iodised salt (>15.0 ppm)	Number of households
Residence							
Urban	46.6	26.5	9.9	14.4	1,521	90.2	709
Rural	30.9	19.0	15.9	32.8	14,500	87.7	4,481
Region							
Southern	32.4	19.2	6.5	40.9	2,681	91.7	869
Highlands	20.8	21.8	23.0	32.3	6,916	95.4	1,440
Momase	43.5	16.7	10.1	28.4	4,075	82.8	1,771
Islands	47.2	19.6	11.8	20.4	2,349	84.0	1,110
Province							
Western	22.9	20.0	3.6	52.1	349	84.7	80
Gulf	18.9	18.4	5.4	56.4	263	93.6	50
Central	35.8	17.5	7.9	38.4	514	93.7	184
National Capital District	39.7	34.8	6.0	17.8	324	85.4	129
Milne Bay	36.1	12.8	7.4	42.9	833	94.5	301
Northern	31.5	21.9	6.2	38.9	399	92.5	126
Southern Highlands	13.3	10.7	24.2	50.1	1,277	91.5	170
Enga	23.2	16.7	21.5	36.2	567	92.8	131
Western Highlands	14.2	45.0	19.3	20.5	868	98.0	123
Chimbu	14.0	31.9	23.5	27.9	1,077	90.9	151
Eastern Highlands	22.7	13.5	38.2	22.5	1,584	97.1	360
Morobe	42.5	24.6	4.8	26.6	1,419	94.9	602
Madang	53.8	16.8	5.9	22.3	1,014	72.7	545
East Sepik	43.4	9.0	20.8	25.4	1,054	79.4	458
West Sepik	28.2	11.1	11.1	48.8	587	81.0	166
Manus	51.3	19.0	8.1	21.1	158	89.0	81
New Ireland	57.0	9.2	5.9	26.5	453	88.3	258
East New Britain	70.4	13.8	2.6	11.7	533	76.6	376
West New Britain	40.8	28.5	8.1	21.8	607	90.9	247
Autonomous Region of Bougainville	24.7	23.7	29.0	22.0	598	80.8	148
Hela	28.7	21.3	9.8	38.7	903	100.0	260
Jiwaka	38.2	21.2	7.2	32.4	641	93.6	245
Wealth quintile							
Lowest	18.8	11.4	14.3	54.5	3,421	93.1	643
Second	26.8	16.2	17.5	37.6	3,362	87.2	900
Middle	35.0	18.4	16.2	28.5	3,282	87.8	1,150
Fourth	43.3	19.7	15.5	20.1	3,129	86.0	1,355
Highest	40.4	35.7	12.7	9.8	2,826	88.5	1,142
Total	32.4	19.7	15.3	31.0	16,021	88.0	5,190

[1] Includes households in which salt could not be tested for technical or logistical reasons, including availability of test kits

Table 11.8 Micronutrient intake among children

Among youngest children age 6-23 months who are living with their mother, percentages who consumed vitamin A-rich and iron-rich foods in the 24 hours preceding the survey, and among all children age 6-59 months, percentages who were given vitamin A supplements in the 6 months preceding the survey, iron supplements in the 7 days preceding the survey, and deworming medication in the 6 months preceding the survey, according to background characteristics, Papua New Guinea DHS 2016-18

	Among youngest children age 6-23 months living with their mother:			Among all children age 6-59 months:			
Background characteristic	Percentage who consumed foods rich in vitamin A in last 24 hours[1]	Percentage who consumed foods rich in iron in last 24 hours[2]	Number of children	Percentage given iron supplements in past 7 days[3]	Percentage given vitamin A supplements in past 6 months[4]	Percentage given deworming medication in past 6 months[3,5]	Number of children
Age in months							
6-8	74.1	38.6	515	7.6	42.3	8.7	540
9-11	86.0	39.0	434	9.2	42.5	12.6	455
12-17	91.2	41.6	872	9.0	49.6	22.3	919
18-23	89.3	42.8	728	8.9	43.0	22.8	845
24-35	na	na	na	5.9	28.3	22.9	1,843
36-47	na	na	na	5.7	23.1	21.2	1,984
48-59	na	na	na	6.3	20.0	20.3	1,865
Sex							
Male	87.0	42.5	1,354	7.1	31.5	20.9	4,424
Female	85.6	39.1	1,196	6.6	29.9	19.9	4,027
Breastfeeding status							
Breastfeeding	86.1	39.4	2,108	8.1	39.9	18.7	3,111
Not breastfeeding	90.0	47.4	254	6.4	25.5	21.4	4,520
Missing	83.7	49.4	188	4.5	24.7	21.4	821
Mother's age							
15-19	88.2	49.0	123	12.5	44.0	15.3	230
20-29	85.9	43.0	1,393	6.2	32.7	20.7	4,113
30-39	87.1	36.2	860	6.7	28.5	20.4	3,281
40-49	85.1	41.1	173	8.8	26.0	20.3	827
Residence							
Urban	92.3	62.7	289	11.2	44.2	31.5	888
Rural	85.6	38.1	2,261	6.3	29.1	19.1	7,563
Region							
Southern	82.9	49.8	503	6.2	35.6	24.2	1,660
Highlands	88.5	39.4	958	4.8	28.0	16.6	3,211
Momase	86.4	37.3	705	7.9	27.7	19.1	2,338
Islands	85.5	39.7	384	11.1	36.9	27.4	1,242
Province							
Western	80.3	50.1	75	5.8	31.1	9.6	227
Gulf	78.9	34.6	47	7.0	26.0	21.3	173
Central	78.0	36.9	111	6.8	36.3	15.0	365
National Capital District	96.2	79.7	70	7.8	46.5	29.5	201
Milne Bay	82.1	57.5	128	6.4	38.4	42.3	466
Northern	84.1	36.7	73	3.0	31.0	13.8	230
Southern Highlands	73.9	19.1	188	7.2	28.7	11.3	649
Enga	86.6	35.9	98	4.4	32.2	21.6	273
Western Highlands	79.1	35.4	95	5.7	17.1	10.3	333
Chimbu	95.5	42.6	167	2.3	36.9	24.5	559
Eastern Highlands	93.4	42.7	192	3.2	22.9	13.2	657
Morobe	91.9	34.3	249	8.8	30.8	22.4	815
Madang	85.8	46.2	189	10.1	28.1	22.9	649
East Sepik	89.1	38.4	140	2.9	20.8	8.8	487
West Sepik	73.4	28.5	126	8.6	28.8	18.9	388
Manus	89.2	71.5	23	20.1	54.7	33.5	77
New Ireland	89.7	47.0	63	15.8	43.2	31.9	241
East New Britain	92.2	43.5	111	14.0	42.1	43.7	364
West New Britain	81.1	27.1	89	5.0	30.5	17.0	277
Autonomous Region of Bougainville	78.2	34.7	98	7.1	26.2	11.2	283
Hela	99.0	55.3	137	8.0	30.5	18.2	458
Jiwaka	91.4	53.7	81	1.9	25.3	21.2	283
Mother's education							
No education	85.0	26.9	603	4.9	19.9	11.3	2,147
Elementary	82.8	32.1	138	5.3	29.2	16.5	448
Primary	84.9	39.9	1,144	6.9	30.8	20.5	3,771
Secondary	89.2	50.8	549	9.5	38.3	29.5	1,759
Higher	97.7	87.2	115	7.5	62.0	35.1	326

Continued...

Table 11.8—*Continued*

Background characteristic	Among youngest children age 6-23 months living with their mother: Percentage who consumed foods rich in vitamin A in last 24 hours[1]	Percentage who consumed foods rich in iron in last 24 hours[2]	Number of children	Among all children age 6-59 months: Percentage given iron supplements in past 7 days[3]	Percentage given vitamin A supplements in past 6 months[4]	Percentage given deworming medication in past 6 months[3,5]	Number of children
Wealth quintile							
Lowest	83.8	29.4	517	4.2	20.3	12.4	1,801
Second	84.7	30.4	496	5.2	25.5	16.2	1,720
Middle	86.1	39.2	548	6.8	30.5	17.9	1,728
Fourth	86.3	43.4	523	8.1	34.9	24.1	1,686
Highest	91.3	64.0	466	10.5	44.7	33.2	1,516
Total	86.3	40.9	2,549	6.9	30.7	20.4	8,451

na = Not applicable
[1] Includes meat (and organ meat), fish, poultry, eggs, pumpkin, red or yellow yams or squash, carrots, red sweet potatoes, dark green leafy vegetables, ripe mango, ripe papaya, and other locally grown fruits and vegetables that are rich in vitamin A
[2] Includes meat (and organ meat), fish, poultry, and eggs
[3] Based on mother's recall
[4] Based on both mother's recall and the vaccination card (where available)
[5] Deworming for intestinal parasites is commonly done for helminths and for schistosomiasis.

Table 11.9 Micronutrient intake among mothers

Among women age 15-49 with a child born in the 5 years preceding the survey, percent distribution by number of days they took iron tablets or syrup during the pregnancy of the last child and percentage who took deworming medication during the pregnancy of the last child, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Number of days women took iron tablets or syrup during pregnancy of last birth						Percentage of women who took deworming medication during pregnancy of last birth	Number of women
	None	<60	60-89	90+	Don't know/ missing	Total		
Age								
15-19	28.5	50.0	2.4	7.9	11.2	100.0	21.0	283
20-29	27.2	51.8	2.2	7.6	11.2	100.0	17.6	3,240
30-39	28.7	45.5	2.9	8.8	14.1	100.0	17.8	2,519
40-49	31.2	42.9	1.0	6.3	18.5	100.0	19.9	717
Residence								
Urban	14.7	52.8	2.5	14.2	15.8	100.0	18.1	761
Rural	30.0	47.9	2.3	7.1	12.7	100.0	18.1	5,998
Region								
Southern	23.3	44.1	3.4	16.5	12.7	100.0	20.7	1,327
Highlands	31.0	47.3	2.0	4.1	15.6	100.0	14.6	2,621
Momase	33.6	47.8	2.2	8.1	8.3	100.0	15.5	1,851
Islands	17.4	58.9	1.9	6.2	15.6	100.0	28.9	961
Province								
Western	28.5	39.5	3.4	11.4	17.2	100.0	16.7	167
Gulf	26.8	30.1	2.8	15.4	24.9	100.0	14.4	134
Central	30.8	46.9	3.0	11.4	8.0	100.0	14.7	290
National Capital District	6.7	42.5	3.9	32.3	14.6	100.0	16.4	176
Milne Bay	14.7	45.5	4.2	23.0	12.5	100.0	33.6	379
Northern	37.9	53.1	2.5	0.9	5.6	100.0	15.2	181
Southern Highlands	42.6	45.1	2.7	2.5	7.1	100.0	9.7	527
Enga	39.5	41.0	2.2	2.0	15.3	100.0	13.6	234
Western Highlands	20.9	61.2	0.0	0.9	16.9	100.0	15.3	281
Chimbu	21.9	40.5	0.9	6.8	29.9	100.0	16.4	420
Eastern Highlands	25.4	61.5	3.1	1.9	8.1	100.0	22.6	540
Morobe	24.2	57.9	0.4	6.8	10.8	100.0	12.1	686
Madang	35.5	44.0	4.7	7.6	8.2	100.0	18.7	499
East Sepik	41.9	35.7	3.0	12.3	7.0	100.0	13.2	377
West Sepik	41.6	46.0	1.2	6.6	4.6	100.0	20.7	289
Manus	11.9	64.6	1.7	10.2	11.6	100.0	16.2	59
New Ireland	24.0	62.4	0.8	2.0	10.8	100.0	41.3	182
East New Britain	10.8	52.2	3.1	11.2	22.6	100.0	37.1	271
West New Britain	21.9	65.1	1.6	1.7	9.7	100.0	22.9	222
Autonomous Region of Bougainville	17.2	56.6	1.6	6.8	17.8	100.0	18.3	227
Hela	36.6	31.8	1.8	8.9	20.9	100.0	9.9	361
Jiwaka	29.3	45.7	1.9	6.3	16.9	100.0	11.7	258
Education								
No education	49.5	33.2	1.6	3.4	12.4	100.0	10.4	1,717
Elementary	26.7	51.3	1.9	7.6	12.5	100.0	18.2	314
Primary	26.2	51.4	2.2	7.8	12.5	100.0	21.5	3,027
Secondary	11.8	58.2	3.4	13.3	13.3	100.0	19.1	1,423
Higher	5.7	58.5	2.5	10.6	22.6	100.0	22.4	278
Wealth quintile								
Lowest	48.4	34.4	2.5	5.1	9.7	100.0	10.3	1,417
Second	32.7	47.6	2.5	5.2	12.0	100.0	17.6	1,357
Middle	27.6	51.3	2.0	7.2	11.9	100.0	20.1	1,341
Fourth	20.5	55.6	2.2	7.7	14.1	100.0	24.1	1,358
Highest	10.3	54.5	2.3	14.9	18.0	100.0	18.5	1,286
Total	28.3	48.5	2.3	7.9	13.0	100.0	18.1	6,759

MALARIA 12

Key Findings

- ***Ownership of insecticide-treated nets:*** 69% of households own at least one insecticide-treated net (ITN).
- ***Use of ITNs:*** 46% of the household population slept under an ITN the night before the survey.
- ***Intermittent preventive treatment (IPTp) during pregnancy:*** 24% of women age 15-49 with a live birth in the 2 years before the survey reported taking three or more doses of SP/Fansidar during their last pregnancy.
- ***Source of advice or treatment:*** Among children under age 5 with a fever in the 2 weeks preceding the survey for whom advice or treatment was sought, 90% went to public health facilities, while 5% went to the private medical sector.
- ***Artemisinin-based combination therapy:*** Among children under age 5 with a fever in the 2 weeks preceding the survey who took any antimalarial medication, 72% received artemisinin-based combination therapy (ACT).

Malaria remains one of the most important public health problems in Papua New Guinea. The National Malaria Control Programme and its implementing partners have made impressive efforts in malaria control. The National Malaria Strategic Plan 2014-2020 is an initiative that comprehensively highlights the objectives of the national programme on malaria in the country (National Department of Health 2017).

This chapter presents data that are useful in assessing how well malaria control strategies are being implemented, including the availability and use of mosquito nets, the prophylactic and therapeutic use of antimalarial drugs, and diagnostic testing of children with fever.

12.1 OWNERSHIP OF INSECTICIDE-TREATED NETS

Ownership of insecticide-treated nets

Households that have at least one insecticide-treated net (ITN). An ITN is defined as a factory-treated net that does not require any further treatment.

Sample: Households

Full household ITN coverage

Percentage of households with at least one ITN for every two people.

Sample: Households

Household ownership and use of mosquito nets (in particular, insecticide-treated nets, or ITNs) is a central strategy in malaria prevention. The National Malaria Strategic Plan 2014-2020 articulates this strategy in its objectives and emphasises that ownership of ITNs has to be interpreted to account for a rolling distribution versus a nationwide distribution (National Department of Health 2017). All households in the 2016-18 PNG DHS were asked if they owned mosquito nets, and if so they were asked a series of follow-up questions about each net: what type it was, where it was obtained, and who slept under it the night before the survey.

Overall, 70% of households have at least one mosquito net, while 69% have at least one ITN. On average, there are 1.9 ITNs per household. Forty-five percent of households have achieved full ITN coverage, meaning that the household had at least one ITN for every two persons who slept there the night before the survey. The remaining households either have no ITN (32%) or do not have enough ITNs for all household members (23%) (**Table 12.1** and **Figure 12.1**).

Patterns by background characteristics

- The percentage of households with at least one ITN is highest in Manus (94%) and lowest in Southern Highlands (23%).

Figure 12.1 **Household ownership of insecticide-treated nets (ITNs)**

Percent distribution of households

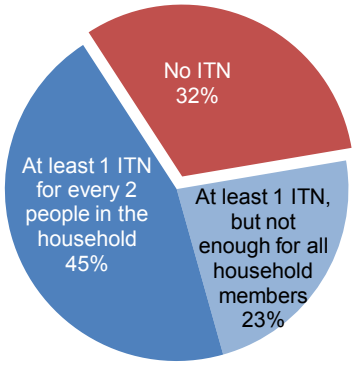
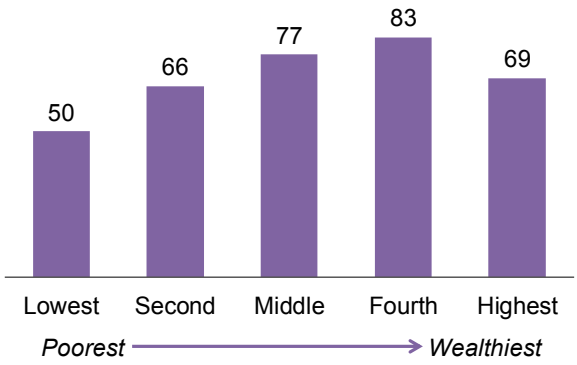


Figure 12.2 **Insecticide-treated net (ITN) ownership by household wealth**

Percentage of households with at least one ITN



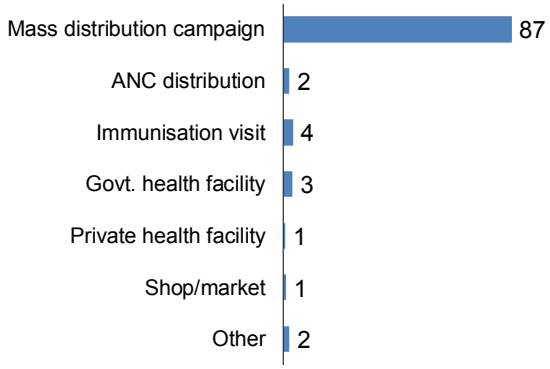
- Ownership of at least one ITN increases from 50% among households in the lowest wealth quintile to 83% among households in the fourth quintile (**Figure 12.2**).
- A higher percentage of rural (46%) than urban (42%) households had at least one ITN for every two persons who stayed in the household the night before the survey.

Source of Nets

The majority of ITNs (87%) were obtained through mass distribution campaigns. Four percent were obtained during immunisation visits, 3% were obtained from government health facilities, and 2% were obtained during antenatal care (ANC) visits (**Figure 12.3** and **Table 12.2**).

Figure 12.3 **Source of insecticide-treated nets (ITNs)**

Percent distribution of ITNs in interviewed households



12.2 HOUSEHOLD ACCESS TO AND USE OF ITNS

Access to an ITN

Percentage of the population that could sleep under an ITN if each ITN in the household were used by up to two people.

Sample: De facto household population

Use of ITNs

Percentage of the population that slept under an ITN the night before the survey.

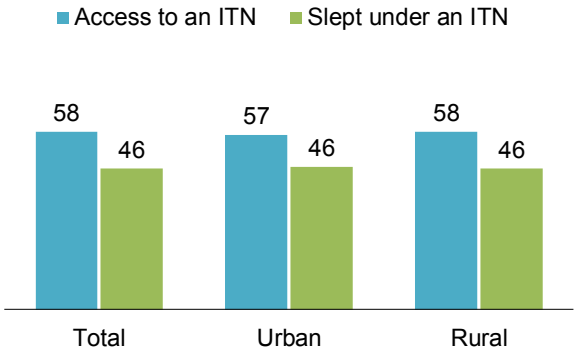
Sample: De facto household population

Access to an ITN is measured by the proportion of the population that could sleep under an ITN if each ITN in the household were used by up to two people. Comparing ITN access and ITN use indicators can help programmes identify if there is a behavioural gap in which available ITNs are not being used. If the difference between these indicators is substantial, the malaria programme may need to focus on behaviour change and identify the main drivers of or barriers to ITN use to design an appropriate intervention. This analysis helps malaria control programmes determine whether they need to achieve higher ITN coverage, promote ITN use, or both. Promoting ITN use is critical in efforts to increase use (National Department of Health 2017).

In Papua New Guinea, 58% of the de facto household population has access to an ITN (**Table 12.3** and **Table 12.4**), although a smaller proportion (46%) slept under an ITN the night before the survey (**Table 12.5**). In households with at least one ITN, 66% of the de facto population slept under an ITN the night before the survey. Sixty-eight percent of all ITNs were used the night before the survey (**Table 12.6**).

Figure 12.4 **Access to and use of insecticide-treated nets (ITNs) by residence**

Percentage of the household population with access to an ITN and percentage who slept under an ITN the night before the survey



Patterns by background characteristics

- The percentage of the population with access to ITNs is similar in urban and rural areas (57% and 58%, respectively) (**Figure 12.4**).
- ITN access ranges from a high of 73% in the Momase region to a low of 37% in the Highlands region (**Table 12.4**).
- Fifty-two percent of the household population under age 5 slept under an ITN the night before the survey, as compared with 43% of the household population age 50 or above (**Table 12.5**).

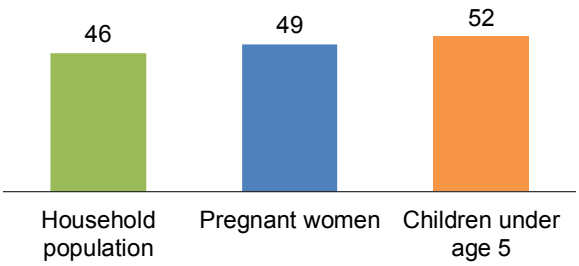
12.3 Use of ITNs by Children and Pregnant Women

Children and pregnant women are particularly vulnerable to malaria. Approximately half (52%) of children under age 5 slept underneath an ITN the night before the survey, and 71% of children under age 5 in households with at least one ITN slept under an ITN the night preceding the survey (**Table 12.7** and **Figure 12.5**).

Similarly, around half (49%) of pregnant women age 15-49 slept under an ITN the night before the survey, and 72% of pregnant women in households with at least one ITN slept under an ITN the night preceding the survey (**Table 12.8** and **Figure 12.5**).

***Figure 12.5* Insecticide-treated net (ITN) use**

Percentage who slept under an ITN the night before the survey



Patterns by background characteristics

- The percentage of children under age 5 who slept under an ITN the night preceding the survey is slightly higher among those from urban households (54%) than among those from rural households (51%) (**Table 12.7**).
- Use of an ITN the night before the survey among children under age 5 varies by region, from 32% in Highlands to 71% in Momase (**Table 12.7**). Similarly, the percentage of pregnant women who slept under an ITN the night before the survey ranges from 24% in Highlands to 80% in Momase (**Table 12.8**).

12.4 Malaria in Pregnancy

Intermittent preventive treatment (IPTp) during pregnancy

Percentage of women who took at least three doses of SP/Fansidar during their last pregnancy.

Sample: Women age 15-49 with a live birth in the 2 years before the survey

Malaria infection during pregnancy is a major public health problem in Papua New Guinea, with substantial risks for the mother, her foetus, and the neonate. Intermittent preventive treatment of malaria in pregnancy (IPTp) is a full therapeutic course of antimalarial medicine given to pregnant women at routine antenatal care visits to prevent malaria. IPTp helps prevent maternal malaria episodes, maternal and foetal anaemia, placental parasitaemia, low birth weight, and neonatal mortality. Sulfadoxine-pyrimethamine (SP), also known as Fansidar, is the recommended drug for IPTp in Papua New Guinea; the aim is to provide three doses of sulfadoxine-pyrimethamine at least 1 month apart to women receiving ANC from the second trimester of their pregnancies until delivery (National Department of Health 2017).

In Papua New Guinea, 50% of women with a live birth in the 2 years before the survey reported taking one or more doses of SP/Fansidar during their last pregnancy; 36% reported taking two or more doses, and 24% reported taking three or more doses (**Table 12.9)**.

Patterns by background characteristics

- The percentage of women who received three or more doses of SP/Fansidar during their last pregnancy generally increases with increasing education; 16% of women with no education received three or more doses, as compared with 35% of women with a higher education (**Table 12.9**).

- The percentage of women who received three or more doses of SP/Fansidar during their last pregnancy ranges from 17% in the Highlands region to 35% in the Islands region.

- The percentage of women who received three or more doses of SP/Fansidar increases with increasing household wealth, from 14% among those in the lowest wealth quintile to 33% among those in the highest quintile (**Table 12.9**).

12.5 Case Management of Malaria in Children

Care seeking for children under age 5 with a fever

Percentage of children under age 5 with a fever in the 2 weeks before the survey for whom advice or treatment was sought from a health provider, a health facility, or a pharmacy.

Sample: Children under age 5 with a fever in the 2 weeks before the survey

Diagnosis of malaria in children under age 5 with a fever

Percentage of children under age 5 with a fever in the 2 weeks before the survey who had blood taken from a finger or heel for testing. This is a proxy measure of diagnostic testing for malaria.

Sample: Children under age 5 with a fever in the 2 weeks before the survey

Artemisinin-based combination therapy (ACT) for children under age 5 with a fever

Among children under age 5 with a fever in the 2 weeks before the survey who took any antimalarial drugs, the percentage who received artemisinin-based combination therapy (ACT).

Sample: Children under age 5 with a fever in the 2 weeks before the survey

Eighteen percent of children under age 5 had a fever in the 2 weeks preceding the survey; treatment was sought for 50% of these children. For 28% of children with a fever, treatment was sought the same or next day. Twenty-five percent of children who had a fever had blood taken from a finger or heel for testing (**Table 12.10**).

Among children with a fever for whom advice or treatment was sought, 90% went to public health facilities, while 5% went to the private medical sector (**Table 12.11**). Among children with a fever in the 2 weeks preceding the survey who took any antimalarial medication, 72% received artemisinin-based combination therapy (ACT). The next most used drugs were amodiaquine and artemether pills/tablets (17% each) (**Table 12.12**). It is worth noting that during the survey period drug and test stocks were a major issue nationwide.

Patterns by background characteristics

- The occurrence of fever among children under age 5 in the 2 weeks before the survey was highest among those age 12-23 months (24%) (**Table 12.10**).

- The percentage of children with a fever for whom advice or treatment was sought was higher among those living in urban areas (67%) than among those living in rural areas (47%) (**Table 12.10**).

- The proportion of children with a fever in the 2 weeks before the survey who had blood taken from a finger or heel for testing ranges from a high of 36% in the Islands region to a low of 8% in the Highlands region (**Table 12.10**).

- The percentage of children with a fever who received ACT was higher among those from rural areas (72%) than among those from urban areas (67%) (**Table 12.12**).

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- **Table 12.3 Access to an insecticide-treated net (ITN)**
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- **Table 12.5 Use of mosquito nets by persons in the household**
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- **Table 12.11 Source of advice or treatment for children with fever**
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Table 12.1 Household possession of mosquito nets

Percentage of households with at least one mosquito net (treated or untreated) and one insecticide-treated net (ITN), average number of nets and ITNs per household, and percentage of households with at least one net and ITN per two persons who stayed in the household last night, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage of households with at least one mosquito net		Average number of nets per household		Number of households	Percentage of households with at least one net for every two persons who stayed in the household last night		Number of households with at least one person who stayed in the household last night
	Any mosquito net	Insecticide-treated mosquito net (ITN)[1]	Any mosquito net	Insecticide-treated mosquito net (ITN)[1]		Any mosquito net	Insecticide-treated mosquito net (ITN)[1]	
Residence								
Urban	76.1	71.5	2.4	2.2	1,521	46.3	42.4	1,517
Rural	69.4	68.2	1.9	1.9	14,500	46.7	45.5	14,416
Region								
Southern	85.4	84.1	2.6	2.6	2,681	56.5	55.1	2,670
Highlands	49.4	48.2	1.2	1.1	6,916	30.2	29.3	6,879
Momase	86.8	84.3	2.7	2.6	4,075	62.1	59.3	4,040
Islands	84.3	83.2	2.4	2.3	2,349	56.9	56.0	2,344
Province								
Western	87.2	85.3	2.6	2.6	349	56.5	55.4	348
Gulf	83.7	82.2	2.7	2.6	263	58.9	56.7	263
Central	84.6	83.7	2.7	2.6	514	53.3	51.6	513
National Capital District	60.4	56.0	1.8	1.6	324	25.9	22.8	323
Milne Bay	93.4	93.0	2.8	2.7	833	66.4	65.7	826
Northern	89.4	88.7	3.0	2.9	399	63.4	62.6	398
Southern Highlands	23.5	22.9	0.6	0.6	1,277	14.4	13.9	1,277
Enga	34.1	33.0	0.9	0.8	567	17.8	17.3	563
Western Highlands	54.9	52.4	1.3	1.2	868	39.0	37.5	864
Chimbu	62.1	61.4	1.5	1.4	1,077	37.4	36.4	1,077
Eastern Highlands	72.1	70.5	1.6	1.6	1,584	45.8	44.1	1,557
Morobe	81.6	78.3	2.6	2.5	1,419	52.6	48.9	1,389
Madang	89.6	88.0	3.0	2.9	1,014	65.0	61.9	1,011
East Sepik	90.2	87.6	2.7	2.6	1,054	75.0	72.7	1,053
West Sepik	88.6	86.2	2.4	2.3	587	56.6	55.2	587
Manus	94.5	93.8	3.2	3.1	158	78.0	77.0	158
New Ireland	90.1	88.9	2.9	2.8	453	68.0	66.9	452
East New Britain	75.5	74.8	2.0	2.0	533	39.0	38.7	531
West New Britain	84.9	82.9	2.2	2.2	607	58.7	57.3	604
Autonomous Region of Bougainville	84.4	83.6	2.3	2.3	598	56.9	56.3	598
Hela	32.5	31.1	0.9	0.8	903	18.7	18.5	902
Jiwaka	53.3	52.7	1.2	1.2	641	27.2	26.8	640
Wealth quintile								
Lowest	50.9	50.2	1.3	1.2	3,421	31.7	31.0	3,402
Second	67.1	65.8	1.8	1.8	3,362	45.0	43.8	3,351
Middle	78.0	76.7	2.2	2.1	3,282	54.5	53.1	3,273
Fourth	84.3	82.6	2.5	2.4	3,129	57.8	56.0	3,124
Highest	71.9	68.6	2.2	2.0	2,826	45.2	42.6	2,783
Total	70.0	68.5	2.0	1.9	16,021	46.6	45.2	15,933

[1] An insecticide-treated net (ITN) is a factory-treated net that does not require any further treatment.

Table 12.2 Source of mosquito nets

Percent distribution of mosquito nets by source of net, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Mass distribution campaign	ANC visit	Immunisation visit	Government health facility	Private health facility	Pharmacy	Shop/ market	Community health worker	Religious institution	Other	Don't know /missing	Total	Number of mosquito nets
Type of net													
ITN[1]	86.7	2.3	3.6	3.4	0.6	0.0	0.9	0.1	0.2	2.0	0.3	100.0	30,677
Other[2]	5.6	0.3	2.8	0.0	0.0	0.9	49.8	0.9	0.6	11.0	28.3	100.0	1,087
Residence													
Urban	73.8	4.8	3.9	2.7	0.4	0.2	9.5	0.0	0.3	2.7	1.7	100.0	3,578
Rural	85.3	1.9	3.5	3.3	0.6	0.1	1.6	0.1	0.1	2.2	1.2	100.0	28,185
Region													
Southern	87.3	1.4	2.2	3.3	0.4	0.1	2.3	0.2	0.1	0.8	1.7	100.0	7,084
Highlands	78.8	4.0	7.7	4.2	0.0	0.0	1.2	0.0	0.1	2.4	1.5	100.0	8,102
Momase	84.7	2.1	2.2	0.9	1.1	0.1	4.4	0.1	0.1	3.2	1.2	100.0	10,978
Islands	85.8	0.8	2.1	6.6	0.6	0.0	1.1	0.0	0.3	2.2	0.7	100.0	5,600
Province													
Western	93.2	1.7	1.4	1.0	0.4	0.0	0.8	0.0	0.0	0.6	1.0	100.0	916
Gulf	85.4	0.7	6.3	2.0	0.0	0.7	1.0	0.0	0.7	0.0	3.1	100.0	722
Central	79.3	1.6	3.3	9.1	0.1	0.1	1.4	1.0	0.2	1.7	2.3	100.0	1,372
National Capital District	66.3	3.6	3.7	3.3	1.2	0.7	14.9	0.0	0.0	3.0	3.2	100.0	581
Milne Bay	91.7	1.3	1.1	2.1	0.8	0.0	1.8	0.2	0.1	0.5	0.4	100.0	2,315
Northern	94.9	0.6	0.5	1.4	0.0	0.0	0.4	0.0	0.0	0.1	2.2	100.0	1,178
Southern Highlands	78.1	4.6	9.1	4.0	0.0	0.0	0.3	0.0	0.0	1.2	2.8	100.0	750
Enga	69.6	5.6	11.3	5.9	0.0	0.0	1.9	0.0	0.0	2.1	3.5	100.0	493
Western Highlands	75.4	8.8	8.3	0.9	0.0	0.1	1.9	0.0	0.0	2.4	2.1	100.0	1,131
Chimbu	86.3	3.8	4.0	4.0	0.0	0.0	0.3	0.0	0.1	0.5	1.0	100.0	1,591
Eastern Highlands	80.5	1.8	8.5	2.9	0.0	0.1	0.7	0.0	0.0	4.0	1.5	100.0	2,563
Morobe	81.1	4.8	3.9	0.9	0.2	0.0	6.2	0.0	0.2	0.9	1.8	100.0	3,741
Madang	79.0	0.8	1.0	0.9	3.5	0.0	3.7	0.0	0.0	9.6	1.6	100.0	3,024
East Sepik	91.6	0.8	1.9	0.6	0.2	0.2	3.1	0.3	0.2	0.7	0.4	100.0	2,814
West Sepik	92.8	0.4	0.6	1.4	0.2	0.1	3.5	0.0	0.0	0.7	0.4	100.0	1,399
Manus	94.3	0.9	0.6	2.2	0.0	0.1	1.5	0.0	0.0	0.1	0.4	100.0	498
New Ireland	75.8	0.1	0.3	15.3	2.0	0.0	1.4	0.0	0.3	3.4	1.2	100.0	1,294
East New Britain	81.0	2.2	0.9	9.8	0.2	0.0	0.9	0.0	1.3	3.7	0.0	100.0	1,062
West New Britain	90.0	0.9	0.6	3.7	0.2	0.1	1.3	0.0	0.0	2.3	1.0	100.0	1,344
Autonomous Region of Bougainville	91.5	0.2	6.6	0.3	0.0	0.0	0.5	0.0	0.0	0.3	0.4	100.0	1,402
Hela	58.7	2.3	14.6	15.1	0.0	0.0	3.4	0.0	1.0	4.1	0.9	100.0	788
Jiwaka	89.7	4.6	1.4	1.3	0.0	0.0	1.5	0.0	0.0	1.1	0.5	100.0	786
Wealth quintile													
Lowest	87.2	2.4	4.3	2.0	1.0	0.0	0.8	0.0	0.1	1.2	1.0	100.0	4,313
Second	85.3	1.8	4.3	2.2	0.8	0.0	1.2	0.1	0.2	2.9	1.3	100.0	6,168
Middle	84.5	2.0	3.3	3.7	0.5	0.0	2.0	0.2	0.3	2.8	0.7	100.0	7,210
Fourth	83.8	2.0	3.6	4.6	0.2	0.1	2.0	0.1	0.1	2.2	1.2	100.0	7,875
Highest	79.9	3.0	2.7	3.0	0.5	0.1	6.5	0.0	0.1	1.9	2.3	100.0	6,198
Total	84.0	2.2	3.6	3.3	0.6	0.1	2.5	0.1	0.2	2.3	1.3	100.0	31,764

ANC = Antenatal care
[1] An insecticide-treated net (ITN) is a factory-treated net that does not require any further treatment.
[2] Any net that is not an ITN

Table 12.3 Access to an insecticide-treated net (ITN)

Percent distribution of the de facto household population by number of ITNs the household owns, according to number of persons who stayed in the household the night before the survey, Papua New Guinea DHS 2016-18

	Number of persons who stayed in the household the night before the survey								
Number of ITNs[1]	1	2	3	4	5	6	7	8+	Total
0	33.7	36.2	31.3	33.9	31.7	29.2	31.9	26.7	30.3
1	43.4	23.1	18.0	11.6	8.8	6.7	5.8	5.3	9.2
2	13.9	25.6	25.9	24.5	21.6	19.5	14.4	8.8	17.4
3	5.1	9.9	16.5	16.8	20.1	21.7	19.4	19.7	18.8
4	2.7	3.5	4.3	9.0	10.6	12.8	13.8	15.7	11.7
5	1.0	1.1	2.8	2.4	4.5	5.3	6.5	8.9	5.6
6	0.2	0.6	1.0	1.6	2.5	4.6	7.3	14.0	6.5
7	0.0	0.0	0.2	0.2	0.1	0.2	0.7	0.9	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	1,133	3,128	6,579	10,252	12,313	12,552	10,076	23,320	79,353
Percentage of the de facto population with access to an ITN[2]	66.3	63.8	62.7	60.3	58.7	59.8	55.0	54.1	57.9

[1] An insecticide-treated net (ITN) is a factory-treated net that does not require any further treatment.
[2] Percentage of the de facto household population who could sleep under an ITN if each ITN in the household were used by up to two people

Table 12.4 Access to an ITN by background characteristics

Percentage of the de facto population with access to an ITN in the household, by background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage of the de facto population with access to an ITN[1, 2]	Number of persons
Residence		
Urban	56.8	9,219
Rural	58.0	70,134
Region		
Southern	70.1	14,957
Highlands	37.3	31,759
Momase	73.4	21,039
Islands	70.5	11,598
Province		
Western	75.6	1,876
Gulf	71.1	1,463
Central	68.4	3,046
National Capital District	40.9	2,265
Milne Bay	80.2	4,078
Northern	78.3	2,230
Southern Highlands	17.5	5,813
Enga	25.7	2,881
Western Highlands	40.3	3,773
Chimbu	48.6	5,154
Eastern Highlands	55.1	6,488
Morobe	66.3	7,748
Madang	79.2	5,497
East Sepik	80.3	4,776
West Sepik	70.0	3,019
Manus	86.3	739
New Ireland	78.7	2,248
East New Britain	59.1	2,873
West New Britain	69.8	2,817
Autonomous Region of Bougainville	72.3	2,919
Hela	26.2	4,596
Jiwaka	41.6	3,054
Wealth quintile		
Lowest	41.9	15,774
Second	56.1	15,804
Middle	66.2	15,853
Fourth	70.3	15,951
Highest	54.9	15,971
Total	57.9	79,353

[1] An insecticide-treated net (ITN) is a factory-treated net that does not require any further treatment.
[2] Percentage of the de facto household population who could sleep under an ITN if each ITN in the household were used by up to two people

Table 12.5 Use of mosquito nets by persons in the household

Percentage of the de facto household population who slept the night before the survey under a mosquito net (treated or untreated) and under an insecticide-treated net (ITN), and among the de facto household population in households with at least one ITN, percentage who slept under an ITN the night before the survey, according to background characteristics, Papua New Guinea DHS 2016-18

	Household population			Household population in households with at least one ITN[1]	
Background characteristic	Percentage who slept under any mosquito net last night	Percentage who slept under an ITN[1] last night	Number of persons	Percentage who slept under an ITN[1] last night	Number of persons
Age					
<5	52.9	51.5	11,079	71.4	7,982
5-14	46.3	44.9	22,011	64.6	15,306
15-34	46.5	45.2	24,572	65.3	16,980
35-49	48.6	47.1	10,954	67.5	7,650
50+	44.5	43.3	10,590	63.1	7,277
Sex					
Male	45.8	44.4	40,772	64.4	28,138
Female	49.0	47.6	38,581	67.7	27,148
Residence					
Urban	50.0	46.4	9,219	64.4	6,637
Rural	47.0	45.9	70,134	66.2	48,648
Region					
Southern	55.7	54.8	14,957	64.7	12,664
Highlands	28.1	27.4	31,760	57.7	15,106
Momase	69.8	66.7	21,039	78.8	17,817
Islands	48.4	47.7	11,598	57.0	9,699
Province					
Western	68.3	67.1	1,876	75.8	1,660
Gulf	64.8	64.2	1,463	77.7	1,209
Central	47.9	47.3	3,046	54.8	2,626
National Capital District	28.7	26.9	2,265	44.0	1,385
Milne Bay	55.3	54.6	4,078	59.0	3,779
Northern	78.1	77.3	2,230	86.0	2,005
Southern Highlands	12.7	12.4	5,813	53.5	1,350
Enga	15.6	15.3	2,881	43.6	1,010
Western Highlands	28.9	27.5	3,773	54.8	1,895
Chimbu	39.6	39.2	5,154	64.5	3,136
Eastern Highlands	38.4	37.4	6,488	53.9	4,497
Morobe	59.6	55.7	7,748	69.8	6,182
Madang	74.7	72.4	5,497	80.9	4,916
East Sepik	81.0	78.0	4,776	90.2	4,131
West Sepik	69.1	66.7	3,019	77.7	2,588
Manus	60.7	59.9	739	63.5	697
New Ireland	42.3	41.8	2,248	47.1	1,998
East New Britain	43.8	43.3	2,873	58.1	2,143
West New Britain	62.4	60.8	2,817	73.3	2,335
Autonomous Region of Bougainville	41.0	40.8	2,920	47.1	2,527
Hela	22.0	21.0	4,596	63.9	1,511
Jiwaka	36.6	36.2	3,054	64.7	1,707
Wealth quintile					
Lowest	36.5	35.9	15,774	70.0	8,080
Second	47.0	46.0	15,804	69.3	10,507
Middle	57.4	56.1	15,853	72.2	12,328
Fourth	57.1	55.8	15,950	67.2	13,240
Highest	38.6	35.9	15,971	51.6	11,131
Total	47.3	46.0	79,353	66.0	55,286

Note: Total includes 91 persons with missing information on age.
[1] An insecticide-treated net (ITN) is a factory-treated net that does not require any further treatment.

Table 12.6 Use of existing ITNs

Percentage of insecticide-treated nets (ITNs) that were used by anyone the night before the survey, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage of existing ITNs[1] used last night	Number of ITNs[1]
Residence		
Urban	72.5	3,311
Rural	67.4	27,366
Region		
Southern	65.2	6,888
Highlands	64.3	7,841
Momase	78.0	10,446
Islands	57.4	5,502
Province		
Western	79.6	898
Gulf	75.9	693
Central	57.9	1,331
National Capital District	60.4	534
Milne Bay	54.5	2,284
Northern	79.6	1,149
Southern Highlands	60.0	723
Enga	58.1	472
Western Highlands	61.0	1,071
Chimbu	70.6	1,560
Eastern Highlands	54.0	2,488
Morobe	69.7	3,483
Madang	78.9	2,913
East Sepik	86.2	2,698
West Sepik	81.1	1,353
Manus	59.4	492
New Ireland	40.8	1,267
East New Britain	62.9	1,053
West New Britain	72.6	1,304
Autonomous Region of Bougainville	53.4	1,387
Hela	80.2	751
Jiwaka	81.2	774
Wealth quintile		
Lowest	73.8	4,233
Second	67.8	5,997
Middle	71.2	7,017
Fourth	67.6	7,648
Highest	60.2	5,783
Total	67.9	30,677

[1] An insecticide-treated net (ITN) is a factory-treated net that does not require any further treatment.

Table 12.7 Use of mosquito nets by children

Percentage of children under age 5 who, the night before the survey, slept under a mosquito net (treated or untreated) and under an insecticide-treated net (ITN), and among children under age 5 in households with at least one ITN, percentage who slept under an ITN the night before the survey, according to background characteristics, Papua New Guinea DHS 2016-18

	Children under age 5 in all households			Children under age 5 in households with at least one ITN[1]	
Background characteristic	Percentage who slept under any mosquito net last night	Percentage who slept under an ITN[1] last night	Number of children	Percentage who slept under an ITN[1] last night	Number of children
Age in months					
<12	55.1	53.9	2,088	73.9	1,524
12-23	53.8	52.1	2,083	71.4	1,519
24-35	52.3	50.9	2,198	72.1	1,552
36-47	50.4	49.1	2,450	69.3	1,736
48-59	53.5	51.7	2,260	70.8	1,652
Sex					
Male	52.0	50.6	5,853	70.1	4,220
Female	54.0	52.5	5,226	72.9	3,762
Residence					
Urban	58.0	53.7	1,177	72.3	875
Rural	52.3	51.2	9,902	71.3	7,107
Region					
Southern	60.1	59.0	2,223	68.9	1,903
Highlands	32.6	32.0	4,172	64.0	2,084
Momase	74.2	71.0	3,033	82.5	2,611
Islands	55.5	54.7	1,651	65.4	1,383
Province					
Western	72.2	71.2	277	77.3	256
Gulf	65.6	65.6	226	82.6	180
Central	51.8	50.7	488	60.1	412
National Capital District	35.9	32.6	277	50.7	178
Milne Bay	60.2	59.6	632	64.1	587
Northern	78.9	77.9	322	86.2	291
Southern Highlands	13.4	13.2	818	54.9	197
Enga	22.9	22.3	327	58.5	125
Western Highlands	31.0	29.9	436	57.5	227
Chimbu	43.5	43.3	700	67.6	448
Eastern Highlands	42.7	42.2	859	60.4	600
Morobe	67.9	63.9	1,069	76.1	898
Madang	76.2	73.2	812	82.7	719
East Sepik	81.3	79.1	664	91.5	574
West Sepik	74.7	71.8	488	83.3	421
Manus	70.2	69.5	101	72.9	97
New Ireland	52.9	52.5	318	60.2	277
East New Britain	54.3	53.8	462	68.4	363
West New Britain	62.7	60.7	379	73.1	315
Autonomous Region of Bougainville	48.2	48.2	391	56.8	332
Hela	29.9	28.1	620	69.8	249
Jiwaka	44.9	44.3	412	76.7	238
Wealth quintile					
Lowest	41.4	40.5	2,358	74.8	1,278
Second	51.9	50.9	2,276	71.3	1,623
Middle	63.1	62.2	2,250	77.4	1,808
Fourth	64.9	63.2	2,196	74.8	1,855
Highest	43.1	40.1	1,999	56.6	1,418
Total	52.9	51.5	11,079	71.4	7,982

Note: Table is based on children who stayed in the household the night before the interview.
[1] An insecticide-treated net (ITN) is a factory-treated net that does not require any further treatment.

Table 12.8 Use of mosquito nets by pregnant women

Percentage of pregnant women age 15-49 who, the night before the survey, slept under a mosquito net (treated or untreated) and under an insecticide-treated net (ITN), and among pregnant women age 15-49 in households with at least one ITN, percentage who slept under an ITN the night before the survey, according to background characteristics, Papua New Guinea DHS 2016-18

	Among pregnant women age 15-49 in all households			Among pregnant women age 15-49 in households with at least one ITN[1]	
Background characteristic	Percentage who slept under any mosquito net last night	Percentage who slept under an ITN[1] last night	Number of pregnant women	Percentage who slept under an ITN[1] last night	Number of pregnant women
Residence					
Urban	57.9	55.9	83	78.4	59
Rural	50.0	48.1	656	71.4	443
Region					
Southern	61.6	61.1	139	69.4	122
Highlands	23.6	23.6	306	56.2	128
Momase	84.0	79.8	170	91.1	149
Islands	60.5	55.9	124	68.0	102
Education					
No education	34.3	34.3	181	73.7	84
Elementary	(33.9)	(33.9)	48	(58.8)	28
Primary	61.3	58.4	321	77.2	243
Secondary	60.3	57.6	143	71.3	116
Higher	31.0	31.0	46	(45.1)	32
Wealth quintile					
Lowest	34.6	33.7	182	76.5	80
Second	52.9	52.9	165	76.2	115
Middle	57.4	57.4	126	72.2	100
Fourth	62.7	60.7	151	73.3	125
Highest	50.9	43.3	115	60.8	82
Total	50.8	49.0	739	72.2	502

Note: Table is based on women who stayed in the household the night before the interview. Figures in parentheses are based on 25-49 unweighted cases.
[1] An insecticide-treated net (ITN) is a factory-treated net that does not require any further treatment.

Table 12.9 Use of intermittent preventive treatment (IPTp) by women during pregnancy

Percentage of women age 15-49 with a live birth in the 2 years preceding the survey who, during the pregnancy that resulted in the last live birth, received one or more doses of SP/Fansidar, received two or more doses of SP/Fansidar, and received three or more doses of SP/Fansidar, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage who received one or more doses of SP/Fansidar	Percentage who received two or more doses of SP/Fansidar	Percentage who received three or more doses of SP/Fansidar	Number of women with a live birth in the 2 years preceding the survey
Residence				
Urban	63.6	41.8	27.3	409
Rural	48.5	35.0	23.0	3,233
Region				
Southern	55.7	40.2	24.5	727
Highlands	44.3	27.2	16.5	1,382
Momase	45.1	35.2	26.1	990
Islands	66.8	52.6	34.9	543
Province				
Western	49.9	42.6	23.2	94
Gulf	33.8	25.6	14.9	73
Central	58.9	45.2	34.2	147
National Capital District	68.3	48.3	34.9	95
Milne Bay	65.5	41.9	23.6	207
Northern	42.0	31.0	12.1	111
Southern Highlands	30.3	18.3	10.9	263
Enga	41.3	31.9	22.6	137
Western Highlands	51.8	27.7	14.9	122
Chimbu	66.6	35.7	16.6	246
Eastern Highlands	41.1	36.7	27.2	281
Morobe	56.3	41.4	33.9	357
Madang	35.4	27.5	20.3	260
East Sepik	38.8	32.7	23.7	204
West Sepik	43.9	36.7	21.4	170
Manus	71.7	44.3	30.0	32
New Ireland	69.2	61.3	51.0	91
East New Britain	77.6	49.3	22.4	151
West New Britain	61.3	52.9	33.6	125
Autonomous Region of Bougainville	57.6	52.1	39.9	144
Hela	35.0	17.2	7.8	199
Jiwaka	47.8	18.7	12.9	133
Education				
No education	32.7	21.9	15.7	897
Elementary	46.0	33.7	27.8	173
Primary	49.2	35.8	22.6	1,668
Secondary	67.3	47.9	31.2	743
Higher	82.7	57.9	34.7	161
Wealth quintile				
Lowest	30.1	18.1	13.5	740
Second	40.9	30.8	19.5	728
Middle	50.1	37.7	24.6	772
Fourth	60.7	43.7	27.7	736
Highest	71.2	49.7	32.9	666
Total	50.2	35.7	23.5	3,642

Table 12.10 Prevalence, diagnosis, and prompt treatment of children with fever

Percentage of children under age 5 with a fever in the 2 weeks preceding the survey, and among children under age 5 with fever, percentage for whom advice or treatment was sought, percentage for whom advice or treatment was sought the same or next day, and percentage who had blood taken from a finger or heel for testing, by background characteristics, Papua New Guinea DHS 2016-18

	Children under age 5		Children under age 5 with fever			
Background characteristic	Percentage with a fever in the 2 weeks preceding the survey	Number of children	Percentage for whom advice or treatment was sought[1]	Percentage for whom advice or treatment was sought the same or next day	Percentage who had blood taken from a finger or heel for testing	Number of children
Age in months						
<12	19.6	1,915	51.7	26.0	18.7	376
12-23	23.5	1,763	52.5	32.0	21.7	414
24-35	20.9	1,843	44.0	27.8	27.6	385
36-47	13.6	1,984	48.1	25.0	23.4	270
48-59	13.7	1,865	51.5	28.0	34.6	256
Sex						
Male	17.5	4,916	51.8	28.6	25.1	859
Female	18.9	4,455	47.3	27.3	24.1	842
Residence						
Urban	21.1	984	66.7	39.3	41.3	207
Rural	17.8	8,387	47.2	26.4	22.3	1,494
Region						
Southern	17.1	1,850	65.2	37.6	32.0	316
Highlands	15.9	3,564	40.6	20.7	8.4	565
Momase	21.6	2,578	47.1	25.4	31.4	556
Islands	19.2	1,378	55.8	38.5	36.1	264
Province						
Western	14.6	241	69.2	39.4	14.5	35
Gulf	22.9	197	62.2	39.0	42.8	45
Central	16.0	396	67.9	44.5	19.9	63
National Capital District	23.8	223	66.4	37.6	28.9	53
Milne Bay	13.4	533	69.9	38.4	42.9	71
Northern	18.4	261	53.3	24.6	37.8	48
Southern Highlands	18.1	712	42.0	25.3	5.7	129
Enga	11.9	301	(30.0)	(11.1)	(2.3)	36
Western Highlands	7.5	357	(33.1)	(7.4)	(2.6)	27
Chimbu	14.3	628	42.9	22.1	11.3	90
Eastern Highlands	18.8	733	50.4	23.8	7.2	137
Morobe	21.5	904	43.4	19.2	30.8	194
Madang	23.2	704	45.4	27.6	21.6	163
East Sepik	21.8	542	53.8	27.2	41.8	118
West Sepik	18.6	427	50.0	33.0	37.3	79
Manus	15.9	85	60.5	34.6	49.2	13
New Ireland	26.2	263	41.7	32.6	33.2	69
East New Britain	20.1	398	52.9	36.0	38.5	80
West New Britain	16.3	305	60.4	39.7	38.9	50
Autonomous Region of Bougainville	15.8	327	68.5	45.7	30.2	52
Hela	20.2	509	29.3	13.6	12.1	103
Jiwaka	13.6	324	(41.2)	(27.6)	(14.1)	44
Mother's education						
No education	16.1	2,405	33.6	15.4	13.7	387
Elementary	15.2	476	42.5	16.6	12.1	72
Primary	19.2	4,206	53.3	31.1	26.8	808
Secondary	19.7	1,918	58.0	36.1	32.3	377
Higher	15.4	366	58.3	30.1	32.4	56
Wealth quintile						
Lowest	18.7	1,977	31.4	14.7	10.3	370
Second	17.9	1,918	44.4	22.8	19.8	344
Middle	17.9	1,931	47.8	26.3	24.9	346
Fourth	18.4	1,861	62.0	38.4	30.7	342
Highest	17.8	1,683	65.6	40.5	40.5	300
Total	18.2	9,371	49.5	28.0	24.6	1,701

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] Includes advice or treatment from the following sources: public sector, private sector, shop, and market. Excludes advice or treatment from a traditional practitioner.

Table 12.11 Source of advice or treatment for children with fever

Percentage of children under age 5 with a fever in the 2 weeks preceding the survey for whom advice or treatment was sought from specific sources, and among children under age 5 with a fever in the 2 weeks preceding the survey for whom advice or treatment was sought, percentage for whom advice or treatment was sought from specific sources, Papua New Guinea DHS 2016-18

	Percentage for whom advice or treatment was sought from each source:	
Source	Among children with fever	Among children with fever for whom advice or treatment was sought
Public sector	45.0	90.2
Government hospital	7.1	14.3
Government health centre	14.9	29.9
Government sub-health centre	5.4	10.8
Community aid/health post	8.6	17.2
Church hospital	1.3	2.6
Church health centre	4.4	8.9
Church sub-health centre	1.7	3.4
Church aid post	1.1	2.3
Trained VHV	0.6	1.3
Other public sector	0.3	0.7
Private sector	2.7	5.4
Private hospital/clinic	1.8	3.6
Pharmacy	0.7	1.4
Other private medical sector	0.2	0.5
Other private sector	0.5	1.0
Shop	0.1	0.3
Traditional practitioner	0.4	0.7
Other	1.8	3.6
Number of children	1,701	849

VHV = Village health volunteer

Table 12.12 Type of antimalarial drugs used

Among children under age 5 with a fever in the 2 weeks preceding the survey who took any antimalarial medication, percentage who took specific antimalarial drugs, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage of children who took:															Number of children with fever who took anti-malarial drug
	Any ACT	SP/Fansidar	Chloroquine	Amodiaquine	Quinine pills	Quinine injection	Artesunate rectal	Artesunate injection	Malawan pills/tablets	Malawan injection/IV	Artemether pills/tablets	Artemether pills/injection	Dihydro-artemisinin pills/tablets	Dihydro-artemisinin injection/IV	Other anti-malarial	
Age in months																
<6	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	17
6-11	(60.5)	(29.1)	(1.5)	(21.9)	(1.3)	(1.5)	(0.0)	(2.5)	(16.1)	(11.3)	(15.2)	(19.7)	(2.4)	(0.5)	(3.8)	38
12-23	75.4	16.0	0.6	16.8	3.1	0.2	2.9	2.1	27.8	23.3	12.0	14.4	1.6	0.7	2.7	88
24-35	74.8	10.5	2.5	12.6	0.2	2.9	0.0	2.2	41.1	11.0	9.6	11.7	2.5	3.3	4.3	74
36-47	71.8	12.4	1.8	23.5	7.6	5.0	0.0	1.6	27.8	6.5	27.3	11.1	1.6	2.3	0.3	87
48-59	71.9	8.1	7.1	15.1	0.0	0.0	0.0	2.8	40.9	9.1	17.6	8.9	1.9	2.1	8.1	58
Sex																
Male	73.1	12.6	3.0	17.4	2.9	2.1	0.8	3.1	30.9	13.0	15.4	15.9	1.7	1.8	2.8	188
Female	70.2	16.3	1.6	17.5	2.6	3.1	0.9	1.4	31.8	11.9	18.5	8.6	2.0	1.8	3.8	175
Residence																
Urban	67.3	13.3	1.7	15.6	4.1	6.0	0.3	1.3	25.9	17.3	17.5	8.4	4.5	5.2	3.6	52
Rural	72.4	14.6	2.5	17.7	2.5	2.0	0.9	2.4	32.2	11.7	16.8	13.1	1.4	1.3	3.2	311
Region																
Southern	63.8	11.7	1.3	19.8	2.8	8.3	0.2	3.9	32.0	16.8	7.0	13.1	2.2	0.9	3.7	73
Highlands	63.6	14.0	2.9	27.0	7.5	3.0	3.9	0.5	10.1	10.7	23.4	14.9	2.2	6.1	3.3	74
Momase	78.6	9.6	2.4	16.7	1.1	0.7	0.0	2.3	38.3	9.9	22.3	11.3	0.7	0.0	1.1	156
Islands	73.3	30.8	2.8	4.6	1.3	0.0	0.0	2.3	38.5	16.1	6.9	11.3	3.9	2.4	8.5	60
Mother's education																
No education	63.7	17.5	0.0	33.5	7.4	4.9	0.0	6.0	15.3	11.4	19.7	20.9	1.6	0.0	4.0	71
Elementary	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	12
Primary	78.1	13.6	3.1	11.3	1.5	0.8	1.6	1.9	40.2	12.3	20.8	6.0	0.5	0.8	4.0	180
Secondary	65.2	13.7	2.6	19.4	1.6	4.1	0.2	0.7	27.2	13.7	8.3	17.6	4.9	2.8	1.9	94
Higher	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	6
Wealth quintile																
Lowest	(74.5)	(8.3)	(0.0)	(22.2)	(4.4)	(0.0)	(0.0)	(2.2)	(27.9)	(3.4)	(26.3)	(22.6)	(0.0)	(0.0)	(3.9)	62
Second	78.2	11.5	1.9	12.4	4.1	2.7	1.9	1.7	40.2	7.1	23.2	4.4	2.7	1.5	1.5	83
Middle	73.9	13.1	0.0	20.7	0.0	4.8	2.3	5.0	30.6	22.2	15.0	10.7	0.0	0.4	0.9	57
Fourth	62.8	24.7	7.4	16.7	2.0	0.0	0.0	2.4	31.5	14.8	7.4	11.4	1.9	0.2	4.4	80
Highest	70.2	12.7	1.4	17.3	2.8	5.5	0.2	0.8	25.3	15.8	14.1	14.9	3.6	6.1	5.2	81
Total	71.7	14.4	2.4	17.4	2.8	2.6	0.8	2.3	31.3	12.5	16.9	12.4	1.8	1.8	3.3	363

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
ACT = Artemisinin-based combination therapy

HIV/AIDS-RELATED KNOWLEDGE, ATTITUDES, AND BEHAVIOUR

13

Key Findings

- ***Knowledge about HIV transmission and prevention:*** 23% of women and 27% of men have comprehensive knowledge about HIV.
- ***Knowledge of mother-to-child transmission (MTCT) of HIV:*** 52% of women and 54% of men know that HIV can be transmitted during pregnancy, 54% of women and 56% of men know that HIV can be transmitted during labour, and 53% of women and 48% of men know that HIV can be transmitted during breastfeeding.
- ***Discriminatory attitudes towards people living with HIV:*** 44% of women and 43% of men expressed discriminatory attitudes towards people living with HIV.
- ***HIV testing:*** 58% of women and 63% of men know where to get an HIV test, and 25% of women and 19% of men have ever been tested and received the results.
- ***Self-reported prevalence of STIs:*** 11% of women and 9% of men who had ever had sexual intercourse reported having had a sexually transmitted infection (STI) and/or STI symptoms in the 12 months preceding the survey.

Acquired immunodeficiency syndrome (AIDS) is one of the most serious public health and development challenges facing the world today. AIDS is caused by the human immunodeficiency virus (HIV). HIV weakens the immune system, making the body susceptible to secondary infections and opportunistic diseases. Without treatment, HIV infection leads to AIDS, which is invariably fatal. The predominant mode of HIV transmission is sexual contact. Other modes of transmission are unsafe injections, use of tainted blood supplies during blood transfusions, and mother-to-child transmission (in which the mother passes HIV to her child during pregnancy, delivery, or breastfeeding).

The first case of HIV was diagnosed in Papua New Guinea in 1987 (UNAIDS Pacific Region 2009). The most recent estimate suggests that the national HIV prevalence is 0.9% among adults age 15-49 (UNAIDS 2017). There is evidence that the epidemic is most concentrated among the high-risk population (National Department of Health 2018b). There has been an effective national response in Papua New Guinea to this epidemic, a response supported by international donors. Key initiatives addressing the epidemic include the establishment of the National AIDS Council in 1997 under the Prime Minister's Department, prohibition of discrimination on the basis of HIV infection via the HIV and AIDS Management and Prevention Act 2003, development of a National HIV Prevention Strategy (NHPS) (2010-2015), and rapid scaling up of voluntary counselling and testing, surveillance, and antiretroviral therapy (National Department of Health 2010; Coghlan et al. 2011).

During the 2016-18 PNG DHS, data were collected on the level of knowledge of HIV/AIDS and means of prevention and transmission, along with data on attitudes and behaviours regarding the disease. These data

are useful for strengthening the prevention programme and for evaluating the results of ongoing interventions.

This chapter provides key HIV/AIDS-related findings from the 2016-18 PNG DHS. Data are presented on HIV/AIDS knowledge, attitudes, and behaviours, including knowledge of HIV prevention methods; stigma and discrimination; number of sexual partners; condom use; self-reported HIV testing; prevention of mother-to-child transmission (PMTCT) of HIV; and voluntary medical male circumcision. These data are provided at the national and regional levels and by other demographic and socioeconomic characteristics.

13.1 HIV/AIDS Knowledge, Transmission, and Prevention Methods

Eighty-two percent of women and 90% of men age 15-49 are aware of AIDS (**Table 13.1**). Overall, 52% of women and 58% of men know that using condoms is a way to prevent HIV transmission (**Table 13.2**). Sixty-nine percent of women and 74% of men recognise that the risk of getting HIV can be reduced by limiting sexual intercourse to one uninfected partner. A greater proportion of men (52%) than women (48%) are aware of both of these prevention methods.

Patterns by background characteristics

- Women and men who have never been married and have never had sex are less likely to have heard of HIV (78% and 83%, respectively) than those who have ever had sex (87% and 94%, respectively) (**Table 13.1**).
- Among women, knowledge of HIV/AIDS prevention decreases with age; 50% of women age 15-24 know that using condoms and limiting sexual intercourse to one uninfected partner can reduce the risk of HIV, as compared with 46% of women age 40-49 (**Table 13.2**).
- Knowledge of HIV prevention methods is higher among urban women (61%) and men (65%) than rural women (46%) and men (50%).
- There are notable differences in knowledge of HIV/AIDS prevention methods by region, ranging from 45% each among women and men in Highlands to 57% among women and 58% among men in Islands.
- Knowledge of prevention methods increases with increasing education; 29% of women and 36% of men with no education are aware of both HIV prevention methods, as compared with 77% of women and 69% of men with a higher education.

Comprehensive knowledge of HIV

Knowing that consistent use of condoms during sexual intercourse and having just one uninfected faithful partner can reduce the chances of getting HIV, knowing that a healthy-looking person can have HIV, and rejecting the two most common local misconceptions about transmission or prevention of HIV.

Sample: Women and men age 15-24 and 15-49

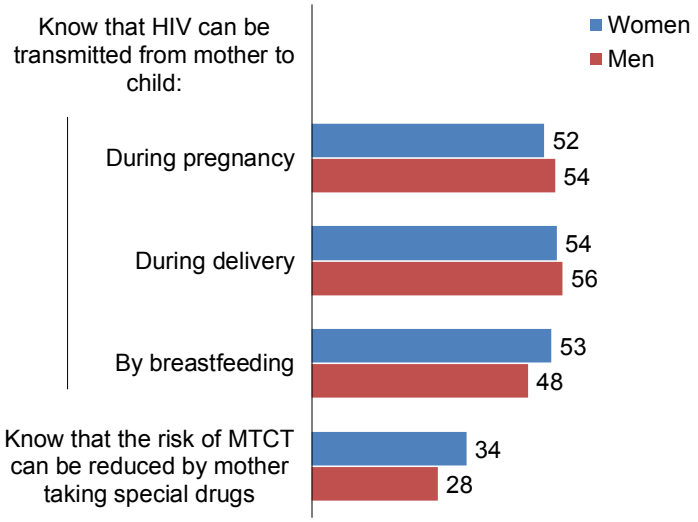
Comprehensive knowledge of HIV is a composite measure and indicates that a person knows that both condom use and limiting sexual intercourse to one uninfected partner can prevent HIV, knows that a healthy-looking person can have HIV, and rejects the two most common local misconceptions about the transmission of HIV, which in Papua New Guinea are that HIV can be transmitted through mosquito bites and that a person can become infected with HIV by sharing food with someone who has AIDS. Twenty-three percent of women and 27% of men age 15-49 have comprehensive knowledge about HIV (**Table 13.3**).

13.2 KNOWLEDGE ABOUT MOTHER-TO-CHILD TRANSMISSION

Increasing the level of general knowledge about transmission of HIV from mother to child and reducing the risk of transmission using antiretroviral drugs are critical in reducing mother-to-child transmission (MTCT) of HIV. To assess MTCT knowledge, respondents were asked whether HIV can be transmitted from a mother to her child during pregnancy, during delivery, or through breastfeeding and whether a mother with HIV can reduce the risk of transmission to her baby by taking certain drugs during pregnancy.

***Figure 13.1* Knowledge of mother-to-child transmission (MTCT) of HIV**

Percentage of women and men age 15-49



Fifty-two percent of women know that HIV can be transmitted during pregnancy, 54% know that it can be transmitted during delivery, and 53% know that it can be transmitted during breastfeeding. Overall, 39% of women know all three mother-to-child transmission modes. Thirty-four percent of women and 28% of men know that mother-to-child transmission of HIV can be reduced by the mother taking special medications. Fifty-four percent of men know that HIV can be transmitted during pregnancy, 56% know that it can be transmitted during delivery, and 48% know that it can be transmitted during breastfeeding (**Table 13.4** and **Figure 13.1**).

13.3 DISCRIMINATORY ATTITUDES TOWARDS PEOPLE LIVING WITH HIV

Widespread stigma and discrimination in a population can adversely affect both people's willingness to be tested and their adherence to antiretroviral therapy (ART). Thus, reduction of stigma and discrimination in a population is an important indicator of the success of programmes targeting HIV/AIDS prevention and control.

Discriminatory attitudes towards people living with HIV

Women and men are asked two questions to assess discriminatory attitudes towards people living with HIV. Respondents with discriminatory attitudes towards people living with HIV are those who say that they would not buy fresh vegetables from a shopkeeper or vendor if they knew that person had HIV or who say that children living with HIV should not be allowed to attend school with children who do not have HIV.

Sample: Women and men age 15-49 who have heard of HIV or AIDS

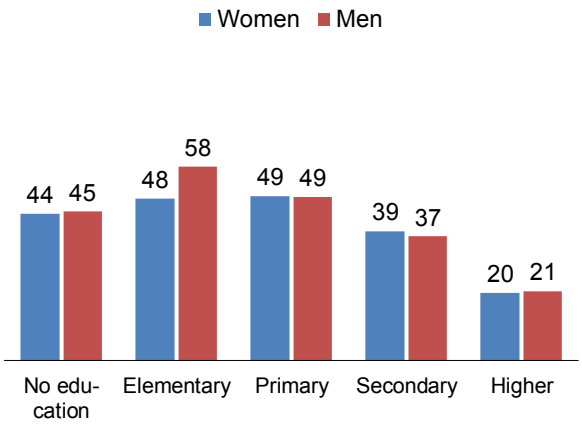
Table 13.5 shows that 25% of women and 27% of men do not think that children living with HIV should be able to attend school with children who are HIV negative. Furthermore, 38% of women and 33% of men would not buy fresh vegetables from a shopkeeper who has HIV. Overall, there is no difference in the percentage of women and men with discriminatory attitudes towards people living with HIV (44% and 43%, respectively).

Patterns by background characteristics

- The proportion of women and men with discriminatory attitudes is highest in the Momase region (57% and 53%, respectively) and lowest in the Highlands region (28% and 30%, respectively) (**Table 13.5**).
- Among both men and women, discriminatory attitudes vary according to education; 44% of women and 45% of men with no education have discriminatory attitudes, as compared with 20% of women and 21% of men with a higher education (**Figure 13.2**).
- Discriminatory attitudes also vary by household wealth. The percentage of women with discriminatory attitudes decreases from 47% among those in the lowest wealth quintile to 39% among those in the highest quintile. The corresponding percentages among men are 44% and 37% (**Table 13.5**).

Figure 13.2 **Discriminatory attitudes towards people living with HIV by education**

Percentage among women and men age 15-49 who have heard of HIV



Note: Respondents have discriminatory attitudes if they do not think that children living with HIV should be able to attend school with children who are HIV negative or would not buy fresh vegetables from a shopkeeper who has HIV.

13.4 Multiple Sexual Partners

Only 1% of all women reported having two or more sexual partners in the past 12 months. Of those with more than one partner in the last 12 months, 7% reported using a condom during their last sexual intercourse. In the 12 months before the survey, 5% of women had sex with a non-marital/non-cohabitating partner (a person who neither was their husband nor lived with them), and only 18% of those women reported using a condom during their last sexual intercourse with such a partner. On average, women have had 1.7 lifetime sexual partners (**Table 13.6.1**).

Eight percent of men reported having two or more sexual partners in the past 12 months. Of those with more than one partner, 15% reported using a condom during their last sexual intercourse. Seventeen percent of men reported having sex in the 12 months preceding the survey with a person who neither was their wife nor lived with them; 33% of these men reported using a condom during their last sexual intercourse with such a partner. Men have had an average of 5.5 lifetime sexual partners (**Table 13.6.2**).

Patterns by background characteristics

- Never-married women (14%) are more likely than women who are married (1%) to have had sexual intercourse in the past 12 months with a person who neither was their husband nor lived with them; 10% of women who are divorced, separated, or widowed had intercourse with such a partner. The pattern is similar among men. Twenty-nine percent of never-married men, 5% of married men, and 44% of divorced, separated, or widowed men had sexual intercourse in the past 12 months with a person who neither was their wife nor lived with them.
- Women and men with a secondary education are more likely to have used a condom during their last sexual intercourse with a non-marital partner (28% and 38%, respectively) than women and men in other educational categories.
- The percentage of women who reported using a condom during their last sexual intercourse with a non-marital partner increases from 8% among those in the lowest wealth quintile to 24% among those in the highest wealth quintile. The corresponding percentages among men are 21% and 36%.

13.5 Paid Sex

The act of paying for sex introduces an uneven negotiating ground for safer sexual intercourse. Transactional sex is the exchange of money, favours, or gifts for sexual intercourse. This type of sexual intercourse is associated with a greater risk of contracting HIV and other sexually transmitted infections (STIs) because of compromised power relations and the likelihood of having multiple partners. Four percent of men age 15-49 reported that they had ever paid for sex (**Table 13.7**). Almost half of men (48%) who had paid for sex in the last 12 months reported using a condom during the last paid sexual intercourse.

13.6 Coverage of HIV Testing Services

Knowledge of HIV status helps HIV-negative individuals make specific decisions to reduce risk and increase safer sex practices so that they can remain disease free. Among those who are living with HIV, knowledge of their status allows them to take action to protect their sexual partners, to access care, and to receive treatment.

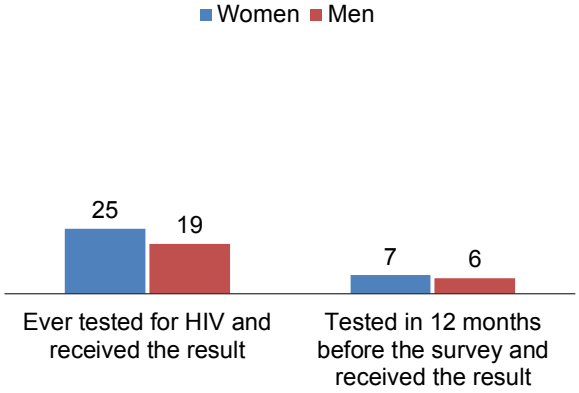
13.6.1 Awareness of HIV Testing Services and Experience with HIV Testing

To assess awareness and coverage of HIV testing services, respondents were asked whether they had ever been tested for HIV. If they said that they had, they were asked whether they had received the results of their last test and where they had been tested. If they had never been tested, they were asked whether they knew a place where they could go to be tested.

The findings show that 58% of women and 63% of men know where to obtain an HIV test, while 25% of women and 19% of men have ever been tested and received the test results. Overall, 7% of women and 6% of men had been tested for HIV in the 12 months before the survey and received the results (**Table 13.8.1**, **Table 13.8.2**, and **Figure 13.3**).

***Figure 13.3* HIV testing**

Percentage of women and men age 15-49



Patterns by background characteristics

- The proportion of women who have never been tested for HIV is highest among those age 15-19 (90%) and lowest among those age 25-29 (59%). Among men, the proportion is highest among those age 15-19 (94%) and lowest among those age 40-49 (72%).
- Urban women and men are much more likely (12% each) to have been tested for HIV in the past 12 months and to have received the results of the last test than rural women and men (6% and 5%, respectively).
- The percentage of women who were tested for HIV in the year before the survey and received the results increases from 5% among those with no education to 19% among those with a higher education. The corresponding percentages among men are 2% and 22%.
- The percentage of women who reported that they had been tested for HIV in the past 12 months and had received the results of the last test increases with increasing wealth, from 4% among those in the lowest wealth quintile to 11% among those in the highest quintile. The pattern is the same among men, with the percentage rising from 3% among those in the lowest wealth quintile to 11% among those in the highest quintile.

13.6.2 HIV Testing of Pregnant Women

In order to prevent MTCT, it is vital to screen pregnant women for HIV, which entails initial testing and education about HIV. Through testing in pregnancy, HIV can be diagnosed and managed early. Twenty-six percent of women who gave birth in the past 2 years reported that they received counselling on HIV during antenatal care (ANC) and that they were tested for HIV and received the results (**Table 13.9**). Thirty-six percent of women had an HIV test during ANC or labour and received their test results.

Patterns by background characteristics

- Women in urban areas are almost twice as likely as women in rural areas to have received counselling on HIV, to have been tested for HIV during ANC, and to have received the results of the test (40% versus 24%).
- The percentage of women who received counselling on HIV, were tested for HIV during ANC, and received the results increases with increasing wealth, from 10% among those in the lowest wealth quintile to 47% among those in the highest wealth quintile.
- The proportion of women receiving testing during ANC or labour increases with increasing education, from 18% among those with no education to 84% among those with a higher education level.

13.7 Male Circumcision

More than half (52%) of men age 15-49 are circumcised. Forty-four percent of men were circumcised by traditional practitioners or family and friends, while only 5% were circumcised by health workers or health professionals (**Table 13.10**).

Patterns by background characteristics

- The percentage of men who are circumcised varies by age; 61% of men age 20-24 are circumcised, as compared with 47% of men age 15-19. Older men age 40-49 (6%) are more likely than younger men age 15-19 (3%) to have been circumcised by health professionals. In contrast, men age 15-24 (47%) are more likely than men age 40-49 (33%) to have been circumcised by traditional practitioners or family and or friends (**Table 13.10**).
- The proportion of men who have been circumcised is higher in urban areas than in rural areas (64% versus 50%).
- There are notable differences in the prevalence of circumcision by region. Thirty-seven percent of men in the Southern region have been circumcised, as compared with 77% in the Islands region and 67% in the Momase region. Approximately 3 in 10 men in the Southern region were circumcised by a traditional practitioner, friend, or family member, compared with 68% of men in the Islands region.
- The percentage of men who have been circumcised varies by province, from 20% in Milne Bay to 91% in West New Britain.
- There are notable variations in the prevalence of circumcision by religion. The proportion of men who have been circumcised is highest among those who are Roman Catholics (58%) and lowest among those who are Evangelical Alliance and United Church members (40% each).

13.8 Self-reporting of Sexually Transmitted Infections

Sexually transmitted infections (STIs) and symptoms

Respondents who have ever had sex are asked whether they had an STI or symptoms of an STI (a bad-smelling, abnormal discharge from the vagina/penis or a genital sore or ulcer) in the 12 months before the survey.

Sample: Women and men age 15-49 who have ever had sex

Sexually transmitted diseases are associated with HIV, and people with an STI are more likely to contract HIV than those without an STI. Overall, 11% of women and 9% of men who had ever had sexual intercourse reported having an STI or STI symptoms in the 12 months preceding the survey (**Table 13.11**).

The results show that 38% of women and 40% of men who had an STI or STI symptoms sought advice or treatment from a clinic, hospital, private doctor, or other health professional. Less than 1% of women (0.1%) and men (0.3%) sought advice or treatment from a shop or pharmacy, while 3% of women and 2% of men sought advice or treatment from any other source. Fifty-one percent of women and 36% of men did not seek any advice or treatment (**Table 13.12**).

13.9 HIV/AIDS-related Knowledge and Behaviour among Young People

This section addresses HIV/AIDS-related knowledge among young people age 15-24 and also assesses the extent to which young people are engaged in behaviours that may place them at risk of contracting HIV.

13.9.1 Knowledge

Knowledge of how HIV is transmitted is crucial in enabling people to avoid HIV infection, and this is especially true for young people, who are often at greater risk because they may have shorter relationships with more partners or engage in other risky behaviours.

The data show that 24% of young women and 26% of young men have comprehensive knowledge of HIV (defined as knowing that consistent use of condoms during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting HIV, knowing that a healthy-looking person can have HIV, and rejecting the two most common local misconceptions about HIV transmission or prevention) (**Table 13.13**).

Patterns by background characteristics

- Comprehensive knowledge about HIV is lowest among young women and men age 15-17; 18% of women and 19% of men age 15-17 have comprehensive knowledge, as compared with 29% of women age 20-22 and 36% of men age 23-24.
- Young women and men in urban areas (35% and 38%, respectively) are more likely than their counterparts in rural areas (23% and 24%, respectively) to have comprehensive knowledge about HIV.
- In general, comprehensive knowledge about HIV increases with increasing education. Only 9% of young women with no education have comprehensive knowledge, compared with 65% of those with a higher education. Among young men, 8% of those with an elementary education and 64% of those with a higher education have comprehensive knowledge.

13.9.2 First Sex

Young people who initiate sex at an early age are typically at higher risk of becoming pregnant or contracting an STI than young people who initiate sex later. Consistent condom use can reduce such risks.

Overall, 5% of young women and 4% of young men had sexual intercourse before age 15, while 32% each of young women and men had sex before age 18 (**Table 13.14**).

Patterns by background characteristics

- Young women in rural areas are more likely to have had sexual intercourse by age 18 (33%) than their urban counterparts (26%). Conversely, young urban men are more likely than young rural men to have had sex by age 18 (37% versus 31%).
- There is a general decline with increasing education in the percentage of young women who had sexual intercourse before age 15 (from 11% among those with no education to 1% among those with a higher education) and age 18 (from 46% among those with no education to 4% among those with a higher education).

13.9.3 Premarital Sex

Table 13.15 shows that 79% of never-married young women and 60% of never-married young men have never had sexual intercourse.

Patterns by background characteristics

- The percentage of never-married young women and men who have never had sexual intercourse decreases sharply with increasing age; 92% of young women and 85% of young men age 15-17 have never had sex, as compared with 81% of young women and 62% of young men age 18-19 and 43% of young women and 34% of young men age 23-24.
- The percentage of never-married young men who have never had sexual intercourse is higher in rural areas than in urban areas (62% versus 49%). There is no difference by residence among never-married young women.

13.9.4 Multiple Sexual Partners

Young men age 15-24 are more likely than their female counterparts to have had more than one partner in the 12 months before the survey; 7% of men had more than one partner in the last 12 months, as compared with 2% of women (**Tables 13.16.1** and **13.16.2**).

There are differences in condom use between young women and young men who had more than one partner in the past 12 months; 24% of young men with more than one partner reported using a condom during their last intercourse, compared with 10% of young women.

Young men are more likely than young women to have had sexual intercourse with a non-marital, non-cohabitating partner in the last 12 months (24% versus 9%). Eighteen percent of young women and 31% of young men reported using a condom during their last intercourse with a non-marital, non-cohabiting partner.

13.9.5 Coverage of HIV Testing Services

Seeking an HIV test may be more difficult for young people than adults because many young people lack experience in accessing health services for themselves and because there are often barriers to young people obtaining services.

Table 13.17 presents information on sexually active young people age 15-24 who were tested for HIV in the past 12 months and received the results of their last test. Overall, young women were more likely than young men to have been tested for HIV and to have received their results (13% versus 7%).

Patterns by background characteristics

- The proportion of young men who were tested for HIV in the last 12 months and received the results increases with age, from 2% among those age 15-17 to 10% among those age 23-24. In contrast, the proportion among young women decreases, from 15% among those age 15-17 to 13% among those age 23-24.

- There are also slight variations by marital status. Young women who have been married are more likely than never-married women to have been tested for HIV in the past 12 months and to have received the results of their last test (15% versus 6%). Similarly, 10% of young men who have been married and 6% of never-married men were tested for HIV in the 12 months before the survey and received the results.

List of Tables

For more information on HIV/AIDS-related knowledge, attitudes, and behaviour, see the following tables:

- **Table 13.1 Knowledge of HIV or AIDS**
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- **Table 13.3 Comprehensive knowledge about HIV**
- **Table 13.4 Knowledge of prevention of mother-to-child transmission of HIV**
- **Table 13.5 Discriminatory attitudes towards people living with HIV**
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- **Table 13.17 Recent HIV tests among young people**

Table 13.1 Knowledge of HIV or AIDS

Percentage of women and men age 15-49 who have heard of HIV or AIDS, by background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Women		Men	
	Has heard of AIDS	Number of respondents	Has heard of AIDS	Number of respondents
Age				
15-24	79.9	5,704	87.2	2,715
15-19	76.6	2,945	83.4	1,469
20-24	83.5	2,759	91.7	1,246
25-29	83.1	2,543	93.0	1,171
30-39	83.5	4,239	90.9	2,024
40-49	82.2	2,712	91.7	1,423
Marital status				
Never married	79.7	3,968	87.9	3,114
Ever had sex	86.6	989	93.7	1,470
Never had sex	77.5	2,978	82.8	1,643
Married or living together	82.2	10,052	91.4	3,947
Divorced/separated/widowed	86.1	1,179	94.2	272
Residence				
Urban	95.5	2,018	97.7	976
Rural	79.8	13,180	88.9	6,357
Region				
Southern	78.0	2,899	82.9	1,490
Highlands	85.4	6,213	91.6	2,871
Momase	76.7	3,919	91.2	1,999
Islands	86.2	2,167	94.0	973
Province				
Western	70.7	352	71.0	182
Gulf	61.8	277	74.9	137
Central	74.5	557	79.9	272
National Capital District	98.3	526	98.2	251
Milne Bay	83.0	767	81.6	423
Northern	65.0	421	86.6	223
Southern Highlands	70.3	1,089	84.0	457
Enga	80.9	563	87.5	306
Western Highlands	90.3	746	97.9	378
Chimbu	94.2	1,038	92.5	397
Eastern Highlands	91.4	1,310	94.0	587
Morobe	90.0	1,514	94.9	796
Madang	78.8	987	95.0	493
East Sepik	65.1	872	91.3	435
West Sepik	54.7	545	73.7	276
Manus	92.6	135	92.9	64
New Ireland	95.1	385	95.3	171
East New Britain	91.7	572	93.7	247
West New Britain	64.8	532	90.6	260
Autonomous Region of Bougainville	93.3	544	97.5	231
Hela	78.5	874	88.3	438
Jiwaka	93.0	594	97.8	309
Education				
No education	65.3	3,488	77.4	941
Elementary	77.0	676	79.1	253
Primary	81.5	6,969	88.6	3,593
Secondary	97.2	3,460	97.9	2,156
Higher	99.4	605	97.3	389
Wealth quintile				
Lowest	63.9	2,783	78.5	1,366
Second	74.4	2,831	86.5	1,384
Middle	81.2	2,897	90.7	1,528
Fourth	89.2	3,118	94.5	1,399
Highest	96.0	3,569	98.1	1,656
Total	81.9	15,198	90.0	7,333

Table 13.2 Knowledge of HIV prevention methods

Percentage of women and men age 15-49 who, in response to prompted questions, say that people can reduce the risk of getting HIV by using condoms every time they have sexual intercourse and by having one sex partner who is not infected and has no other partners, by background characteristics, Papua New Guinea DHS 2016-18

	Women				Men			
Background characteristic	Using condoms[1]	Limiting sexual intercourse to one uninfected partner[2]	Using condoms and limiting sexual intercourse to one uninfected partner[1,2]	Number of women	Using condoms[1]	Limiting sexual intercourse to one uninfected partner[2]	Using condoms and limiting sexual intercourse to one uninfected partner[1,2]	Number of men
Age								
15-24	54.7	66.9	50.0	5,704	60.3	72.1	53.2	2,715
15-19	51.7	61.6	46.6	2,945	54.8	65.3	46.5	1,469
20-24	57.9	72.6	53.7	2,759	66.8	80.1	61.0	1,246
25-29	52.1	69.3	47.5	2,543	61.0	74.2	51.3	1,171
30-39	50.3	70.8	46.6	4,239	54.5	74.6	49.9	2,024
40-49	50.2	68.2	45.6	2,712	57.2	77.0	51.7	1,423
Residence								
Urban	67.4	82.4	61.3	2,018	69.6	88.3	64.5	976
Rural	49.9	66.5	45.8	13,180	56.5	71.9	49.7	6,357
Region								
Southern	53.3	65.2	48.8	2,899	61.1	72.0	55.9	1,490
Highlands	50.4	69.6	45.3	6,213	53.5	70.7	45.4	2,871
Momase	49.5	66.5	46.1	3,919	59.8	78.5	54.8	1,999
Islands	61.0	74.5	57.2	2,167	64.5	78.1	57.5	973
Province								
Western	46.8	53.8	41.4	352	50.1	58.5	46.2	182
Gulf	36.0	48.0	33.6	277	52.8	64.9	46.8	137
Central	41.5	56.0	35.8	557	61.2	67.5	53.2	272
National Capital District	70.7	85.1	65.0	526	74.5	93.2	71.6	251
Milne Bay	65.0	76.1	61.8	767	59.6	69.6	54.7	423
Northern	42.7	53.3	38.2	421	62.8	73.9	57.1	223
Southern Highlands	43.8	59.4	40.6	1,089	42.8	57.0	34.5	457
Enga	41.3	63.9	34.3	563	58.9	75.5	53.7	306
Western Highlands	55.6	70.7	49.3	746	48.8	65.2	38.1	378
Chimbu	62.5	86.6	59.1	1,038	51.4	79.7	49.9	397
Eastern Highlands	62.0	72.2	53.4	1,310	63.9	76.8	54.4	587
Morobe	58.8	77.8	53.8	1,514	62.1	82.0	56.1	796
Madang	52.8	72.4	50.8	987	56.7	85.0	54.5	493
East Sepik	39.6	54.7	37.0	872	71.6	78.5	65.0	435
West Sepik	33.3	43.3	30.7	545	40.1	57.0	35.2	276
Manus	76.0	87.5	73.6	135	75.6	87.6	73.4	64
New Ireland	71.5	87.2	69.4	385	59.2	83.0	55.0	171
East New Britain	66.8	79.7	64.0	572	58.3	79.9	52.9	247
West New Britain	44.8	55.6	40.6	532	61.2	73.8	52.8	260
Autonomous Region of Bougainville	59.6	75.3	53.6	544	75.7	74.8	65.1	231
Hela	33.3	56.8	30.3	874	51.9	61.7	38.6	438
Jiwaka	43.2	75.8	39.3	594	55.2	82.6	48.9	309
Education								
No education	33.7	49.4	29.3	3,488	44.7	53.0	35.6	941
Elementary	43.7	57.5	36.8	676	46.0	62.0	39.6	253
Primary	52.8	68.4	48.3	6,969	56.7	73.2	50.6	3,593
Secondary	66.6	86.2	62.6	3,460	65.8	83.7	58.7	2,156
Higher	79.7	93.8	77.4	605	71.6	88.4	69.0	389
Wealth quintile								
Lowest	33.5	49.1	29.4	2,783	43.9	56.7	37.1	1,366
Second	44.4	60.0	40.7	2,831	55.6	69.7	48.3	1,384
Middle	52.1	68.5	47.8	2,897	59.1	76.7	52.7	1,528
Fourth	60.6	75.9	55.6	3,118	61.2	79.3	54.0	1,399
Highest	65.9	84.6	61.2	3,569	69.0	85.3	63.7	1,656
Total	52.2	68.7	47.9	15,198	58.2	74.1	51.7	7,333

[1] Using condoms every time they have sexual intercourse
[2] Partner who has no other partners

Table 13.3 Comprehensive knowledge about HIV

Percentage of women and men age 15-49 who say that a healthy-looking person can have HIV and who, in response to prompted questions, correctly reject local misconceptions about transmission or prevention of HIV, and percentage with comprehensive knowledge about HIV, according to age, Papua New Guinea DHS 2016-18

Age	Percentage of respondents who say that:				Percentage who say that a healthy-looking person can have HIV and who reject the two most common local misconceptions[1]	Percentage with comprehensive knowledge about HIV[2]	Number of respondents
	A healthy-looking person can have HIV	HIV cannot be transmitted by mosquito bites	HIV cannot be transmitted by supernatural means	A person cannot become infected by sharing food with a person who has HIV			
				WOMEN			
15-24	61.6	48.3	63.2	62.1	34.6	24.4	5,704
15-19	56.2	45.9	59.6	55.8	29.9	21.3	2,945
20-24	67.4	50.9	67.0	68.8	39.7	27.7	2,759
25-29	63.5	46.2	63.9	64.7	34.2	22.1	2,543
30-39	64.2	48.0	65.6	64.9	36.7	23.9	4,239
40-49	62.5	46.6	63.7	63.4	34.0	21.8	2,712
Total	62.8	47.6	64.0	63.5	35.0	23.4	15,198
				MEN			
15-24	67.1	55.7	67.3	66.3	39.2	26.2	2,715
15-19	60.6	51.4	63.3	60.9	33.9	21.4	1,469
20-24	74.7	60.7	72.0	72.7	45.5	31.9	1,246
25-29	78.0	61.8	72.3	75.7	49.1	27.6	1,171
30-39	69.5	58.1	71.4	69.3	41.8	27.1	2,024
40-49	72.5	54.9	69.6	68.3	41.8	27.6	1,423
Total	70.5	57.2	69.7	69.0	42.0	27.0	7,333

[1] Two most common local misconceptions: the AIDS virus can be transmitted by mosquito bites and sharing food with a person who has HIV.
[2] Comprehensive knowledge means knowing that consistent use of condoms during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting HIV, knowing that a healthy-looking person can have HIV, and rejecting the two most common local misconceptions about transmission or prevention of HIV.

Table 13.4 Knowledge of prevention of mother-to-child transmission of HIV

Percentage of women and men age 15-49 who know that HIV can be transmitted from mother to child during pregnancy, during delivery, by breastfeeding, and by all three means, and percentage who know that the risk of mother-to-child transmission (MTCT) of HIV can be reduced by the mother taking special drugs, according to age, Papua New Guinea DHS 2016-18

Age	Percentage who know that HIV can be transmitted from mother to child:				Percentage who know that the risk of MTCT can be reduced by mother taking special drugs	Number of respondents
	During pregnancy	During delivery	By breastfeeding	By all three means		
			WOMEN			
15-24	47.6	51.0	50.6	35.1	33.1	5,704
15-19	44.0	44.7	47.0	32.4	28.3	2,945
20-24	51.4	57.8	54.5	38.0	38.3	2,759
25-29	54.2	55.6	54.4	40.4	37.5	2,543
30-39	54.3	57.5	55.6	42.3	34.7	4,239
40-49	53.2	55.3	53.7	39.5	32.9	2,712
Total	51.6	54.4	53.2	38.8	34.3	15,198
			MEN			
15-24	49.5	50.7	45.2	31.0	26.7	2,715
15-19	44.5	43.6	41.1	28.9	23.7	1,469
20-24	55.4	59.1	50.2	33.4	30.3	1,246
25-29	57.3	60.8	51.8	33.0	26.9	1,171
30-39	56.2	58.1	48.4	37.3	30.1	2,024
40-49	56.6	57.8	49.4	36.1	28.3	1,423
Total	54.0	55.7	48.0	34.0	28.0	7,333

Table 13.5 Discriminatory attitudes towards people living with HIV

Among women and men age 15-49 who have heard of HIV or AIDS, percentage who do not think that children living with HIV should be able to attend school with children who are HIV negative, percentage who would not buy fresh vegetables from a shopkeeper who has HIV, and percentage with discriminatory attitudes towards people living with HIV, according to background characteristics, Papua New Guinea DHS 2016-18

	Women				Men			
Background characteristic	Percentage who do not think that children living with HIV should be able to attend school with children who are HIV negative	Percentage who would not buy fresh vegetables from a shopkeeper who has HIV	Percentage with discriminatory attitudes towards people living with HIV[1]	Number of women who have heard of AIDS	Percentage who do not think that children living with HIV should be able to attend school with children who are HIV negative	Percentage who would not buy fresh vegetables from a shopkeeper who has HIV	Percentage with discriminatory attitudes towards people living with HIV[1]	Number of men who have heard of AIDS
Age								
15-24	24.9	40.6	46.0	4,559	29.0	36.4	45.7	2,368
15-19	27.5	43.4	48.8	2,256	31.3	38.6	48.3	1,226
20-24	22.3	37.9	43.3	2,303	26.6	34.1	42.9	1,143
25-29	23.3	38.5	44.5	2,114	20.9	30.3	38.8	1,090
30-39	25.3	34.2	41.3	3,541	26.3	32.2	43.2	1,840
40-49	26.8	35.6	43.5	2,229	27.2	31.5	42.8	1,304
Marital status								
Never married	24.8	40.4	45.7	3,163	27.8	35.2	44.7	2,739
Ever had sex	24.8	40.7	46.9	856	27.4	33.5	44.6	1,377
Never had sex	24.8	40.3	45.2	2,307	28.2	36.9	44.9	1,361
Married or living together	25.7	37.5	44.3	8,264	25.6	32.0	42.4	3,608
Divorced/separated/widowed	20.7	29.2	35.6	1,015	27.0	31.0	41.3	256
Residence								
Urban	22.3	39.4	45.8	1,927	23.9	30.0	40.7	953
Rural	25.6	37.2	43.6	10,516	27.0	33.8	43.7	5,649
Region								
Southern	33.4	49.9	56.5	2,262	31.9	42.0	53.1	1,235
Highlands	13.9	22.4	27.9	5,307	16.3	21.5	30.2	2,629
Momase	32.0	51.0	56.6	3,006	34.5	42.8	53.3	1,823
Islands	35.5	44.0	54.1	1,867	33.0	36.1	47.9	915
Province								
Western	26.5	34.3	41.7	249	22.7	21.7	35.1	130
Gulf	25.9	41.9	46.8	171	38.9	50.7	62.4	103
Central	35.0	45.9	54.3	415	33.6	50.5	59.9	218
National Capital District	23.3	41.0	47.3	517	19.3	23.5	33.8	247
Milne Bay	45.1	67.2	73.1	636	44.3	60.9	74.3	345
Northern	34.1	52.1	57.8	274	26.4	31.2	39.4	193
Southern Highlands	10.9	19.3	22.9	765	15.7	24.4	34.2	384
Enga	21.6	32.0	41.2	456	20.6	31.6	41.6	268
Western Highlands	5.4	15.7	17.9	674	7.3	14.7	18.7	370
Chimbu	20.0	19.2	30.5	977	22.8	13.1	27.1	367
Eastern Highlands	13.2	28.9	32.6	1,197	20.5	29.4	39.2	552
Morobe	24.2	53.7	56.4	1,363	20.6	32.8	41.2	755
Madang	43.8	48.0	57.6	778	26.2	39.7	45.9	468
East Sepik	28.9	46.0	52.8	568	72.5	59.4	80.8	397
West Sepik	43.0	55.8	62.0	298	30.8	54.9	61.4	203
Manus	29.2	28.1	46.5	125	16.3	14.2	25.2	59
New Ireland	45.9	51.8	64.6	366	36.2	31.6	47.6	163
East New Britain	38.5	47.7	56.5	524	41.3	48.1	58.5	231
West New Britain	28.2	46.6	54.2	345	39.1	39.7	54.0	236
Autonomous Region of Bougainville	31.3	36.7	45.8	507	20.2	29.2	37.0	226
Hela	18.0	24.2	30.3	686	12.7	16.6	23.8	387
Jiwaka	7.5	16.5	18.6	552	13.7	19.6	24.3	302
Education								
No education	25.6	36.9	43.9	2,278	25.3	36.0	44.6	728
Elementary	28.9	42.4	48.4	521	33.2	49.5	58.0	200
Primary	30.4	42.2	49.2	5,681	32.6	37.9	48.9	3,184
Secondary	18.4	32.8	38.7	3,361	20.4	26.9	37.1	2,111
Higher	6.2	18.5	20.3	601	9.5	15.8	20.8	379
Wealth quintile								
Lowest	29.0	39.6	47.1	1,779	26.3	35.3	43.9	1,072
Second	26.4	36.5	42.2	2,107	30.4	38.8	47.9	1,198
Middle	27.2	38.2	45.7	2,351	29.6	34.5	45.6	1,386
Fourth	27.8	41.4	47.9	2,781	29.2	31.8	44.0	1,323
Highest	18.5	33.6	39.0	3,425	19.2	28.0	37.0	1,625
Total	25.1	37.6	44.0	12,443	26.6	33.3	43.3	6,602

[1] Percentage who do not think that children living with HIV should be able to attend school with children who are HIV negative and/or would not buy fresh vegetables from a shopkeeper who has HIV

Table 13.6.1 Multiple sexual partners and higher-risk sexual intercourse in the past 12 months: Women

Among all women age 15-49, percentage who had sexual intercourse with more than one sexual partner in the past 12 months and percentage who had intercourse in the past 12 months with a person who neither was their husband nor lived with them; among women having more than one partner in the past 12 months, percentage reporting that a condom was used during last intercourse; among women who had sexual intercourse in the past 12 months with a person who neither was their husband nor lived with them, percentage who used a condom during last sexual intercourse with such a partner; and among women who ever had sexual intercourse, mean number of sexual partners during their lifetime, according to background characteristics, Papua New Guinea DHS 2016-18

	All women			Women who had 2+ partners in the past 12 months		Women who had intercourse in the past 12 months with a person who neither was their husband nor lived with them		Women who ever had sexual intercourse[1]	
Background characteristic	Percentage who had 2+ partners in the past 12 months	Percentage who had intercourse in the past 12 months with a person who neither was their husband nor lived with them	Number of women	Percentage who reported using a condom during last sexual inter-course	Number of women	Percentage who reported using a condom during last sexual intercourse with such a partner	Number of women	Mean number of sexual partners in lifetime	Number of women
Age									
15-24	1.5	9.3	5,704	10.2	84	17.9	532	1.6	2,877
15-19	1.4	7.4	2,945	(8.3)	41	13.5	217	1.5	735
20-24	1.6	11.4	2,759	(12.0)	43	21.0	315	1.6	2,141
25-29	1.9	3.8	2,543	(6.5)	48	16.7	97	1.7	2,341
30-39	1.4	2.3	4,239	(4.5)	61	16.9	97	1.8	4,030
40-49	0.4	1.1	2,712	*	12	(26.4)	29	1.9	2,582
Marital status									
Never married	1.4	14.0	3,968	17.4	54	18.5	555	1.8	976
Married or living together	1.3	0.9	10,052	1.6	126	19.1	87	1.7	9,716
Divorced/separated/ widowed	2.1	9.6	1,179	(12.8)	25	14.6	113	2.1	1,139
Residence									
Urban	1.9	7.4	2,018	6.5	37	17.7	150	1.7	1,485
Rural	1.3	4.6	13,180	7.3	168	18.0	605	1.7	10,345
Region									
Southern	0.9	7.2	2,899	(13.8)	25	17.0	208	1.9	2,256
Highlands	2.0	3.9	6,213	6.8	123	15.1	241	1.9	4,804
Momase	0.7	4.8	3,919	*	29	19.8	186	1.4	3,117
Islands	1.3	5.5	2,167	4.4	28	22.5	120	1.8	1,653
Education									
No education	1.0	2.0	3,488	*	34	12.8	69	1.5	3,058
Elementary	0.6	3.4	676	*	4	*	23	1.9	545
Primary	1.0	4.9	6,969	5.9	71	11.0	343	1.8	5,178
Secondary	2.6	8.1	3,460	6.8	89	28.0	281	1.8	2,542
Higher	1.1	6.3	605	*	6	20.7	38	1.8	507
Wealth quintile									
Lowest	0.7	3.4	2,783	*	19	8.2	93	1.5	2,248
Second	0.7	3.4	2,831	*	19	8.4	97	1.8	2,242
Middle	1.5	4.3	2,897	(14.5)	44	19.4	125	1.8	2,276
Fourth	1.6	6.0	3,118	(7.0)	50	19.4	187	1.8	2,388
Highest	2.0	7.0	3,569	3.1	73	23.5	252	1.8	2,677
Total	1.3	5.0	15,198	7.1	205	18.0	754	1.7	11,830

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Means are calculated excluding respondents who gave non-numeric responses.

Table 13.6.2 Multiple sexual partners and higher-risk sexual intercourse in the past 12 months: Men

Among all men age 15-49, percentage who had sexual intercourse with more than one sexual partner in the past 12 months and percentage who had intercourse in the past 12 months with a person who neither was their wife nor lived with them; among men having more than one partner in the past 12 months, percentage reporting that a condom was used during last intercourse; among men who had sexual intercourse in the past 12 months with a person who neither was their wife nor lived with them, percentage who used a condom during last sexual intercourse with such a partner; and among men who ever had sexual intercourse, mean number of sexual partners during their lifetime, according to background characteristics, Papua New Guinea DHS 2016-18

	All men			Men who had 2+ partners in the past 12 months		Men who had intercourse in the past 12 months with a person who neither was their wife nor lived with them		Men who ever had sexual intercourse[1]	
Background characteristic	Percentage who had 2+ partners in the past 12 months	Percentage who had intercourse in the past 12 months with a person who neither was their wife nor lived with them	Number of men	Percentage who reported using a condom during last sexual inter-course	Number of men	Percentage who reported using a condom during last sexual intercourse with such a partner	Number of men	Mean number of sexual partners in lifetime	Number of men
Age									
15-24	6.9	24.3	2,715	24.0	188	30.5	660	4.0	1,250
15-19	3.8	17.5	1,469	26.8	56	31.0	256	2.6	373
20-24	10.6	32.4	1,246	22.8	132	30.3	404	4.6	877
25-29	13.0	24.1	1,171	8.6	152	35.5	282	5.4	986
30-39	7.5	9.6	2,024	9.6	152	37.1	195	6.5	1,791
40-49	6.2	6.0	1,423	17.5	88	37.5	86	5.8	1,285
Marital status									
Never married	6.9	29.3	3,114	24.0	216	30.2	912	4.2	1,402
Married or living together	7.9	4.8	3,947	8.2	312	44.8	191	5.8	3,655
Divorced/separated/ widowed	19.2	44.1	272	(21.2)	52	37.7	120	9.1	254
Type of union									
In polygynous union	47.0	7.4	303	7.1	142	(58.5)	23	7.4	283
In non-polygynous union	4.7	4.6	3,645	9.0	170	42.9	168	5.7	3,373
Not currently in union	7.9	30.5	3,386	23.4	268	31.1	1,032	4.9	1,656
Residence									
Urban	11.1	25.6	976	21.1	108	33.2	250	6.7	716
Rural	7.4	15.3	6,357	13.9	472	33.2	973	5.3	4,595
Region									
Southern	5.7	19.4	1,490	26.4	84	31.8	289	5.5	1,133
Highlands	11.2	15.9	2,871	15.1	322	33.6	458	7.1	1,958
Momase	6.7	16.7	1,999	9.3	133	35.8	333	3.5	1,538
Islands	4.2	14.6	973	12.9	41	28.6	142	5.6	683
Education									
No education	4.9	8.2	941	(21.1)	46	24.0	77	4.1	702
Elementary	6.7	20.3	253	*	17	(26.7)	52	6.3	199
Primary	5.3	12.3	3,593	14.6	192	29.7	442	5.1	2,389
Secondary	12.1	26.2	2,156	16.6	262	37.8	564	6.1	1,685
Higher	16.3	22.6	389	7.8	64	33.4	88	8.0	337
Wealth quintile									
Lowest	6.6	9.9	1,366	(10.7)	89	20.6	136	4.6	924
Second	6.1	13.4	1,384	26.0	85	33.6	185	4.8	1,002
Middle	5.1	13.7	1,528	11.5	78	34.6	209	5.5	1,076
Fourth	6.8	19.1	1,399	11.3	96	33.9	267	5.7	1,028
Highest	14.0	25.7	1,656	15.9	233	36.0	426	6.6	1,281
Total	7.9	16.7	7,333	15.2	580	33.2	1,222	5.5	5,312

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Means are calculated excluding respondents who gave non-numeric responses.

Table 13.7 Payment for sexual intercourse and condom use at last paid sexual intercourse

Percentage of men age 15-49 who ever paid for sexual intercourse and percentage reporting payment for sexual intercourse in the past 12 months, and among them, percentage reporting that a condom was used the last time they paid for sexual intercourse, according to age, Papua New Guinea DHS 2016-18

	Among all men:			Among men who paid for sex in the past 12 months:	
Age	Percentage who ever paid for sexual intercourse	Percentage who paid for sexual intercourse in the past 12 months	Number of men	Percentage reporting condom use at last paid sexual intercourse	Number of men
15-24	2.3	1.8	2,715	46.5	49
15-19	0.8	0.6	1,469	*	9
20-24	4.1	3.2	1,246	(47.3)	40
25-29	4.7	3.1	1,171	(53.9)	37
30-39	4.1	2.1	2,024	(44.5)	43
40-49	5.7	3.9	1,423	48.9	55
Total	3.8	2.5	7,333	48.2	184

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Table 13.8.1 Coverage of prior HIV testing: Women

Percentage of women age 15-49 who know where to get an HIV test, percent distribution of women by testing status and by whether they received the results of the last test, percentage of women ever tested, and percentage of women who were tested in the past 12 months and received the results of the last test, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage who know where to get an HIV test	Percent distribution of women by testing status and by whether they received the results of the last test			Total	Percentage ever tested	Percentage who have been tested for HIV in the past 12 months and received the results of the last test	Number of women
		Ever tested and received results	Ever tested, did not receive results	Never tested[1]				
Age								
15-24	53.5	17.0	5.1	77.9	100.0	22.1	6.8	5,704
15-19	44.1	7.9	2.0	90.0	100.0	10.0	4.2	2,945
20-24	63.6	26.6	8.4	65.0	100.0	35.0	9.6	2,759
25-29	62.9	32.8	8.1	59.1	100.0	40.9	9.3	2,543
30-39	59.7	31.2	6.1	62.7	100.0	37.3	7.6	4,239
40-49	57.2	22.7	3.8	73.6	100.0	26.4	3.6	2,712
Marital status								
Never married	48.5	7.9	1.8	90.3	100.0	9.7	2.8	3,968
Ever had sex	61.6	16.7	4.2	79.1	100.0	20.9	6.5	989
Never had sex	44.1	5.0	1.0	94.0	100.0	6.0	1.6	2,978
Married or living together	59.8	29.7	7.3	63.1	100.0	36.9	8.3	10,052
Divorced/separated/widowed	67.8	37.7	4.7	57.5	100.0	42.5	8.5	1,179
Residence								
Urban	77.1	37.5	5.1	57.4	100.0	42.6	12.0	2,018
Rural	54.5	22.6	5.7	71.6	100.0	28.4	6.1	13,180
Region								
Southern	53.2	23.1	5.8	71.1	100.0	28.9	6.1	2,899
Highlands	63.5	29.4	6.1	64.5	100.0	35.5	9.2	6,213
Momase	48.9	16.9	4.7	78.3	100.0	21.7	4.5	3,919
Islands	61.4	26.9	5.8	67.3	100.0	32.7	5.5	2,167
Province								
Western	48.1	22.3	4.4	73.3	100.0	26.7	5.9	352
Gulf	28.0	10.4	5.6	84.0	100.0	16.0	2.6	277
Central	45.7	21.1	8.4	70.5	100.0	29.5	5.6	557
National Capital District	79.7	39.9	6.5	53.6	100.0	46.4	10.9	526
Milne Bay	62.0	23.0	5.3	71.8	100.0	28.2	6.5	767
Northern	34.7	13.9	3.8	82.3	100.0	17.7	2.1	421
Southern Highlands	46.2	22.7	4.3	73.0	100.0	27.0	6.0	1,089
Enga	55.9	16.7	6.6	76.7	100.0	23.3	5.0	563
Western Highlands	68.4	28.6	7.2	64.2	100.0	35.8	5.9	746
Chimbu	77.4	33.3	4.8	61.8	100.0	38.2	10.1	1,038
Eastern Highlands	68.8	32.5	8.8	58.7	100.0	41.3	9.6	1,310
Morobe	68.9	24.0	5.8	70.2	100.0	29.8	7.5	1,514
Madang	43.6	15.4	4.1	80.5	100.0	19.5	3.0	987
East Sepik	30.1	8.5	2.8	88.6	100.0	11.4	2.1	872
West Sepik	33.0	13.4	5.9	80.7	100.0	19.3	3.1	545
Manus	69.4	27.3	5.8	66.9	100.0	33.1	5.9	135
New Ireland	70.8	37.6	7.7	54.7	100.0	45.3	8.0	385
East New Britain	75.3	38.4	3.7	57.9	100.0	42.1	6.0	572
West New Britain	38.1	14.5	5.6	79.9	100.0	20.1	3.2	532
Autonomous Region of Bougainville	61.0	19.3	7.0	73.7	100.0	26.3	5.3	544
Hela	52.2	30.5	5.5	63.9	100.0	36.1	13.9	874
Jiwaka	77.3	39.1	4.6	56.3	100.0	43.7	13.3	594
Education								
No education	39.2	16.2	4.4	79.4	100.0	20.6	4.8	3,488
Elementary	50.8	19.9	6.1	74.0	100.0	26.0	6.3	676
Primary	53.5	22.1	6.0	71.9	100.0	28.1	5.6	6,969
Secondary	78.7	33.3	5.8	60.9	100.0	39.1	9.5	3,460
Higher	95.2	57.7	7.7	34.7	100.0	65.3	19.0	605
Wealth quintile								
Lowest	36.3	13.6	4.2	82.2	100.0	17.8	3.8	2,783
Second	47.2	18.7	5.6	75.7	100.0	24.3	5.1	2,831
Middle	54.3	21.7	6.7	71.6	100.0	28.4	6.3	2,897
Fourth	65.2	30.7	5.7	63.7	100.0	36.3	7.3	3,118
Highest	78.1	34.9	6.0	59.1	100.0	40.9	10.8	3,569
Total	57.5	24.6	5.7	69.7	100.0	30.3	6.9	15,198

[1] Includes “don’t know/missing”

Table 13.8.2 Coverage of prior HIV testing: Men

Percentage of men age 15-49 who know where to get an HIV test, percent distribution of men by testing status and by whether they received the results of the last test, percentage of men ever tested, and percentage of men who were tested in the past 12 months and received the results of the last test, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage who know where to get an HIV test	Percent distribution of men by testing status and by whether they received the results of the last test			Total	Percentage ever tested	Percentage who have been tested for HIV in the past 12 months and received the results of the last test	Number of men
		Ever tested and received results	Ever tested, did not receive results	Never tested[1]				
Age								
15-24	54.3	9.8	1.1	89.1	100.0	10.9	4.1	2,715
15-19	47.9	4.9	0.8	94.3	100.0	5.7	2.3	1,469
20-24	61.7	15.5	1.6	82.9	100.0	17.1	6.4	1,246
25-29	71.5	22.4	1.8	75.8	100.0	24.2	6.7	1,171
30-39	66.6	24.5	2.2	73.3	100.0	26.7	6.7	2,024
40-49	68.8	25.3	2.8	72.0	100.0	28.0	7.3	1,423
Marital status								
Never married	55.6	9.6	1.3	89.1	100.0	10.9	4.0	3,114
Ever had sex	67.4	14.6	2.1	83.3	100.0	16.7	5.3	1,470
Never had sex	45.1	5.1	0.6	94.3	100.0	5.7	2.8	1,643
Married or living together	68.5	25.7	2.2	72.0	100.0	28.0	7.2	3,947
Divorced/separated/widowed	74.2	25.5	2.8	71.7	100.0	28.3	7.8	272
Residence								
Urban	77.0	30.1	2.0	67.9	100.0	32.1	11.7	976
Rural	61.1	17.1	1.8	81.0	100.0	19.0	5.0	6,357
Region								
Southern	58.0	18.9	1.9	79.2	100.0	20.8	5.4	1,490
Highlands	71.1	20.3	2.0	77.7	100.0	22.3	6.5	2,871
Momase	55.0	17.5	1.2	81.3	100.0	18.7	5.7	1,999
Islands	64.9	17.3	2.7	80.0	100.0	20.0	4.9	973
Province								
Western	49.2	12.2	1.0	86.8	100.0	13.2	3.1	182
Gulf	40.0	10.8	1.5	87.7	100.0	12.3	3.8	137
Central	41.1	13.3	1.8	84.9	100.0	15.1	3.2	272
National Capital District	77.3	35.7	2.1	62.2	100.0	37.8	11.4	251
Milne Bay	63.0	22.2	3.0	74.8	100.0	25.2	6.1	423
Northern	65.5	11.0	0.8	88.2	100.0	11.8	2.8	223
Southern Highlands	62.8	20.0	2.7	77.3	100.0	22.7	5.6	457
Enga	65.0	12.4	1.0	86.7	100.0	13.3	4.5	306
Western Highlands	74.6	23.2	2.6	74.2	100.0	25.8	6.9	378
Chimbu	82.3	13.0	1.4	85.5	100.0	14.5	4.1	397
Eastern Highlands	66.8	22.6	0.4	77.0	100.0	23.0	6.4	587
Morobe	62.7	28.5	1.3	70.2	100.0	29.8	10.1	796
Madang	53.6	13.6	2.0	84.4	100.0	15.6	3.3	493
East Sepik	50.8	5.9	0.8	93.3	100.0	6.7	2.0	435
West Sepik	41.8	11.0	0.4	88.6	100.0	11.4	3.6	276
Manus	85.0	27.7	3.2	69.1	100.0	30.9	10.9	64
New Ireland	66.2	17.8	2.0	80.2	100.0	19.8	2.8	171
East New Britain	54.2	18.2	1.9	79.9	100.0	20.1	5.6	247
West New Britain	59.8	13.6	3.3	83.2	100.0	16.8	4.8	260
Autonomous Region of Bougainville	75.8	17.3	3.3	79.4	100.0	20.6	4.1	231
Hela	67.4	18.5	3.6	77.9	100.0	22.1	6.7	438
Jiwaka	84.7	33.0	2.7	64.3	100.0	35.7	12.6	309
Education								
No education	46.3	10.4	1.5	88.1	100.0	11.9	2.3	941
Elementary	43.0	8.3	4.7	87.0	100.0	13.0	4.5	253
Primary	54.6	14.7	1.8	83.5	100.0	16.5	4.0	3,593
Secondary	81.8	25.7	1.7	72.7	100.0	27.3	7.8	2,156
Higher	94.3	47.2	2.1	50.6	100.0	49.4	22.1	389
Wealth quintile								
Lowest	47.0	9.0	2.7	88.3	100.0	11.7	2.7	1,366
Second	55.7	13.5	1.7	84.7	100.0	15.3	3.0	1,384
Middle	60.6	16.6	1.6	81.8	100.0	18.2	4.9	1,528
Fourth	67.5	20.7	1.4	77.9	100.0	22.1	6.7	1,399
Highest	81.8	32.0	1.9	66.1	100.0	33.9	11.0	1,656
Total	63.2	18.9	1.9	79.3	100.0	20.7	5.9	7,333

[1] Includes “don’t know/missing”

Table 13.9 Pregnant women counselled and tested for HIV

Among all women age 15-49 who gave birth in the 2 years preceding the survey, percentage who received counselling on HIV during antenatal care, percentage who received an HIV test during antenatal care for their most recent birth by whether they received their results and post-test counselling, and percentage who received an HIV test during ANC or labour for their most recent birth by whether they received their test results, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage who received counselling on HIV during antenatal care[1]	Percentage who were tested for HIV during antenatal care and who:			Percentage who received counselling on HIV and an HIV test during ANC, and the results	Percentage who had an HIV test during ANC or labour and who:[2]		Number of women who gave birth in the past 2 years[3]
		Received results and received post-test counselling	Received results and did not receive post-test counselling	Did not receive results		Received results	Did not receive results	
Age								
15-24	34.2	25.9	12.5	5.8	26.7	39.3	6.1	1,197
15-19	27.0	20.0	12.8	4.9	20.5	32.9	6.2	223
20-24	35.8	27.2	12.5	6.0	28.2	40.8	6.0	974
25-29	33.4	23.7	12.5	4.9	25.4	37.6	4.9	1,034
30-39	34.4	22.2	10.8	3.7	26.3	33.9	4.4	1,179
40-49	23.5	15.8	9.8	4.0	19.4	27.4	2.9	231
Marital status								
Never married	27.9	14.4	9.0	8.6	16.7	24.6	8.7	125
Married or living together	33.5	23.9	11.9	4.4	26.1	36.9	4.7	3,341
Divorced/separated/widowed	34.9	21.2	11.6	7.4	26.2	33.6	7.4	176
Residence								
Urban	46.7	36.6	20.7	3.6	40.1	59.5	5.0	409
Rural	31.7	21.8	10.6	4.9	23.9	33.4	5.0	3,233
Region								
Southern	30.1	18.2	10.1	5.7	19.3	29.6	6.2	727
Highlands	39.8	28.7	13.9	5.9	32.0	44.2	6.0	1,382
Momase	24.5	19.3	8.6	2.7	19.2	28.3	3.3	990
Islands	37.6	24.5	14.4	4.1	30.5	40.1	3.9	543
Province								
Western	35.6	22.8	8.5	2.0	25.3	33.3	2.0	94
Gulf	11.2	6.5	6.0	2.4	7.6	13.0	3.2	73
Central	33.1	19.1	7.2	11.3	20.5	27.8	11.4	147
National Capital District	54.0	41.6	32.2	6.2	46.4	75.3	6.2	95
Milne Bay	27.2	11.2	8.5	5.4	11.9	20.6	6.7	207
Northern	18.7	14.0	2.5	4.0	10.9	17.5	4.0	111
Southern Highlands	29.8	12.2	16.6	2.1	23.7	30.0	2.1	263
Enga	34.2	23.6	5.8	5.4	23.4	31.9	6.6	137
Western Highlands	59.9	37.7	18.5	8.3	49.8	57.4	8.3	122
Chimbu	45.5	40.1	9.1	3.7	42.6	52.4	3.8	246
Eastern Highlands	40.8	26.5	13.7	13.9	26.5	40.5	13.9	281
Morobe	35.6	32.5	8.5	1.5	30.2	41.4	3.2	357
Madang	21.7	13.7	11.6	3.5	14.1	25.4	3.5	260
East Sepik	14.3	11.2	4.9	1.5	13.0	16.7	1.5	204
West Sepik	17.8	10.0	8.9	5.4	11.1	19.0	5.5	170
Manus	26.2	21.6	8.3	3.2	14.4	33.5	1.2	32
New Ireland	45.4	31.7	15.1	5.7	32.3	47.9	6.4	91
East New Britain	63.7	46.8	15.9	1.4	56.5	62.9	1.4	151
West New Britain	26.6	13.1	14.7	5.3	21.3	29.3	5.1	125
Autonomous Region of Bougainville	17.4	7.3	13.3	5.1	13.6	22.0	4.6	144
Hela	36.3	28.5	17.2	4.5	30.2	46.9	3.8	199
Jiwaka	39.9	42.1	16.9	1.4	35.5	61.1	1.7	133
Education								
No education	16.4	12.6	4.7	3.0	11.1	18.1	3.2	897
Elementary	24.1	14.7	14.4	2.1	20.0	29.2	2.1	173
Primary	33.0	20.5	11.9	5.7	24.1	33.6	5.8	1,668
Secondary	47.8	34.9	19.4	6.1	38.2	55.7	6.7	743
Higher	75.4	70.7	11.9	1.0	72.9	84.4	1.9	161
Wealth quintile								
Lowest	15.7	8.3	6.8	3.5	9.9	15.4	3.5	740
Second	26.8	16.1	7.1	4.3	17.7	24.0	5.0	728
Middle	33.8	22.3	12.1	6.0	26.0	35.6	6.0	772
Fourth	38.0	25.2	15.9	4.5	30.2	42.3	4.8	736
Highest	54.5	47.7	17.5	5.4	46.9	67.3	5.6	666
Total	33.4	23.4	11.8	4.7	25.7	36.3	5.0	3,642

[1] In this context, "counselling" means that someone talked with the respondent about all three of the following topics: (1) babies getting HIV from their mother, (2) preventing the virus, and (3) getting tested for HIV.
[2] Women were asked whether they received an HIV test during labour only if they were not tested for HIV during ANC.
[3] Denominator for percentages includes women who did not receive antenatal care for their last birth in the past 2 years.

Table 13.10 Male circumcision

Percent distribution of men age 15-49 by circumcision status and provider of circumcision, and percentage of men circumcised, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Circumcised by:			Not circumcised	Don't know/missing circumcision status	Total	Percentage of men circumcised[1]	Number of men
	Health worker/ professional	Traditional practitioner/ family/friend	Other/don't know/missing					
Age								
15-24	3.6	47.1	2.5	45.8	1.0	100.0	53.3	2,715
15-19	2.7	41.8	1.9	52.2	1.4	100.0	46.5	1,469
20-24	4.7	53.4	3.3	38.2	0.5	100.0	61.3	1,246
25-29	5.9	52.4	5.2	35.7	0.8	100.0	63.5	1,171
30-39	4.8	42.1	3.0	49.2	0.8	100.0	50.0	2,024
40-49	5.5	33.3	1.6	58.7	0.8	100.0	40.5	1,423
Residence								
Urban	8.6	50.6	5.0	35.3	0.5	100.0	64.3	976
Rural	4.1	42.9	2.6	49.5	0.9	100.0	49.6	6,357
Region								
Southern	5.6	29.1	2.6	62.1	0.6	100.0	37.3	1,490
Highlands	3.9	32.1	3.3	59.6	1.1	100.0	39.3	2,871
Momase	4.0	60.1	3.1	31.9	1.0	100.0	67.1	1,999
Islands	7.2	68.2	1.8	22.3	0.4	100.0	77.3	973
Province								
Western	8.2	21.9	3.5	66.1	0.3	100.0	33.6	182
Gulf	3.4	26.9	2.2	67.1	0.4	100.0	32.5	137
Central	2.8	33.0	3.3	58.9	2.0	100.0	39.1	272
National Capital District	13.0	40.0	6.6	40.3	0.2	100.0	59.5	251
Milne Bay	4.4	14.9	0.9	79.6	0.3	100.0	20.1	423
Northern	2.1	46.5	0.2	51.0	0.2	100.0	48.8	223
Southern Highlands	2.3	23.3	10.7	63.4	0.4	100.0	36.2	457
Enga	5.3	18.0	0.6	75.3	0.8	100.0	23.9	306
Western Highlands	6.0	36.4	5.2	51.1	1.3	100.0	47.6	378
Chimbu	4.6	24.7	0.8	67.6	2.3	100.0	30.1	397
Eastern Highlands	4.6	53.1	1.7	40.2	0.4	100.0	59.4	587
Morobe	5.1	58.7	1.0	33.8	1.4	100.0	64.8	796
Madang	3.4	57.6	5.4	32.1	1.4	100.0	66.4	493
East Sepik	1.7	68.8	4.2	24.7	0.6	100.0	74.7	435
West Sepik	5.3	54.5	3.2	36.9	0.0	100.0	63.1	276
Manus	10.5	47.8	3.4	38.0	0.3	100.0	61.7	64
New Ireland	7.2	57.6	0.8	33.4	1.0	100.0	65.5	171
East New Britain	9.1	76.8	1.0	13.1	0.0	100.0	86.9	247
West New Britain	7.3	79.7	3.7	8.9	0.5	100.0	90.6	260
Autonomous Region of Bougainville	4.3	59.7	0.9	34.8	0.4	100.0	64.9	231
Hela	1.7	29.8	2.3	64.0	2.1	100.0	33.8	438
Jiwaka	2.9	26.9	0.7	69.4	0.1	100.0	30.5	309
Religion								
Anglican	2.9	38.7	1.3	56.5	0.6	100.0	42.9	230
Evangelical Alliance	0.8	33.4	5.2	60.5	0.1	100.0	39.5	230
Pentecostal	3.9	48.1	1.7	45.9	0.4	100.0	53.7	604
Evangelical Lutheran	4.9	47.6	3.1	43.1	1.3	100.0	55.6	1,060
Roman Catholic	4.8	49.7	3.4	41.4	0.6	100.0	57.9	1,725
Seventh Day Adventist	5.8	47.7	2.8	42.9	0.9	100.0	56.2	1,122
United Church	3.8	33.5	2.5	59.6	0.6	100.0	39.8	825
Other Christian church	5.2	38.9	2.9	51.7	1.2	100.0	47.0	1,412
Other Christian	(5.0)	(26.4)	(2.1)	(66.4)	(0.0)	100.0	(33.6)	43
Other non-Christian	6.3	34.4	6.1	50.6	2.6	100.0	46.8	66
Other	*	*	*	*	*	*	*	17
Total	4.7	43.9	2.9	47.6	0.9	100.0	51.5	7,333

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Includes all men who report they are circumcised, regardless of provider

Table 13.11 Self-reported prevalence of sexually transmitted infections (STIs) and STI symptoms

Among women and men age 15-49 who ever had sexual intercourse, percentage reporting having an STI and/or symptoms of an STI in the past 12 months, according to background characteristics, Papua New Guinea DHS 2016-18

	Percentage of women who reported having in the past 12 months:					Percentage of men who reported having in the past 12 months:				
Background characteristic	STI	Bad-smelling/ abnormal genital discharge	Genital sore or ulcer	STI/genital discharge/ sore or ulcer	Number of women who ever had sexual intercourse	STI	Bad-smelling/ abnormal discharge from penis	Genital sore or ulcer	STI/ abnormal discharge from penis/sore or ulcer	Number of men who ever had sexual intercourse
Age										
15-24	5.0	10.7	2.1	12.8	2,908	5.2	9.9	2.4	12.5	1,281
15-19	4.9	11.3	2.0	12.0	737	4.3	10.3	1.7	12.9	385
20-24	5.1	10.5	2.2	13.0	2,171	5.6	9.7	2.7	12.3	897
25-29	5.7	11.7	2.9	13.7	2,391	4.7	9.0	2.2	10.4	1,052
30-39	3.7	8.4	2.4	9.9	4,115	3.7	6.6	2.3	8.6	1,906
40-49	4.1	7.0	1.7	8.5	2,638	3.1	5.2	2.2	6.6	1,375
Marital status										
Never married	4.9	9.4	1.9	10.9	989	5.3	8.8	2.1	11.3	1,470
Married or living together	4.7	9.5	2.4	11.3	9,902	3.5	6.6	2.2	8.3	3,877
Divorced/separated/ widowed	2.5	7.9	1.4	8.9	1,161	6.0	12.3	3.9	12.8	267
Circumcised										
Yes[1]	na	na	na	na	na	4.9	8.3	2.1	10.6	3,120
No	na	na	na	na	na	3.1	6.4	2.5	7.8	2,458
Don't know	na	na	na	na	na	(0.0)	(3.7)	(3.7)	(3.7)	37
Residence										
Urban	4.4	8.7	2.4	10.5	1,515	5.3	5.7	1.3	8.1	770
Rural	4.5	9.4	2.3	11.1	10,537	3.9	7.7	2.4	9.5	4,844
Region										
Southern	1.4	6.3	1.9	7.3	2,300	2.9	6.4	1.8	7.8	1,200
Highlands	7.6	11.1	3.0	13.6	4,913	6.8	12.1	3.6	14.5	2,108
Momase	3.4	9.7	1.6	11.1	3,160	1.8	3.0	0.7	4.3	1,577
Islands	1.9	7.5	2.1	8.6	1,680	3.3	5.4	2.5	7.9	729
Province										
Western	2.4	6.3	2.2	7.9	277	1.2	1.8	0.0	2.6	135
Gulf	1.1	5.9	2.7	6.8	215	0.6	1.6	0.9	3.0	102
Central	1.5	9.8	3.2	11.4	446	4.2	14.1	5.2	15.9	219
National Capital District	1.8	6.0	1.1	6.7	377	3.5	3.3	1.5	4.9	209
Milne Bay	0.6	3.2	1.3	3.8	659	2.4	6.2	0.3	7.4	347
Northern	1.9	8.7	1.3	9.2	326	4.4	7.1	2.4	8.8	189
Southern Highlands	5.5	7.9	2.7	10.6	847	4.7	6.9	3.6	9.6	340
Enga	5.5	10.8	2.2	11.6	457	4.5	6.4	5.3	9.7	216
Western Highlands	5.7	8.7	4.2	10.8	532	7.8	12.7	3.8	16.2	277
Chimbu	8.0	8.0	1.8	11.3	812	8.7	16.7	2.6	20.6	292
Eastern Highlands	9.7	18.0	3.6	20.7	1,110	6.5	17.2	2.9	17.8	492
Morobe	6.6	12.0	2.1	14.7	1,304	3.1	1.7	0.0	3.3	628
Madang	0.8	13.7	1.0	14.1	796	1.0	4.2	0.4	4.8	402
East Sepik	1.0	3.7	1.7	4.1	638	0.7	1.5	0.3	2.1	336
West Sepik	1.8	3.9	0.8	4.6	422	0.8	6.8	4.1	9.9	212
Manus	1.2	4.3	1.3	5.3	110	3.1	7.1	1.2	8.3	53
New Ireland	1.4	10.9	1.6	11.1	312	2.1	3.4	1.1	5.1	130
East New Britain	2.1	6.4	2.0	8.1	443	4.4	5.0	1.9	8.3	182
West New Britain	1.3	10.3	3.1	11.5	394	5.3	7.1	5.3	11.6	190
Autonomous Region of Bougainville	2.9	4.3	1.7	5.4	421	1.2	5.0	1.4	5.3	175
Hela	4.7	5.5	2.3	7.8	645	2.8	3.2	1.3	4.9	248
Jiwaka	13.4	16.0	5.0	18.6	509	12.8	16.4	7.0	19.0	243
Education										
No education	3.7	8.3	1.9	9.1	3,140	3.3	7.4	2.7	8.7	737
Elementary	5.7	9.9	2.5	12.4	553	5.0	6.0	4.5	10.1	211
Primary	4.0	10.3	2.6	11.8	5,272	3.8	8.1	2.2	10.0	2,527
Secondary	5.4	8.8	2.0	10.9	2,573	4.9	7.7	2.2	9.6	1,769
Higher	9.3	8.0	2.5	13.2	514	3.6	2.3	0.6	4.4	371
Wealth quintile										
Lowest	2.7	7.1	1.5	7.8	2,298	3.6	8.7	3.0	9.5	1,015
Second	3.5	8.5	1.8	9.5	2,265	3.9	7.1	2.0	8.8	1,048
Middle	5.0	10.5	2.2	11.9	2,335	4.7	8.6	1.9	11.2	1,120
Fourth	5.3	10.7	4.1	13.3	2,442	4.0	7.9	3.0	10.3	1,078
Highest	5.8	9.6	1.8	12.3	2,712	4.3	5.4	1.6	7.2	1,353
Total	4.5	9.3	2.3	11.0	12,052	4.1	7.4	2.3	9.3	5,615

Note: Figures in parentheses are based on 25-49 unweighted cases.
na = Not applicable
[1] Includes all men who report they are circumcised, regardless of provider

Table 13.12 Women and men seeking treatment for STIs

Percentage of women and men age 15-49 reporting an STI or symptoms of an STI in the past 12 months who sought advice or treatment, Papua New Guinea DHS 2016-18

Source of advice or treatment	Women	Men
Clinic/hospital/private doctor/other health professional	37.8	39.7
Advice or medicine from shop/pharmacy	0.1	0.3
Advice or treatment from any other source	3.3	1.7
No advice or treatment	50.8	35.9
Number with STI or symptoms of STI	1,342	524

Table 13.13 Comprehensive knowledge about HIV among young people

Percentage of young women and young men age 15-24 with comprehensive knowledge about HIV, according to background characteristics, Papua New Guinea DHS 2016-18

	Women		Men	
Background characteristic	Percentage with comprehensive knowledge of HIV[1]	Number of respondents	Percentage with comprehensive knowledge of HIV[1]	Number of respondents
Age				
15-19	21.3	2,945	21.4	1,469
15-17	18.3	1,714	19.2	855
18-19	25.6	1,231	24.4	614
20-24	27.7	2,759	31.9	1,246
20-22	28.9	1,694	29.4	778
23-24	26.0	1,065	36.0	468
Marital status				
Never married	25.9	3,511	25.4	2,373
Ever had sex	33.1	741	33.6	943
Never had sex	23.9	2,770	20.0	1,430
Ever married	22.1	2,194	31.8	342
Residence				
Urban	34.9	819	38.1	409
Rural	22.7	4,885	24.1	2,306
Education				
No education	9.0	740	13.0	191
Elementary	15.2	203	8.1	67
Primary	17.3	2,964	18.0	1,492
Secondary	41.1	1,609	41.1	896
Higher	64.5	189	64.4	69
Total	24.4	5,704	26.2	2,715

[1] Comprehensive knowledge means knowing that consistent use of condoms during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting HIV, knowing that a healthy-looking person can have HIV, and rejecting the two most common local misconceptions about transmission or prevention of HIV. The components of comprehensive knowledge are presented in Tables 13.2 and 13.3.

Table 13.14 Age at first sexual intercourse among young people

Percentage of young women and young men age 15-24 who had sexual intercourse before age 15 and percentage of young women and young men age 18-24 who had sexual intercourse before age 18, according to background characteristics, Papua New Guinea DHS 2016-18

	Women				Men			
Background characteristic	Percentage who had sexual intercourse before age 15	Number of respondents (15-24)	Percentage who had sexual intercourse before age 18	Number of respondents (18-24)	Percentage who had sexual intercourse before age 15	Number of respondents (15-24)	Percentage who had sexual intercourse before age 18	Number of respondents (18-24)
Age								
15-19	4.0	2,945	na	na	3.5	1,469	na	na
15-17	2.8	1,714	na	na	2.3	855	na	na
18-19	5.5	1,231	28.9	1,231	5.1	614	30.9	614
20-24	6.3	2,759	33.9	2,759	4.7	1,246	32.5	1,246
20-22	5.9	1,694	34.9	1,694	4.8	778	33.6	778
23-24	6.8	1,065	32.5	1,065	4.6	468	30.7	468
Residence								
Urban	4.2	819	26.3	574	6.6	409	37.2	284
Rural	5.2	4,885	33.4	3,416	3.6	2,306	31.0	1,576
Education								
No education	10.9	740	46.4	592	2.5	191	16.7	151
Elementary	15.4	203	50.3	130	5.3	67	(20.4)	43
Primary	5.0	2,964	40.9	1,723	3.2	1,492	32.0	846
Secondary	1.6	1,609	17.7	1,356	5.8	896	35.8	752
Higher	1.1	189	4.0	189	1.5	69	30.8	69
Total	5.1	5,704	32.4	3,990	4.0	2,715	32.0	1,860

Note: Figures in parentheses are based on 25-49 unweighted cases.
na = Not applicable

Table 13.15 Premarital sexual intercourse among young people

Among never-married women and men age 15-24, percentage who have never had sexual intercourse, according to background characteristics, Papua New Guinea DHS 2016-18

	Women age 15-24		Men age 15-24	
Background characteristic	Percentage who have never had sexual intercourse	Number of never-married women	Percentage who have never had sexual intercourse	Number of never-married men
Age				
15-19	88.0	2,494	75.3	1,440
15-17	92.3	1,590	84.8	851
18-19	80.5	903	61.6	589
20-24	56.5	1,017	37.1	933
20-22	61.4	755	38.5	653
23-24	42.6	262	33.8	280
Residence				
Urban	78.5	574	49.2	363
Rural	79.0	2,936	62.3	2,009
Education				
No education	84.1	277	75.0	155
Elementary	81.2	116	52.7	55
Primary	81.3	1,916	70.9	1,352
Secondary	74.6	1,096	41.7	756
Higher	63.6	106	(20.0)	55
Total	78.9	3,511	60.3	2,373

Note: Figures in parentheses are based on 25-49 unweighted cases.

Table 13.16.1 Multiple sexual partners and higher-risk sexual intercourse in the past 12 months among young people: Women

Among all young women age 15-24, percentage who had sexual intercourse with more than one sexual partner in the past 12 months and percentage who had intercourse in the past 12 months with a person who neither was their husband nor lived with them; among young women having more than one partner in the past 12 months, percentage reporting that a condom was used during last intercourse; and among young women who had sexual intercourse in the past 12 months with a person who neither was their husband nor lived with them, percentage who used a condom during last sexual intercourse with such a partner, according to background characteristics, Papua New Guinea DHS 2016-18

	Women age 15-24			Women age 15-24 who had 2+ partners in the past 12 months		Women age 15-24 who had intercourse in the past 12 months with a person who neither was their husband nor lived with them	
Background characteristic	Percentage who had 2+ partners in the past 12 months	Percentage who had intercourse in the past 12 months with a person who neither was their husband nor lived with them	Number of women	Percentage who reported using a condom during last sexual intercourse	Number of women	Percentage who reported using a condom during last sexual intercourse with such a partner	Number of women
Age							
15-19	1.4	7.4	2,945	(8.3)	41	13.5	217
15-17	0.9	5.4	1,714	*	16	11.3	93
18-19	2.0	10.1	1,231	*	25	15.2	124
20-24	1.6	11.4	2,759	(12.0)	43	21.0	315
20-22	1.5	13.1	1,694	(4.9)	26	21.4	223
23-24	1.6	8.7	1,065	*	17	19.9	92
Marital status							
Never married	1.1	13.3	3,511	(18.4)	39	19.5	468
Ever married	2.0	2.9	2,194	(3.1)	45	6.8	64
Residence							
Urban	1.8	11.2	819	(7.4)	15	18.6	92
Rural	1.4	9.0	4,885	(10.8)	69	17.8	440
Education							
No education	1.6	5.5	740	*	12	(5.8)	41
Elementary	0.0	10.3	203	*	0	*	21
Primary	1.4	8.6	2,964	(8.0)	41	11.2	255
Secondary	1.8	12.3	1,609	(18.3)	29	30.1	198
Higher	1.2	8.8	189	*	2	(15.5)	17
Total 15-24	1.5	9.3	5,704	10.2	84	17.9	532

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Table 13.16.2 Multiple sexual partners and higher-risk sexual intercourse in the past 12 months among young people: Men

Among all young men age 15-24, percentage who had sexual intercourse with more than one sexual partner in the past 12 months and percentage who had intercourse in the past 12 months with a person who neither was their wife nor lived with them; among young men having more than one partner in the past 12 months, percentage reporting that a condom was used during last intercourse; and among young men who had sexual intercourse in the past 12 months with a person who neither was their wife nor lived with them, percentage who used a condom during last sexual intercourse with such a partner, according to background characteristics, Papua New Guinea DHS 2016-18

	Men age 15-24			Men age 15-24 who had 2+ partners in the past 12 months		Men age 15-24 who had intercourse in the past 12 months with a person who neither was their wife nor lived with them	
Background characteristic	Percentage who had 2+ partners in the past 12 months	Percentage who had intercourse in the past 12 months with a person who neither was their wife nor lived with them	Number of men	Percentage who reported using a condom during last sexual intercourse	Number of men	Percentage who reported using a condom during last sexual intercourse with such a partner	Number of men
Age							
15-19	3.8	17.5	1,469	26.8	56	31.0	256
15-17	1.8	11.0	855	*	15	45.2	94
18-19	6.6	26.4	614	(32.2)	41	22.8	162
20-24	10.6	32.4	1,246	22.8	132	30.3	404
20-22	10.4	33.3	778	22.1	81	28.6	259
23-24	10.9	30.9	468	23.9	51	33.2	145
Marital status							
Never married	6.1	25.4	2,373	28.7	144	29.5	604
Ever married	13.1	16.5	342	(8.8)	45	42.0	57
Residence							
Urban	11.1	32.2	409	27.4	45	29.8	132
Rural	6.2	22.9	2,306	22.9	143	30.7	528
Education							
No education	3.0	17.8	191	*	6	(4.4)	34
Elementary	5.2	40.1	67	*	3	*	27
Primary	4.5	16.1	1,492	15.8	67	20.9	240
Secondary	11.0	37.3	896	31.9	99	39.7	334
Higher	18.9	36.6	69	*	13	*	25
Total 15-24	6.9	24.3	2,715	24.0	188	30.5	660

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Table 13.17 Recent HIV tests among young people

Among young women and young men age 15-24 who have had sexual intercourse in the past 12 months, percentage who were tested for HIV in the past 12 months and received the results of the last test, according to background characteristics, Papua New Guinea DHS 2016-18

	Women age 15-24 who have had sexual intercourse in the past 12 months:		Men age 15-24 who have had sexual intercourse in the past 12 months:	
Background characteristic	Percentage who have been tested for HIV in the past 12 months and received the results of the last test	Number of women	Percentage who have been tested for HIV in the past 12 months and received the results of the last test	Number of men
Age				
15-19	12.7	596	5.8	286
15-17	14.5	203	2.2	106
18-19	11.7	393	7.9	180
20-24	12.8	1,738	7.9	668
20-22	12.9	998	6.5	376
23-24	12.7	741	9.7	291
Marital status				
Never married	6.0	480	6.1	638
Ever married	14.5	1,855	9.6	316
Total 15-24	12.8	2,335	7.3	954

ADULT AND MATERNAL MORTALITY 14

Key Findings

- ***Adult mortality:*** The adult mortality rate is 2.56 deaths per 1,000 population among women and 2.96 deaths per 1,000 population among men.
- ***Lifetime risk of maternal death:*** The lifetime risk of maternal death indicates that one in 125 women in Papua New Guinea will die from a maternal cause.
- ***Maternal mortality ratio:*** The maternal mortality ratio for the 7-year period before the 2016-18 PNG DHS is estimated at 171 maternal deaths per 100,000 live births.
- ***Pregnancy-related mortality ratio:*** The pregnancy-related mortality ratio (including deaths from accidents or violence) for the 7-year period before the 2016-18 PNG DHS is estimated at 205 pregnancy-related deaths per 100,000 live births.

Adult and maternal mortality indicators can be used to assess the health status of a population. In most developing countries, reproductive health is a major concern, and there is a need for reliable data on maternal deaths. Maternal mortality continues to be a problem in Papua New Guinea.

WHO explains this problem using a delay model that includes delays in seeking health care, delays in reaching health facilities, and poor health services in facilities. This model has been associated with human, health system, and socioeconomic factors such as poverty, poor emergency obstetric services, and fatalistic beliefs. These problems have contributed to a high incidence of infectious diseases, postpartum haemorrhage, hypertensive disorders, unsafe abortions, and prolonged labour, which have led to high adult and maternal mortality in Papua New Guinea.

Estimation of mortality rates requires complete and accurate data on adult and maternal deaths. In the 2016-18 PNG DHS, data were collected from all female respondents on the survival of their sisters and brothers to obtain an estimate of adult mortality. Questions were included to determine if any of the sisters' deaths were maternity-related, which permits an estimation of maternal mortality—a key indicator of maternal health and well-being.

This chapter presents information on levels of adult mortality and maternal mortality in Papua New Guinea. The chapter includes a summary measure ($_{35}q_{15}$) that represents the probability of dying between exact ages 15 and 50—that is, between the 15th and 50th birthdays.

14.1 DATA

To obtain a sibling history, each respondent was first asked to provide the total number of her mother's live births. The respondent was then asked to provide a list of all children born to her mother, starting with the first born, and the survival status of each sibling. Information on current age was collected for each surviving sibling. Age at death and number of years since death were recorded for each deceased sibling. When a respondent could not provide precise information on age at death or years since death, the interviewers were instructed to accept an approximate but quantitative answer. For sisters who died at age

12 or above, three questions were used to determine whether the death was maternity-related: "Was [NAME OF SISTER] pregnant when she died?" and, if not, "Did she die during childbirth?" and, if not, "Did she die within 2 months after the end of a pregnancy or childbirth?" Estimation of adult and pregnancy-related mortality by either direct or indirect means requires reasonably accurate reporting of the respondent's number of sisters and brothers, the number who have died, and (for pregnancy-related mortality) the number of sisters who died of pregnancy-related causes. **Table 14.1** shows the number of siblings reported by respondents and the completeness of data on current age, age at death, and years since death.

A total of 70,659 siblings were recorded in the adult mortality section of the 2016-18 PNG DHS. Survival status was not reported for only 285 (0.4%) siblings. Current age (used to estimate exposure to death) was reported for 95% of surviving siblings. Data on both age at death and years since death (or year of death) were obtained for 86% of deceased siblings. Rather than excluding siblings with missing data from further analysis, information on the birth order of siblings in conjunction with other information was used to impute the missing data.[1] The sex ratio for enumerated siblings (the ratio of brothers to sisters multiplied by 100) is 110 **(Appendix Table C.8)**.

14.2 Direct Estimates of Adult Mortality

Adult mortality rate

The number of adult deaths per 1,000 population age 15-49. Adult mortality rates by 5-year age groups are calculated as follows: the number of deaths to a respondent's siblings in each age group is divided by the number of person-years of exposure to the risk of dying in that age group during the 7 years preceding the survey. The number of deaths is the number of siblings (brothers or sisters) reported as having died within the 7 years preceding the survey. The person-years of exposure in each age group are calculated for both surviving and dead siblings based on their current age (living siblings) or age at death and years since death (dead siblings).

Sample: Siblings (both living and dead) who were age 15-49 in the 7 years preceding the survey, by sex and 5-year age groups

One way to assess the quality of the data used to estimate pregnancy-related mortality is to evaluate the plausibility and stability of overall adult mortality. If estimated rates of overall adult mortality are implausible, rates based on a subset of deaths (pregnancy-related deaths in particular) may have questionable plausibility.

The reported ages at death and years since death of the respondents' brothers and sisters are used to make direct estimates of adult mortality. Age- and sex-specific death rates are presented in this report because of the differentials in exposure to the risk of dying. To ensure a sufficiently large number of adult deaths to generate a robust estimate, the rates are calculated for the 7-year period before the survey.

[1] The imputation procedure was based on the assumption that the reported birth ordering of siblings in the history was correct. The first step was to calculate birth dates for each living sibling with a reported age and each dead sibling with complete information on both age at death and years since death. For a sibling missing these data, a birth date was imputed within the range defined by the birth dates of the bracketing siblings. In the case of living siblings, an age was then calculated from the imputed birth date. In the case of dead siblings, if either age at death or years since death were reported, that information was combined with the birth date to produce the missing information. If both pieces of information were missing, the distribution of the ages at death for siblings for whom years since death were not reported but age at death was reported was used as a basis for imputing age at death.

Nevertheless, age-specific mortality rates obtained in this manner are subject to considerable sampling variation. Use of this 7-year period was a compromise between the desire for the most recent data and the need to minimise sampling error.

Table 14.2 and **Figure 14.1** shows direct estimates of age-specific mortality rates among women and men age 15-49 for the 7-year period before the survey. Overall, the level of adult mortality is slightly higher among men (2.96 deaths per 1,000 population) than among women (2.56 deaths per 1,000 population). Mortality rates rise rapidly with age among women, from 1.55 per 1,000 population in the 15-19 age group to 4.57 per 1,000 population in the 45-49 age group. Similarly, mortality rates among men increase steadily overall from 1.29 per 1,000 population in the 15-19 age group to 5.01 per 1,000 in the 45-49 age group. Mortality rates are slightly higher among women than men in the 15-19 age group. In the older age groups (20 years and above), however, mortality rates are higher among men.

Figure 14.1 **Adult mortality rates by age**

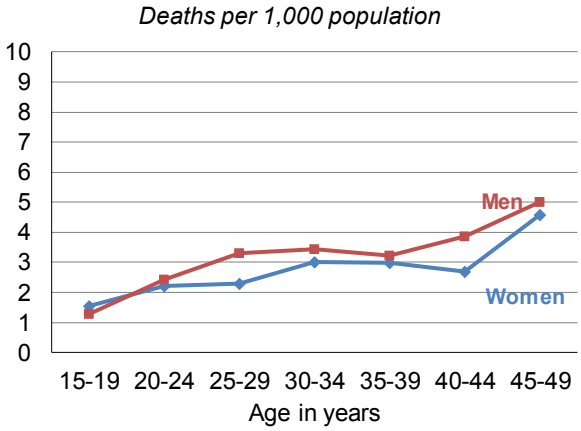


Table 14.3 shows the probability of dying between exact ages 15 and 50 ($_{35}q_{15}$); $_{35}q_{15}$ is the probability of a woman or man who has just reached age 15 dying before age 50 if age-specific death rates in the 7 years before the survey are held constant. The 2016-18 PNG DHS data show that women have a lower probability of dying than men: 92 of 1,000 women age 15 and 107 of 1,000 men age 15 would be expected to die before age 50.

14.3 Direct Estimates of Maternal Mortality

Maternal mortality rate

The number of maternal deaths per 1,000 women age 15-49. Maternal mortality rates by 5-year age groups are calculated by dividing the number of maternal deaths to female siblings of respondents in each age group by the total person-years of exposure of the sisters to the risk of dying in that age group during the 7 years preceding the survey. The number of deaths is the number of sisters reported as having died in the 7 years preceding the survey either during pregnancy or delivery, or in the 42 days following the delivery or termination of a pregnancy, by their age group at the time of death; deaths due to accidents or violence are excluded. The person-years of exposure in each age group are calculated for both surviving and dead sisters based on their reported current age (living sisters) or age at death and years since death (dead sisters).

Sample: Sisters (both living and dead) age 15-49 in the 7 years preceding the survey, by 5-year age groups

Maternal mortality ratio

The number of maternal deaths per 100,000 live births. The maternal mortality ratio is calculated by dividing the age-standardised maternal mortality rate for women age 15-49 in the 7 years preceding the survey by the general fertility rate (GFR) for the same time period.

Maternal deaths are a subset of all female deaths; they are defined as any deaths that occur during pregnancy or childbirth or within 42 days after the birth or termination of a pregnancy. Maternal deaths do not include deaths due to accidents or violence. Two methods are generally used to estimate maternal

mortality in low- and middle-income countries: the indirect sisterhood method (Graham et al. 1989) and a direct variant of the sisterhood method (Rutenberg and Sullivan 1991; Stanton et al. 1997). **Table 14.4** presents age-specific direct estimates of maternal mortality from the reported survivorship of sisters for the 7-year period prior to the 2016-18 PNG DHS. These rates were calculated by dividing the number of maternal deaths by woman-years of exposure. To remove the effect of truncation bias (the lower boundary for eligibility among women interviewed in the survey is 15 years, and the upper boundary is 49 years), the overall rate for women age 15-49 was standardised by the age distribution of survey respondents.

Table 14.4 shows that the maternal mortality rate among women age 15-49 is 0.24 deaths per 1,000 woman-years of exposure. By 5-year age groups, the maternal mortality rate is highest among women age 35-39 (0.43) and lowest among those age 15-19 (0.08). The overall percentage of female deaths due to maternal causes is 10%. The percentage of female deaths that are maternal deaths peaks at 15% in the 35-39 age group and decreases thereafter to 5% in the 45-49 age group.

The estimated maternal mortality ratio is 171 deaths per 100,000 live births during the 7-year period before the survey (with a 95% confidence interval of 95 to 247). Thus, for every 1,000 live births in Papua New Guinea during the 7 years before the 2016-18 PNG DHS, approximately two women died during pregnancy, during childbirth, or within 2 months after childbirth. The lifetime risk of maternal death (0.008) indicates that of 1,000 women of exact age 15, about eight (one in 125 women) would die before age 50 during pregnancy, during childbirth, or within 2 months of childbirth.

14.4 Pregnancy-related Mortality

Pregnancy-related mortality rate

The number of pregnancy-related deaths per 1,000 women age 15-49. Pregnancy-related mortality rates by 5-year age groups are calculated by dividing the number of pregnancy-related deaths to female siblings of respondents in each age group by the total person-years of exposure of the sisters to the risk of dying in that age group during the 7 years preceding the survey. The number of deaths is the number of sisters reported as having died in the 7 years preceding the survey during pregnancy or delivery, or in the 2 months following the delivery or termination of a pregnancy, by their age group at the time of death. The person-years of exposure in each age group are calculated for both surviving and dead sisters based on their reported current age (living sisters) or age at death and years since death (dead sisters).

Sample: Sisters (both living and dead) age 15-49 in the 7 years preceding the survey, by 5 year age groups.

Pregnancy-related mortality ratio

The number of pregnancy-related deaths per 100,000 live births. The pregnancy-related mortality ratio is calculated by dividing the age-standardised pregnancy-related mortality rate for women age 15-49 in the 7 years preceding the survey by the general fertility rate (GFR) for the same time period.

The 2016-18 PNG DHS defines a pregnancy-related death as the death of a woman during pregnancy or childbirth or within 2 months of delivery or termination of a pregnancy, irrespective of the cause of death. Estimates of pregnancy-related mortality are therefore based solely on the timing of the death in relationship to the pregnancy. Note that this definition varies from the WHO definition of a pregnancy-related death, which limits the window to 42 days. What the current PNG DHS defines as a pregnancy-related death had been labelled a maternal death in prior DHS surveys.

Appendix Table C.9 presents estimates of the pregnancy-related mortality ratio (PRMR) with confidence intervals for the current survey. The pregnancy-related maternal mortality ratio for the 2016-18 PNG DHS is 205 deaths per 100,000 live births (with a 95% confidence interval of 121 to 290). It can be noted that the 2006 PNG DHS used the indirect sisterhood method to estimate pregnancy-related mortality (deaths

due to maternal causes, that is, deaths during pregnancy, during childbirth, or within 6 weeks after the end of a pregnancy). The estimated pregnancy-related mortality ratio in the 2006 PNG DHS was 733 (CI: 616-850) deaths per 100,000 live births in the 12 years prior to the survey; that ratio is not directly comparable with the current ratio of 205 deaths per 100,000 live births in the 7 years prior to the 2016-18 PNG DHS, in which the direct sisterhood method was used.

List of Tables

For more information on adult and maternal mortality, see the following tables:

- **Table 14.1 Completeness of information on siblings**
- **Table 14.2 Adult mortality rates**
- **Table 14.3 Adult mortality probabilities**
- **Table 14.4 Maternal mortality**
- **Table C.9 Pregnancy-related mortality**

Table 14.1 Completeness of information on siblings

Completeness of data on survival status of sisters and brothers reported by interviewed women, age of living siblings, and age at death (AD) and years since death (YSD) of dead siblings (unweighted), Papua New Guinea DHS 2016-18

	Sisters		Brothers		All siblings	
	Number	Percent	Number	Percent	Number	Percent
All siblings	33,603	100.0	37,056	100.0	70,659	100.0
Living	31,110	92.6	34,150	92.2	65,260	92.4
Dead	2,349	7.0	2,765	7.5	5,114	7.2
Survival status unknown	144	0.4	141	0.4	285	0.4
Living siblings	31,110	100.0	34,150	100.0	65,260	100.0
Age reported	29,671	95.4	32,601	95.5	62,272	95.4
Age missing	1,439	4.6	1,549	4.5	2,988	4.6
Dead siblings	2,349	100.0	2,765	100.0	5,114	100.0
AD and YSD reported	1,999	85.1	2,381	86.1	4,380	85.6
Missing only AD	163	6.9	172	6.2	335	6.6
Missing only YSD	59	2.5	82	3.0	141	2.8
Missing AD and YSD	128	5.4	130	4.7	258	5.0

Table 14.2 Adult mortality rates

Direct estimates of female and male mortality rates for the 7 years preceding the survey, by 5-year age groups, Papua New Guinea DHS 2016-18

Age	Deaths	Exposure years	Mortality rate[1]
	FEMALE		
15-19	45	28,889	1.55
20-24	70	31,773	2.21
25-29	70	30,786	2.29
30-34	78	25,755	3.02
35-39	62	20,903	2.99
40-44	39	14,448	2.70
45-49	39	8,445	4.57
Total 15-49	403	160,999	2.56[a]
	MALE		
15-19	41	31,377	1.29
20-24	87	35,695	2.44
25-29	109	33,207	3.30
30-34	98	28,531	3.44
35-39	75	23,287	3.23
40-44	60	15,543	3.87
45-49	49	9,762	5.01
Total 15-49	519	177,401	2.96[a]

[1] Expressed per 1,000 population
[a] Age-adjusted rate

Table 14.3 Adult mortality probabilities

The probability of dying between ages 15 and 50 for women and men during the 7 years preceding the survey, Papua New Guinea DHS 2016-18

Survey	Female $_{35}q_{15}$[1]	Male $_{35}q_{15}$[1]
2016-18 PNG DHS	92 (CI: 77-107)	107 (CI: 91-122)

CI: Confidence interval
[1] The probability of dying between exact ages 15 and 50, expressed per 1,000 persons age 15

Table 14.4 Maternal mortality

Direct estimates of maternal mortality rates for the 7 years preceding the survey, by 5-year age groups, and the general fertility rate, maternal mortality ratio, and lifetime risk of maternal death for the 7 years preceding the survey, Papua New Guinea DHS 2016-18

Age	Percentage of female deaths that are maternal	Maternal deaths[1]	Exposure years	Maternal mortality rate[2]
15-19	5.0	2	28,889	0.08
20-24	12.2	9	31,773	0.27
25-29	5.3	4	30,786	0.12
30-34	11.5	9	25,755	0.35
35-39	14.5	9	20,903	0.43
40-44	10.7	4	14,448	0.29
45-49	5.4	2	8,445	0.25
Total 15-49	9.6	39	160,999	0.24[a]
General fertility rate (GFR)[3]	0.141[a]			
Maternal mortality ratio (MMR)[4]	171	(CI: 95-247)		
Lifetime risk of maternal death[5]	0.008			

CI: Confidence interval
[1] A maternal death is defined as the death of a woman while pregnant or within 42 days of termination of pregnancy, from any cause except accidents or violence.
[2] Expressed per 1,000 woman-years of exposure
[3] Age-adjusted rate, expressed per 1,000 women age 15-49
[4] Expressed per 100,000 live births; calculated as the age-adjusted maternal mortality rate times 100 divided by the age-adjusted general fertility rate
[5] Calculated as $1-(1-MMR)^{TFR}$, where TFR represents the total fertility rate for the 7 years preceding the survey
[a] Age-adjusted rate

WOMEN'S EMPOWERMENT 15

Key Findings

- ***Employment and control over earnings:*** Men are more likely to be employed than women in Papua New Guinea. Sixty-four percent of currently married men were employed in the past 12 months, as compared with only 36% of currently married women. Forty-six percent of currently married women with cash earnings decide independently on how their earnings are used. About half of women and men report that they make joint decisions regarding husbands' cash earnings.
- ***Ownership of property:*** More men than women own a house (60% versus 49%) and land (65% versus 44%). Cumulatively, of women and of men own a house, while of women and of men own land.
- ***Participation in decision making:*** More than 8 in 10 currently married women participate, either by themselves or jointly with their husband, in decisions regarding their own health care, while 70% decide alone or jointly on making major household purchases and 79% decide alone or jointly on visiting their family or relatives. Sixty-two percent participate in all three decisions, while 10% do not participate in any of the decisions.
- ***Attitudes towards wife beating:*** 70% of women and 72% of men believe that a husband is justified in beating his wife in at least one of five specified situations.
- ***Empowerment and health outcomes:*** Use of a contraceptive method is higher among women who participate in one or more household decisions. In most cases, women's participation in decision making is positively associated with reproductive health seeking behaviour related to antenatal care, delivery from a skilled provider, and postnatal checks.

This chapter explores women's empowerment in terms of employment, earnings, control over earnings, magnitude of earnings relative to those of their partners, asset ownership, gender-related attitudes, and household decision making. In addition, responses to specific questions are used to define two different indicators of women's empowerment: their participation in household decision making and their attitudes towards wife beating.

15.1 MARRIED WOMEN'S AND MEN'S EMPLOYMENT

Employment

Respondents are considered to be employed if they have done any work other than their housework in the 12 months before the survey.

Sample: Currently married women and men age 15-49

Earning cash for employment

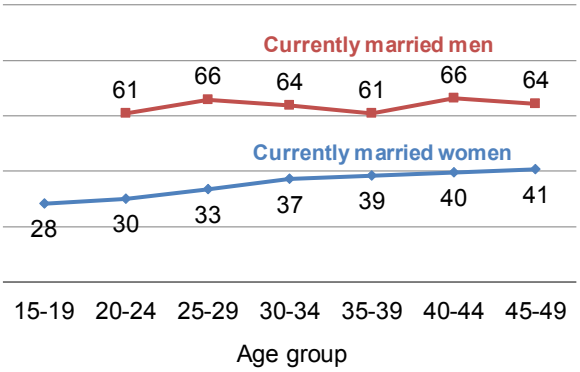
Respondents are asked if they are paid for their labour in cash or in-kind. Only those who receive payment in cash only or in cash and in-kind are considered to earn cash for their employment.

Sample: Currently married women and men age 15-49 employed in the 12 months before the survey

Men are more likely to be employed than women in Papua New Guinea. Sixty-four percent of currently married men were employed in the past 12 months, as compared with only 36% of currently married women. Among employed respondents, women are more likely not to be paid than men (50% versus 40%) (**Table 15.1**). Men are more likely than women to receive payment in cash only or in cash and in-kind (55% versus 46%).

Figure 15.1 **Employment by age**

Percentage of currently married women and men who were employed at any time in the12 months before the survey



Patterns by background characteristics

- Employment among men is consistent across all ages, ranging from 61% to 66%. The percentage of women who are employed increases with age, from 28% among those age 15-19 to 41% among those age 40-49 (**Figure 15.1**).
- Younger women age 15-19 (64%) are more likely than women in other age groups (46%-53%) not to be paid for their work.

15.2 CONTROL OVER WOMEN'S EARNINGS

Control over one's own cash earnings

Respondents are considered to have control over their own earnings if they participate in decisions alone or jointly with their spouse about how their own earnings will be used.

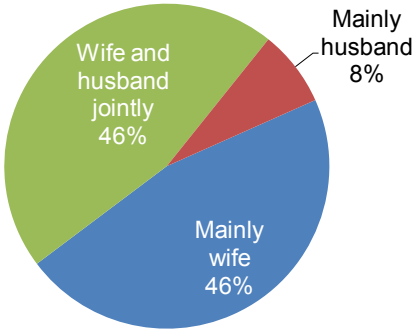
Sample: Currently married women and men age 15-49 who received cash earnings for employment during the 12 months before the survey

Forty-six percent of women decide independently how their earnings are used, while another 46% decide jointly with their husbands. Only 8% of women report that their husband mainly decides on the use of their earnings (**Figure 15.2**).

Around two-fifths (40%) of women earn less than their husband, and 14% earn about the same as their husband; only 16% earn more than their husband (**Table 15.2.1**).

***Figure 15.2* Control over women's earnings**

Percent distribution of currently married women with cash earnings in the 12 months before the survey



Patterns by background characteristics

- Education is a leading factor promoting women's independent decisions on using their own cash earnings; 54% of women with a higher education make their own decisions regarding the use of their earnings, as compared with 39% of women with no education.

- Women in the Highlands region are twice as likely as women in the Islands region to make their own decisions on using their cash earnings (60% versus 29%).

15.3 Control over Men's Earnings

Thirty-two percent of married men decide independently on the use of their own earnings, while 50% decide jointly with their wives (**Table 15.2.2**). Men's and women's reports are similar with respect to control over men's cash earnings.

Patterns by background characteristics

- Younger women are more likely to report that their husband mainly decides independently how his earnings will be used than older women. For example, 42% of women age 15-19 report that their husbands independently make such decisions, as compared with 26% of women age 40-44.

- By region, men (36%) and women (37%) in the Highlands are most likely to report that husbands decide on their own on the use of their earnings.

15.4 Women's Control over Their Own Earnings and over Those of Their Husbands

Women's decisions regarding the use of their own and their husband's earnings vary by the amount they earn relative to their husband. Women who earn about the same as their husband are most likely to jointly decide about the use of their own earnings (63%) and their husband's earnings (65%). Women who earn more than their husband are more likely than other women to be the main decision maker about the use of their own earnings (55%) (**Table 15.3**).

Fifty-seven percent of women who worked but had no cash earnings and 48% of women who did not work decide jointly with their husband about the use of his earnings.

15.5 Women's and Men's Ownership of Assets

Ownership of a house or land

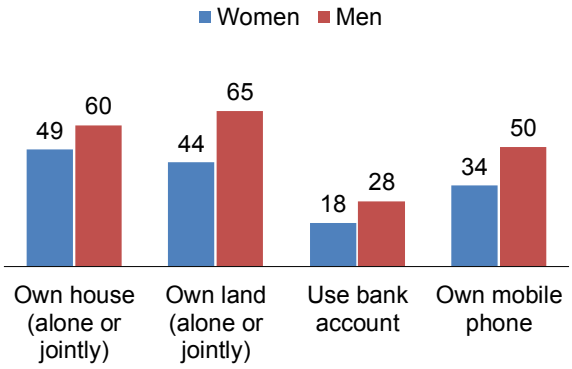
Respondents who own a house or land, whether alone or jointly with someone else.

Sample: Women and men age 15-49

A higher proportion of men than women own a house or land. Sixty percent of men own a house and 65% own land alone or jointly, as compared with 49% and 44% of women, respectively (**Figure 15.3**).

***Figure 15.3* Ownership of assets**

Percentage of women and men age 15-49 by ownership of specific items



Patterns by background characteristics

- Ownership of property increases with age, with older women and men more likely to own a house or land alone or jointly. For example, 72% of women and 86% of men age 45-49 own a house, as compared with 16% of women and 23% of men age 15-19 (**Tables 15.4.1** and **15.4.2**).
- Ownership of a house or land varies with residence. Urban women and men are less likely than rural women and men to own a house (28% of women and 31% of men versus 53% of women and 64% of men) and land (18% of women and 35% of men versus 48% of women and 70% of men).
- Ownership of a house declines with increasing education; 68% of women and 80% of men with no education own a house, compared with 22% of women and 46% of men with a higher education. Ownership of land follows the same pattern.

15.6 Ownership of Title or Deed for House and Land

Ownership of title or deed

Respondents who own a house or land, alone or jointly with someone else, are asked whether they have a title or deed for the house or land they own.

Sample: Women and men age 15-49

A title or deed that includes the owner's name is important in establishing legal rights to property. The 2016-18 PNG DHS sought information from currently married women and men who own a house or land about whether or not they possess a title or deed for their property and whether or not their name appears on the title or deed. Eighty-five percent each of women and men age 15-49 who own a house do not have a title or deed for their house (**Tables 15.5.1** and **15.5.2**). Similarly, 83% of women and 82% of men do not have a title or deed for land they own (**Tables 15.6.1** and **15.6.2**).

15.7 Ownership and Use of Bank Accounts and Mobile Phones

Ownership of a bank account and a mobile phone are reflections of autonomy and financial independence. Women and men interviewed in the 2016-18 PNG DHS were asked if they used an account in a bank or other financial institution and if they owned a mobile phone. Those who owned a mobile phone were asked if they used the phone for financial transactions.

Wide disparities are observed between women and men in use of bank accounts and ownership of mobile phones. Eighteen percent of women age 15-49 use an account in a bank or other financial institution, as

compared with 28% of men. Thirty-four percent of women and 50% of men owned mobile phones at the time of the survey. Among those with a mobile phone, 20% of women and 18% of men use their phone for financial transactions (**Tables 15.7.1** and **15.7.2**).

Patterns by background characteristics

- Women and men residing in urban areas (44% and 51%, respectively) are more likely to have and use a bank account than those residing in rural areas (15% and 24%, respectively).
- There is a huge disparity in ownership of mobile phones by residence. Sixty-three percent of women and 70% of men in urban areas own a mobile phone, as compared with only 30% of women and 47% of men in rural areas.
- Education is associated with bank account use. Use of bank accounts is highest among women and men with a higher education (93% and 82%, respectively) and lowest among women and men with no education (3% and 6%, respectively).
- Bank account use is highest among women and men in the highest wealth quintile (48% and 60%, respectively) and lowest among those in the lowest quintile (1% and 4%, respectively).

15.8 Women's Participation in Decision Making

Participation in major household decisions

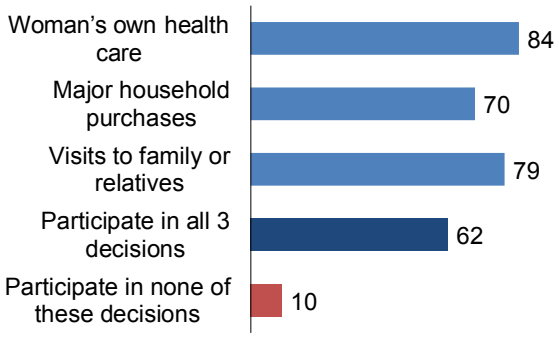
Women are considered to participate in household decisions if they make decisions alone or jointly with their husband in all three of the following areas: (1) their own health care, (2) major household purchases, and (3) visits to their family or relatives.

Sample: Currently married women age 15-49

Fifty-four percent of women indicated that they make decisions regarding their own health care jointly with their husband, 13% reported that such decisions are made mainly by their husband, and 29% indicated that they mainly make these decisions on their own. A majority of men also reported making decisions regarding their own health care jointly with their wife (58%) (**Table 15.8**). Approximately one-fourth of women (24%) indicated that they can decide on their own regarding visits to their family or relatives.

***Figure 15.4* Women's participation in decision making**

Percentage of currently married women age 15-49 participating in specific decisions



Among currently married women, 84% decide by themselves or jointly with their husband on their own health care, 70% decide by themselves or jointly on making major household purchases, and 79% decide by themselves or jointly on visiting family or relatives. Sixty-two percent participate in all three decisions, while 10% participate in none of the decisions (**Table 15.9.1** and **Figure 15.4**).

Patterns by background characteristics

- Women's involvement in all three decisions increases with age, from 45% among those age 15-19 to 68% among those age 45-49.

- Women who are employed for cash (70%) and those residing in urban areas (65%) are most likely to make all three decisions either alone or jointly with their husbands.
- Interestingly, men who are employed but not earning cash are most likely to decide themselves or jointly with their wife on their own health care (88%) and making major household purchases (90%) (**Table 15.9.2**).

15.9 Attitudes towards Wife Beating

Attitudes towards wife beating

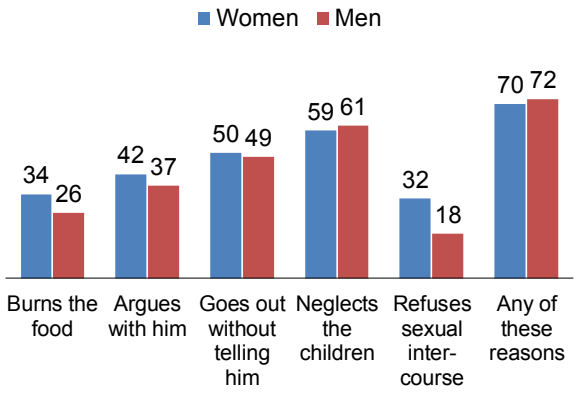
Respondents are asked if they agree that a husband is justified in hitting or beating his wife under each of the following five circumstances: she burns the food, she argues with him, she goes out without telling him, she neglects the children, and she refuses to have sex with him. If respondents answer "yes" in at least one circumstance, they are considered to have attitudes justifying wife beating.

Sample: Women and men age 15-49

Seventy percent of women and 72% of men agree that wife beating is justified under specific circumstances (**Tables 15.10.1** and **15.10.2**). Both women and men are most likely to agree that a husband is justified in beating his wife if she neglects the children (59% and 61%, respectively) and goes out without telling him (50% and 49%, respectively) (**Figure 15.5**).

***Figure 15.5* Attitudes towards wife beating**

Percentage of women and men age 15-49 who agree that a husband is justified in beating his wife for specific reasons



Patterns by background characteristics

- Men in rural areas are more likely to agree that wife beating is justified under specific circumstances than urban men (73% versus 66%). There is only a minor difference by residence in the proportions among women.
- Women and men with a higher education (59% and 64%, respectively) are less likely to agree that wife beating is justified under specific circumstances than women and men in other education categories.

15.10 Negotiating Sexual Relations

To assess attitudes toward negotiating safer sexual relations with husbands, women and men were asked whether they thought that a wife is justified in refusing to have sexual intercourse with her husband if she knows he has sex with other women or asking that he use a condom if she knows he has a sexually transmitted infection (STI).

The findings show that a large proportion of women justified refusing sexual intercourse under the two situations: 73% if the wife knows her husband has sex with other women and 70% if the husband has an STI. The corresponding proportions among male respondents are 72% and 75% (**Table 15.11**).

To assess the ability of women to actually negotiate safer sexual relations with their husbands, women were asked whether they could say no to their husband if they do not want to have sexual intercourse and whether they could ask their husband to use a condom. Sixty-nine percent of women said that they can deny sex, and 54% said that they can ask their husband to use a condom (**Table 15.12**).

Patterns by background characteristics

- The proportions of women reporting that they can deny sex and ask their husband to use a condom are lower in the Highlands region (65% and 46%, respectively) than in the other regions.
- In general, women's ability to negotiate sexual relations increases with increasing education and household wealth.

15.11 Women's Empowerment and Demographic and Health Outcomes

Two indices based on information collected in the 2016-18 PNG DHS on women's participation in household decision making and their attitudes toward wife beating can be used to examine the relationship between women's empowerment and selected demographic and health indicators. The first index, which ranges from 0 to 3, shows the number of decisions (see Section 15.8 for the list) in which women participate. For this index, the higher the value, the greater the respondent's level of empowerment. The second index is the total number of circumstances (see Section 15.9 for the list) in which women agree that wife beating is justified. This index ranges from 0 to 5. In this case, the higher the number, the lower the respondent's empowerment. The two indices are general associated. However, in the 2016-18 PNG DHS, there is no clear relationship between the indices (**Table 15.13**).

With respect to the relationship between the empowerment indices and demographic and health outcomes, both the decision making and the wife beating indices are positively associated with measures of women's ability and desire to control their fertility. For example, the more women are empowered in the number of decisions in which they participate, the more likely they are to use a contraceptive method; 39% of women involved in all three specified decisions use a contraceptive method, as compared with 31% of those not involved in any of the decisions (**Table 15.14**).

The empowerment indices are positively associated with several additional measures that reflect women's fertility desires. For example, mean ideal family size among currently married women declines slightly with the number of household decisions in which they participate, from 3.4 children among women who do not participate in any household decisions to 3.3 children among women involved in all three decisions (**Table 15.15**). Similarly, the ideal number of children among women who do not justify wife beating in any of the specific circumstances is 2.9, compared with 3.1 among those who justify wife beating in all of the specific circumstances.

Empowered women are more likely to seek and use health services to meet their reproductive health goals, including safe motherhood. Women who do not participate in any household decisions were much less likely to receive antenatal care from a skilled provider (61%), delivery care from a skilled provider (42%), and a postnatal checkup (34%) than women participating in all three decisions (78%, 60%, and 51%, respectively) (**Table 15.16**).

The 2016-18 PNG DHS results also provide evidence that women's empowerment has a positive effect on children's survival. For example, under-5 mortality declines from 65 deaths per 1,000 live births in the 10 years before the survey among women who do not participate in any of the three household decisions to 44 deaths per 1,000 births among women who participate in all decisions (**Table 15.17**).

List of Tables

For more information on women's empowerment, see the following tables:

Table 15.1 Employment and cash earnings of currently married women and men

Percentage of currently married women and men age 15-49 who were employed at any time in the past 12 months and percent distribution of currently married women and men employed in the past 12 months by type of earnings, according to age, Papua New Guinea DHS 2016-18

	Among currently married respondents:		Percent distribution of currently married respondents employed in the past 12 months, by type of earnings						
Age	Percentage employed in past 12 months	Number of respondents	Cash only	Cash and in-kind	In-kind only	Not paid	Missing/ don't know	Total	Number of respondents
				WOMEN					
15-19	28.4	403	20.3	6.4	8.9	64.3	0.1	100.0	115
20-24	30.1	1,594	33.0	8.6	7.4	49.6	1.4	100.0	481
25-29	33.4	2,110	37.2	8.6	5.1	47.8	1.4	100.0	704
30-34	37.1	1,878	40.3	5.4	1.6	52.2	0.6	100.0	698
35-39	38.5	1,764	41.6	6.8	2.2	49.0	0.4	100.0	679
40-44	39.6	1,273	35.9	8.8	2.5	52.5	0.4	100.0	504
45-49	40.6	1,029	36.7	14.3	2.4	45.9	0.7	100.0	418
Total	35.8	10,052	37.3	8.2	3.6	50.1	0.8	100.0	3,598
				MEN					
15-19	(45.2)	21	*	*	*	*	*	*	9
20-24	60.8	292	40.6	9.9	5.3	43.3	0.9	100.0	177
25-29	65.9	695	45.9	5.7	2.1	44.3	2.0	100.0	458
30-34	63.8	825	46.9	8.9	2.7	40.6	0.9	100.0	526
35-39	60.9	848	49.7	8.2	3.3	38.0	0.9	100.0	516
40-44	66.3	687	47.2	12.9	3.3	35.3	1.3	100.0	455
45-49	64.3	580	45.4	6.6	3.3	43.1	1.6	100.0	373
Total	63.7	3,947	46.7	8.6	3.1	40.4	1.3	100.0	2,515

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Table 15.2.1 Control over women's cash earnings and relative magnitude of women's cash earnings

Percent distribution of currently married women age 15-49 who received cash earnings for employment in the 12 months preceding the survey by person who decides how the wife's cash earnings are used and by whether she earned more or less than her husband, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Person who decides how the wife's cash earnings are used:						Wife's cash earnings compared with husband's cash earnings:							
	Mainly wife	Wife and husband jointly	Mainly husband	Other	Missing	Total	More	Less	About the same	Husband has no earnings	Don't know	Missing	Total	Number of women
Age														
15-19	(33.0)	(53.0)	(8.3)	(5.1)	(0.6)	100.0	(5.1)	(46.6)	(21.2)	(21.1)	(5.5)	(0.6)	100.0	31
20-24	47.3	40.2	10.7	0.7	1.1	100.0	17.3	38.9	17.0	24.6	1.1	1.1	100.0	200
25-29	50.2	42.6	6.5	0.0	0.7	100.0	16.3	40.4	11.9	24.3	6.3	0.8	100.0	322
30-34	41.5	51.8	4.7	0.1	1.8	100.0	19.6	40.8	13.2	19.8	5.1	1.4	100.0	319
35-39	46.0	43.1	10.3	0.0	0.6	100.0	13.0	32.8	14.0	30.5	9.1	0.6	100.0	328
40-44	40.3	52.2	6.7	0.0	0.8	100.0	17.8	38.0	18.2	15.7	9.6	0.7	100.0	225
45-49	52.0	41.2	6.7	0.0	0.2	100.0	14.8	47.9	12.7	17.8	6.7	0.2	100.0	213
Number of living children														
0	43.3	47.7	5.7	1.1	2.2	100.0	19.6	42.6	10.2	23.8	1.5	2.2	100.0	161
1-2	46.1	43.7	9.1	0.2	0.9	100.0	12.0	43.4	14.3	23.2	6.4	0.7	100.0	601
3-4	46.6	48.0	5.1	0.0	0.3	100.0	22.1	34.2	16.2	19.9	7.4	0.4	100.0	528
5+	45.5	43.9	9.5	0.0	1.1	100.0	13.0	39.6	13.4	25.2	7.6	1.1	100.0	348
Residence														
Urban	48.8	43.8	5.7	0.5	1.1	100.0	17.6	46.4	16.2	14.3	4.1	1.4	100.0	412
Rural	44.9	46.1	8.1	0.1	0.8	100.0	15.7	37.2	13.7	25.4	7.3	0.6	100.0	1,226
Region														
Southern	40.8	44.8	12.9	0.4	1.1	100.0	16.1	38.4	22.0	20.3	2.4	0.8	100.0	373
Highlands	60.2	35.4	4.0	0.0	0.3	100.0	19.9	40.3	8.8	26.2	4.5	0.2	100.0	544
Momase	49.5	41.1	6.2	0.6	2.7	100.0	11.1	38.9	12.9	21.4	13.0	2.7	100.0	297
Islands	29.4	62.1	8.2	0.0	0.2	100.0	15.1	39.9	15.6	20.9	8.1	0.2	100.0	424
Province														
Western	34.7	61.9	2.8	0.0	0.5	100.0	14.8	41.9	5.2	28.2	9.4	0.5	100.0	37
Gulf	(40.4)	(56.6)	(3.0)	(0.0)	(0.0)	100.0	(26.8)	(36.7)	(17.2)	(17.9)	(1.4)	(0.0)	100.0	13
Central	47.4	45.3	3.8	1.9	1.6	100.0	19.5	25.8	24.4	24.7	3.9	1.6	100.0	50
National Capital District	45.8	46.5	6.5	0.4	0.9	100.0	18.5	50.4	16.7	12.2	1.3	0.9	100.0	124
Milne Bay	34.9	37.1	27.2	0.0	0.9	100.0	12.3	31.4	30.3	25.0	0.9	0.0	100.0	133
Northern	(44.8)	(46.3)	(3.8)	(0.0)	(5.1)	100.0	(12.8)	(36.5)	(29.0)	(12.8)	(3.9)	(5.1)	100.0	16
Southern Highlands	(59.8)	(36.8)	(2.6)	(0.0)	(0.8)	100.0	(9.4)	(65.9)	(15.7)	(9.0)	(0.0)	(0.0)	100.0	32
Enga	(42.4)	(48.5)	(9.1)	(0.0)	(0.0)	100.0	(31.2)	(42.2)	(1.4)	(23.8)	(1.4)	(0.0)	100.0	36
Western Highlands	65.0	24.5	10.5	0.0	0.0	100.0	7.7	28.6	10.5	40.9	12.2	0.0	100.0	94
Chimbu	69.2	29.5	1.3	0.0	0.0	100.0	27.6	33.6	11.4	24.6	2.8	0.0	100.0	158
Eastern Highlands	58.3	37.6	3.4	0.0	0.7	100.0	25.4	40.2	7.3	22.3	4.0	0.7	100.0	167
Morobe	61.5	29.5	7.5	0.0	1.5	100.0	7.0	42.4	15.4	27.6	5.1	2.5	100.0	153
Madang	34.8	59.0	3.0	0.0	3.1	100.0	4.8	27.0	11.7	18.9	36.2	1.4	100.0	84
East Sepik	(21.5)	(53.8)	(7.1)	(6.5)	(11.0)	100.0	(25.4)	(35.8)	(13.9)	(13.9)	(0.0)	(11.0)	100.0	24
West Sepik	51.2	39.9	7.0	0.5	1.4	100.0	33.6	53.6	4.5	6.0	0.9	1.4	100.0	37
Manus	54.4	39.0	5.5	0.0	1.1	100.0	29.5	44.5	17.2	7.6	1.2	0.0	100.0	17
New Ireland	37.7	53.9	8.1	0.0	0.2	100.0	15.9	44.8	15.7	21.4	2.0	0.2	100.0	85
East New Britain	21.6	67.7	10.7	0.0	0.0	100.0	10.5	36.1	13.7	28.7	10.9	0.1	100.0	196
West New Britain	47.7	44.8	6.8	0.0	0.7	100.0	22.5	50.0	14.3	10.1	2.3	0.8	100.0	80
Autonomous Region of Bougainville	6.3	92.6	1.1	0.0	0.0	100.0	15.6	27.9	25.9	10.3	20.3	0.0	100.0	45
Hela	*	*	*	*	*	*	*	*	*	*	*	*	100.0	28
Jiwaka	(62.0)	(36.8)	(1.2)	(0.0)	(0.0)	100.0	(3.0)	(54.9)	(7.5)	(29.9)	(4.7)	(0.0)	100.0	29
Education														
No education	38.7	52.8	8.5	0.0	0.0	100.0	13.0	25.5	13.7	34.8	12.1	0.9	100.0	157
Elementary	(45.0)	(51.4)	(3.5)	(0.0)	(0.0)	100.0	(10.7)	(51.4)	(15.7)	(22.2)	(0.0)	(0.0)	100.0	67
Primary	41.3	47.8	9.8	0.1	1.1	100.0	15.1	34.6	15.3	24.5	9.9	0.6	100.0	588
Secondary	48.7	43.1	6.5	0.5	1.2	100.0	16.3	46.8	11.8	20.4	3.5	1.2	100.0	546
Higher	54.3	40.0	5.2	0.0	0.6	100.0	21.5	40.9	17.4	16.2	3.5	0.6	100.0	280
Wealth quintile														
Lowest	45.1	43.0	12.0	0.0	0.0	100.0	13.9	11.4	27.8	36.3	10.5	0.0	100.0	69
Second	33.9	53.4	12.0	0.0	0.7	100.0	6.8	29.3	15.1	36.9	11.9	0.0	100.0	171
Middle	35.6	53.7	9.7	0.0	1.0	100.0	14.0	30.3	15.6	31.5	8.3	0.3	100.0	209
Fourth	40.5	49.8	8.6	0.1	1.0	100.0	17.0	34.7	14.2	22.4	10.5	1.3	100.0	451
Highest	54.9	39.0	4.8	0.4	0.9	100.0	18.8	50.1	12.6	15.7	1.9	0.9	100.0	738
Total	45.9	45.5	7.5	0.2	0.9	100.0	16.2	39.5	14.3	22.6	6.5	0.8	100.0	1,638

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Table 15.2.2 Control over men's cash earnings

Percent distributions of currently married men age 15-49 who receive cash earnings and of currently married women age 15-49 whose husbands receive cash earnings, by person who decides how the husband's cash earnings are used, according to background characteristics, Papua New Guinea DHS 2016-18

	Men							Women						
Background characteristic	Mainly wife	Husband and wife jointly	Mainly husband	Other	Missing	Total	Number	Mainly wife	Husband and wife jointly	Mainly husband	Other	Missing	Total	Number
Age														
15-19	*	*	*	*	*	100.0	5	13.8	39.3	42.1	0.7	4.1	100.0	239
20-24	14.0	42.8	42.7	0.3	0.2	100.0	90	18.0	45.8	33.0	0.9	2.3	100.0	1,125
25-29	15.5	56.7	27.1	0.3	0.5	100.0	236	14.5	46.7	33.0	0.5	5.3	100.0	1,455
30-34	15.1	49.8	32.0	0.0	3.1	100.0	293	12.5	55.0	28.7	0.7	3.1	100.0	1,364
35-39	18.9	53.5	25.2	0.0	2.5	100.0	299	12.3	53.2	30.7	1.1	2.8	100.0	1,247
40-44	14.6	50.7	32.5	0.5	1.6	100.0	273	16.7	53.6	25.6	0.3	3.8	100.0	955
45-49	17.2	40.2	40.6	0.0	2.0	100.0	194	13.8	53.8	28.4	0.1	3.9	100.0	743
Number of living children														
0	14.2	53.6	30.5	0.6	1.1	100.0	147	14.6	49.1	31.7	1.0	3.5	100.0	737
1-2	15.0	53.3	30.9	0.0	0.8	100.0	474	14.9	47.1	33.8	0.9	3.3	100.0	2,487
3-4	17.1	45.9	33.8	0.3	2.9	100.0	447	16.1	51.0	28.8	0.3	3.8	100.0	2,306
5+	17.4	49.1	31.1	0.0	2.4	100.0	323	11.4	56.6	27.8	0.5	3.7	100.0	1,599
Residence														
Urban	15.1	52.7	29.9	0.3	1.9	100.0	334	16.0	51.5	30.0	0.3	2.2	100.0	1,072
Rural	16.5	49.1	32.4	0.1	1.8	100.0	1,056	14.2	50.6	30.7	0.7	3.8	100.0	6,057
Region														
Southern	19.7	51.4	25.5	0.3	3.1	100.0	328	12.0	57.9	28.2	0.3	1.7	100.0	1,439
Highlands	12.0	49.8	36.4	0.0	1.9	100.0	385	17.1	38.5	36.6	1.5	6.3	100.0	2,458
Momase	14.5	49.3	34.4	0.4	1.4	100.0	423	16.3	54.4	26.2	0.2	2.9	100.0	2,132
Islands	20.6	49.6	28.8	0.0	1.1	100.0	255	8.2	61.5	29.0	0.2	1.2	100.0	1,099
Province														
Western	9.5	55.7	22.8	0.0	12.0	100.0	32	11.5	63.9	19.8	1.3	3.5	100.0	161
Gulf	12.9	67.8	11.9	0.0	7.4	100.0	16	9.0	63.5	22.4	0.0	5.1	100.0	126
Central	48.0	29.4	22.6	0.0	0.0	100.0	66	18.6	53.7	25.9	0.2	1.6	100.0	278
National Capital District	11.5	61.0	21.7	0.9	4.9	100.0	102	13.8	60.2	25.1	0.1	0.8	100.0	279
Milne Bay	4.5	54.5	41.0	0.0	0.0	100.0	63	7.5	56.7	35.4	0.1	0.4	100.0	416
Northern	27.5	48.6	23.9	0.0	0.0	100.0	49	12.1	54.2	31.2	0.2	2.3	100.0	180
Southern Highlands	(16.2)	(45.1)	(38.7)	(0.0)	(0.0)	100.0	35	14.7	26.2	44.2	3.2	11.6	100.0	287
Enga	(6.2)	(55.8)	(38.1)	(0.0)	(0.0)	100.0	40	16.2	48.6	31.8	1.8	1.6	100.0	281
Western Highlands	12.4	32.5	55.1	0.0	0.0	100.0	70	8.0	51.8	30.4	3.6	6.1	100.0	259
Chimbu	(4.9)	(64.5)	(30.5)	(0.0)	(0.0)	100.0	52	16.8	37.9	40.5	2.1	2.8	100.0	312
Eastern Highlands	(12.9)	(53.0)	(28.9)	(0.0)	(5.2)	100.0	80	24.4	32.1	39.5	0.4	3.7	100.0	700
Morobe	8.4	48.7	42.7	0.0	0.2	100.0	219	27.9	33.6	33.2	0.1	5.2	100.0	804
Madang	27.4	44.5	22.0	1.8	4.3	100.0	84	7.3	71.9	18.8	0.0	2.0	100.0	566
East Sepik	16.1	49.3	30.4	0.0	4.1	100.0	46	9.5	70.7	18.4	0.6	0.8	100.0	503
West Sepik	16.9	56.5	26.5	0.0	0.0	100.0	75	13.6	49.1	35.4	0.0	1.9	100.0	259
Manus	3.3	67.9	28.9	0.0	0.0	100.0	13	10.4	62.3	25.9	0.0	1.3	100.0	61
New Ireland	9.0	53.2	34.2	0.0	3.5	100.0	36	6.9	49.1	42.9	0.1	1.0	100.0	163
East New Britain	14.0	49.4	36.7	0.0	0.0	100.0	58	7.0	59.4	33.3	0.0	0.3	100.0	266
West New Britain	12.1	44.9	42.9	0.0	0.2	100.0	65	13.6	48.8	35.5	0.6	1.6	100.0	282
Autonomous Region of Bougainville	39.6	49.0	9.8	0.0	1.6	100.0	83	4.9	80.0	13.5	0.0	1.6	100.0	327
Hela	*	*	*	*	*	100.0	33	11.4	41.7	25.6	1.4	19.9	100.0	283
Jiwaka	16.4	56.3	24.5	0.0	2.8	100.0	74	16.6	41.8	38.6	0.0	2.9	100.0	335
Education														
No education	12.9	54.3	32.4	0.0	0.4	100.0	80	12.8	44.3	37.2	0.6	5.0	100.0	1,568
Elementary	(26.2)	(52.2)	(19.2)	(0.0)	(2.4)	100.0	49	20.6	39.7	35.1	0.8	3.7	100.0	318
Primary	18.4	46.7	33.2	0.3	1.4	100.0	528	12.4	55.4	28.7	0.4	3.0	100.0	3,256
Secondary	15.7	52.0	29.6	0.1	2.7	100.0	519	17.0	51.5	27.2	0.7	3.6	100.0	1,657
Higher	10.6	50.9	36.6	0.3	1.6	100.0	214	24.6	41.4	29.9	2.4	1.7	100.0	330
Wealth quintile														
Lowest	10.2	55.9	26.6	0.0	7.2	100.0	73	13.5	46.4	32.2	1.1	6.9	100.0	1,007
Second	17.9	51.0	29.8	0.0	1.3	100.0	117	9.9	53.1	31.7	0.3	4.9	100.0	1,230
Middle	19.9	45.9	31.8	0.0	2.4	100.0	235	11.1	53.2	32.0	0.5	3.2	100.0	1,409
Fourth	19.5	51.7	26.6	0.4	1.8	100.0	366	14.0	53.6	29.9	1.0	1.6	100.0	1,592
Highest	13.1	49.6	36.0	0.2	1.1	100.0	599	20.9	47.2	28.6	0.5	2.9	100.0	1,891
Total	16.2	50.0	31.8	0.2	1.9	100.0	1,391	14.5	50.7	30.6	0.6	3.6	100.0	7,129

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Table 15.3 Women's control over their own earnings and over those of their husbands

Percent distribution of currently married women age 15-49 with cash earnings in the last 12 months by person who decides how the wife's cash earnings are used and percent distribution of currently married women age 15-49 whose husbands have cash earnings by person who decides how the husband's cash earnings are used, according to the relation between wife's and husband's cash earnings, Papua New Guinea DHS 2016-18

Woman's earnings relative to husband's earnings	Person who decides how the wife's cash earnings are used:							Person who decides how husband's cash earnings are used:						
	Mainly wife	Wife and husband jointly	Mainly husband	Other	Missing	Total	Number of women	Mainly wife	Wife and husband jointly	Mainly husband	Other	Missing	Total	Number of women
More than husband	55.0	37.2	7.8	0.1	0.0	100.0	266	29.7	45.0	25.3	0.0	0.0	100.0	266
Less than husband	53.8	39.4	6.8	0.0	0.1	100.0	648	13.7	49.2	36.8	0.3	0.0	100.0	648
Same as husband	22.6	63.3	13.7	0.4	0.0	100.0	235	8.8	65.3	25.9	0.0	0.0	100.0	235
Husband has no cash earnings or did not work	46.6	48.4	3.8	0.5	0.7	100.0	368	na	na	na	na	na	na	0
Woman worked but has no cash earnings	na	na	na	na	na	na	0	14.0	56.5	26.8	0.3	2.3	100.0	1,566
Woman did not work	na	na	na	na	na	na	0	14.1	48.2	32.0	0.7	5.0	100.0	4,296
Total[1]	45.9	45.5	7.5	0.2	0.9	100.0	1,638	14.5	50.7	30.6	0.6	3.6	100.0	7,129

na = Not applicable
[1] Includes cases where a woman does not know whether she earned more or less than her husband

Table 15.4.1 Ownership of assets: Women

Percent distribution of women age 15-49 by ownership of housing and land, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage who own a house: Alone	Jointly	Alone and jointly	Percentage who do not own a house	Missing	Total	Percentage who own land: Alone	Jointly	Alone and jointly	Percentage who do not own land	Missing	Total	Number
Age													
15-19	4.9	7.8	2.9	83.8	0.6	100.0	6.0	11.0	3.0	79.4	0.7	100.0	2,945
20-24	11.7	15.0	7.0	65.4	1.0	100.0	9.8	17.0	6.6	65.7	0.9	100.0	2,759
25-29	21.1	22.7	10.7	43.3	2.2	100.0	17.1	22.4	9.3	48.7	2.6	100.0	2,543
30-34	25.0	25.9	13.9	34.5	0.6	100.0	20.6	21.7	11.8	45.2	0.7	100.0	2,180
35-39	29.5	21.6	15.4	33.4	0.2	100.0	21.8	21.2	12.5	44.1	0.4	100.0	2,059
40-44	29.4	25.4	15.4	29.0	0.7	100.0	21.4	22.2	13.2	42.7	0.6	100.0	1,484
45-49	31.2	26.1	15.1	27.1	0.4	100.0	23.9	25.7	11.5	38.5	0.4	100.0	1,228
Residence													
Urban	11.1	9.7	6.9	71.5	0.7	100.0	6.1	9.4	2.9	81.2	0.5	100.0	2,018
Rural	20.9	20.7	11.0	46.6	0.9	100.0	17.2	20.7	9.9	51.2	1.1	100.0	13,180
Region													
Southern	10.9	18.2	12.5	57.9	0.5	100.0	9.0	18.2	9.5	62.8	0.5	100.0	2,899
Highlands	29.0	20.9	7.5	41.3	1.2	100.0	23.8	21.9	8.0	45.0	1.4	100.0	6,213
Momase	13.2	17.9	13.0	55.0	1.0	100.0	8.7	17.6	9.7	62.8	1.2	100.0	3,919
Islands	15.6	18.3	11.3	54.6	0.2	100.0	14.2	15.7	9.4	60.4	0.3	100.0	2,167
Province													
Western	12.8	19.8	13.4	53.3	0.7	100.0	9.3	25.0	7.7	57.4	0.6	100.0	352
Gulf	20.8	11.9	21.0	45.7	0.6	100.0	8.5	8.6	13.6	69.0	0.3	100.0	277
Central	8.7	15.3	14.8	60.2	0.9	100.0	8.4	10.3	14.5	65.4	1.4	100.0	557
National Capital District	6.2	7.8	5.0	80.3	0.7	100.0	7.5	12.8	3.8	75.7	0.2	100.0	526
Milne Bay	12.5	32.8	6.2	48.5	0.1	100.0	12.4	26.4	4.8	56.2	0.2	100.0	767
Northern	8.4	11.5	24.1	55.8	0.3	100.0	5.3	21.1	17.5	56.0	0.1	100.0	421
Southern Highlands	15.6	20.0	9.8	52.4	2.2	100.0	13.1	21.4	7.7	55.2	2.6	100.0	1,089
Enga	19.9	27.9	17.4	34.2	0.7	100.0	17.6	32.5	22.2	26.4	1.2	100.0	563
Western Highlands	30.6	9.5	5.2	53.4	1.2	100.0	19.7	8.9	2.9	66.6	1.8	100.0	746
Chimbu	20.0	20.4	4.0	55.2	0.5	100.0	17.7	23.9	6.0	52.0	0.4	100.0	1,038
Eastern Highlands	36.1	21.1	8.5	33.6	0.6	100.0	32.7	21.6	9.5	35.6	0.6	100.0	1,310
Morobe	10.4	11.2	7.0	69.2	2.1	100.0	8.1	6.5	3.5	79.5	2.3	100.0	1,514
Madang	21.1	16.0	11.7	50.8	0.4	100.0	12.3	12.1	10.5	64.4	0.7	100.0	987
East Sepik	10.7	27.1	22.0	40.1	0.2	100.0	7.9	33.9	17.7	40.3	0.3	100.0	872
West Sepik	10.6	25.0	17.1	47.0	0.3	100.0	5.2	32.2	12.9	49.4	0.3	100.0	545
Manus	18.0	10.9	17.1	53.1	1.0	100.0	8.7	4.1	5.8	80.5	0.8	100.0	135
New Ireland	18.5	26.1	9.0	46.1	0.3	100.0	11.7	28.3	9.3	50.5	0.2	100.0	385
East New Britain	17.2	16.2	6.9	59.7	0.0	100.0	20.9	11.2	8.1	59.6	0.1	100.0	572
West New Britain	10.6	14.6	11.7	63.1	0.1	100.0	9.7	10.8	11.7	67.7	0.2	100.0	532
Autonomous Region of Bougainville	16.0	20.5	15.9	47.3	0.4	100.0	14.6	19.2	9.7	56.3	0.3	100.0	544
Hela	33.4	34.2	6.9	22.7	2.9	100.0	33.2	30.4	7.1	26.9	2.5	100.0	874
Jiwaka	54.3	11.7	2.1	32.0	0.0	100.0	32.2	13.5	2.6	51.4	0.2	100.0	594
Education													
No education	29.8	25.5	12.6	31.3	0.8	100.0	24.0	24.0	11.7	39.3	0.9	100.0	3,488
Elementary	27.3	23.8	11.7	36.0	1.2	100.0	22.0	22.2	9.5	45.1	1.2	100.0	676
Primary	17.9	18.8	11.2	51.5	0.7	100.0	13.9	19.5	9.0	56.8	0.9	100.0	6,969
Secondary	12.7	15.1	7.7	63.2	1.3	100.0	10.7	13.8	7.0	67.3	1.3	100.0	3,460
Higher	10.8	7.9	3.5	77.1	0.8	100.0	10.6	15.8	2.8	70.3	0.6	100.0	605
Wealth quintile													
Lowest	25.8	24.8	13.6	34.8	0.9	100.0	22.0	26.5	12.0	38.4	1.1	100.0	2,783
Second	22.0	23.5	12.4	41.2	0.9	100.0	17.5	24.6	11.0	45.8	1.1	100.0	2,831
Middle	23.5	21.6	12.7	41.4	0.7	100.0	17.3	19.6	10.5	51.7	0.8	100.0	2,897
Fourth	18.0	18.8	10.6	52.3	0.4	100.0	14.3	16.1	8.7	60.4	0.5	100.0	3,118
Highest	10.9	10.1	4.3	73.3	1.4	100.0	9.3	11.5	3.8	74.0	1.3	100.0	3,569
Total	19.6	19.3	10.4	49.9	0.9	100.0	15.7	19.2	8.9	55.2	1.0	100.0	15,198

Table 15.4.2 Ownership of assets: Men

Percent distribution of men age 15-49 by ownership of housing and land, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage who own a house:						Percentage who own land:						
	Alone	Jointly	Alone and jointly	Percentage who do not own a house	Missing	Total	Alone	Jointly	Alone and jointly	Percentage who do not own land	Missing	Total	Number
Age													
15-19	8.1	13.2	2.1	76.4	0.2	100.0	11.2	21.7	7.7	58.8	0.5	100.0	1,469
20-24	26.7	13.0	5.0	55.3	0.0	100.0	24.6	24.0	10.8	40.2	0.5	100.0	1,246
25-29	43.7	11.4	4.3	40.1	0.4	100.0	31.1	23.3	11.1	33.9	0.5	100.0	1,171
30-34	58.0	10.0	6.3	25.4	0.2	100.0	42.4	20.9	10.8	25.9	0.1	100.0	1,058
35-39	66.2	10.2	4.3	19.1	0.2	100.0	50.9	21.5	9.1	18.0	0.5	100.0	966
40-44	67.4	9.7	6.4	16.4	0.1	100.0	43.0	21.0	14.0	21.6	0.4	100.0	782
45-49	70.7	10.0	4.8	14.5	0.0	100.0	50.2	16.8	12.5	19.8	0.7	100.0	641
Residence													
Urban	19.9	7.2	4.0	68.9	0.0	100.0	13.5	15.3	6.4	64.7	0.1	100.0	976
Rural	47.2	12.0	4.6	35.9	0.2	100.0	36.2	22.7	11.1	29.5	0.5	100.0	6,357
Region													
Southern	34.4	7.4	4.4	53.8	0.1	100.0	25.0	21.1	14.5	39.4	0.1	100.0	1,490
Highlands	53.3	13.0	4.6	28.8	0.3	100.0	48.3	17.2	10.9	22.9	0.8	100.0	2,871
Momase	40.7	11.1	3.2	44.9	0.1	100.0	21.8	30.6	7.5	39.8	0.3	100.0	1,999
Islands	35.0	13.2	7.4	44.5	0.0	100.0	24.6	17.7	9.4	47.8	0.4	100.0	973
Province													
Western	35.6	5.4	3.6	55.4	0.0	100.0	14.9	24.2	8.7	52.2	0.0	100.0	182
Gulf	38.2	10.3	7.6	43.5	0.4	100.0	20.1	30.8	15.0	33.3	0.9	100.0	137
Central	33.6	9.2	4.8	52.0	0.4	100.0	26.6	22.8	5.7	44.9	0.0	100.0	272
National Capital District	12.5	3.2	1.2	83.1	0.0	100.0	12.3	14.7	5.7	67.3	0.0	100.0	251
Milne Bay	48.6	5.2	5.0	41.2	0.0	100.0	31.4	12.8	28.6	27.2	0.0	100.0	423
Northern	29.5	13.8	5.0	51.7	0.0	100.0	36.2	33.3	13.1	17.5	0.0	100.0	223
Southern Highlands	69.0	14.3	3.9	12.9	0.0	100.0	58.4	21.7	6.7	12.5	0.7	100.0	457
Enga	50.5	19.0	5.1	25.2	0.2	100.0	38.2	23.2	12.1	26.5	0.0	100.0	306
Western Highlands	48.7	13.1	1.7	36.5	0.0	100.0	42.8	16.0	3.3	36.1	1.8	100.0	378
Chimbu	50.9	7.4	3.8	37.9	0.0	100.0	49.4	8.8	17.5	24.0	0.3	100.0	397
Eastern Highlands	51.3	11.2	5.6	31.8	0.0	100.0	49.0	18.3	17.6	14.9	0.1	100.0	587
Morobe	33.5	10.1	3.0	53.4	0.0	100.0	11.1	36.3	4.5	48.1	0.0	100.0	796
Madang	46.7	14.2	3.9	34.9	0.2	100.0	22.2	31.8	11.5	33.4	1.1	100.0	493
East Sepik	40.7	9.6	1.7	48.1	0.0	100.0	36.7	10.8	8.9	43.6	0.0	100.0	435
West Sepik	50.4	11.1	5.1	33.4	0.0	100.0	28.4	42.9	6.9	21.8	0.0	100.0	276
Manus	38.6	5.6	7.5	48.3	0.0	100.0	22.5	9.1	32.2	36.2	0.0	100.0	64
New Ireland	39.3	3.3	1.1	56.3	0.0	100.0	29.1	10.8	6.6	52.2	1.2	100.0	171
East New Britain	26.9	13.6	11.9	47.6	0.0	100.0	23.1	15.0	10.0	51.6	0.3	100.0	247
West New Britain	44.1	14.2	5.2	36.5	0.0	100.0	27.2	19.7	5.7	47.1	0.2	100.0	260
Autonomous Region of Bougainville	29.4	20.8	9.5	40.2	0.0	100.0	20.5	25.8	9.0	44.7	0.0	100.0	231
Hela	49.8	15.3	8.0	25.1	1.8	100.0	45.9	18.1	9.3	24.6	2.0	100.0	438
Jiwaka	50.1	12.6	3.1	34.1	0.1	100.0	50.6	13.4	6.0	29.6	0.4	100.0	309
Education													
No education	59.9	13.8	5.9	20.1	0.4	100.0	45.4	21.0	13.4	19.8	0.4	100.0	941
Elementary	59.1	6.9	2.6	31.4	0.0	100.0	44.2	22.9	8.8	24.1	0.0	100.0	253
Primary	44.0	12.1	4.8	39.0	0.0	100.0	32.5	22.6	10.5	33.9	0.4	100.0	3,593
Secondary	35.8	9.9	3.8	50.3	0.1	100.0	28.2	20.2	10.0	41.1	0.4	100.0	2,156
Higher	32.7	9.6	4.1	52.3	1.3	100.0	30.5	21.8	7.3	39.1	1.3	100.0	389
Wealth quintile													
Lowest	58.6	14.5	4.5	22.3	0.2	100.0	47.3	23.1	13.0	16.4	0.2	100.0	1,366
Second	54.9	12.8	4.8	27.0	0.5	100.0	39.4	24.4	12.8	22.1	1.2	100.0	1,384
Middle	49.5	12.9	5.3	32.2	0.1	100.0	37.6	24.0	11.9	26.0	0.4	100.0	1,528
Fourth	39.6	11.0	5.7	43.6	0.0	100.0	26.6	20.7	9.5	42.9	0.3	100.0	1,399
Highest	19.6	6.5	2.8	71.0	0.1	100.0	17.8	16.9	6.1	59.0	0.1	100.0	1,656
Total	43.6	11.4	4.6	40.3	0.2	100.0	33.2	21.7	10.5	34.2	0.4	100.0	7,333

Table 15.5.1 Ownership of title or deed for house: Women

Among women age 15-49 who own a house, percent distribution by whether the house owned has a title or deed and whether or not the woman's name appears on the title or deed, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	House has a title or deed and: Woman's name is on title/deed	Woman's name is not on title/deed	Does not have a title/deed	Don't know/ missing[1]	Total	Number who own a house[2]
Age						
15-19	6.7	1.0	88.0	4.3	100.0	458
20-24	6.1	2.7	86.4	4.9	100.0	928
25-29	9.3	3.1	81.4	6.3	100.0	1,384
30-34	8.7	2.4	83.6	5.4	100.0	1,413
35-39	6.5	1.6	87.0	5.0	100.0	1,367
40-44	7.6	2.7	85.8	3.9	100.0	1,042
45-49	7.4	2.0	84.7	5.8	100.0	890
Residence						
Urban	14.5	6.8	74.2	4.5	100.0	559
Rural	7.1	1.9	85.7	5.3	100.0	6,924
Region						
Southern	7.8	3.2	85.2	3.8	100.0	1,206
Highlands	6.7	2.3	85.3	5.7	100.0	3,574
Momase	6.5	2.2	87.0	4.3	100.0	1,724
Islands	12.8	1.4	79.0	6.9	100.0	979
Province						
Western	3.6	4.3	87.9	4.2	100.0	162
Gulf	14.5	0.6	77.8	7.1	100.0	149
Central	3.7	2.7	87.1	6.5	100.0	216
National Capital District	23.1	14.4	57.7	4.7	100.0	100
Milne Bay	7.2	2.5	89.2	1.1	100.0	395
Northern	4.2	0.4	92.8	2.6	100.0	185
Southern Highlands	7.2	2.4	80.1	10.2	100.0	494
Enga	0.3	0.2	95.6	3.9	100.0	367
Western Highlands	5.1	2.1	82.3	10.6	100.0	338
Chimbu	0.7	1.0	95.4	3.0	100.0	460
Eastern Highlands	9.2	0.2	89.1	1.6	100.0	861
Morobe	15.1	1.7	74.8	8.5	100.0	434
Madang	6.8	4.5	84.9	3.8	100.0	482
East Sepik	1.9	1.1	95.1	1.9	100.0	521
West Sepik	1.7	0.8	94.5	3.1	100.0	287
Manus	12.6	5.1	69.9	12.3	100.0	62
New Ireland	7.8	0.5	90.1	1.6	100.0	206
East New Britain	9.3	1.4	84.2	5.1	100.0	231
West New Britain	13.7	1.3	74.6	10.4	100.0	196
Autonomous Region of Bougainville	18.6	1.4	71.6	8.4	100.0	284
Hela	13.0	6.6	74.0	6.4	100.0	650
Jiwaka	4.7	3.5	83.6	8.3	100.0	404
Education						
No education	5.3	2.3	86.3	6.2	100.0	2,367
Elementary	10.1	0.9	84.0	5.0	100.0	424
Primary	7.1	1.9	86.1	5.0	100.0	3,331
Secondary	11.7	3.8	80.4	4.1	100.0	1,227
Higher	18.6	5.0	72.6	3.7	100.0	134
Wealth quintile						
Lowest	5.2	2.5	87.3	5.0	100.0	1,788
Second	5.6	1.4	87.2	5.8	100.0	1,640
Middle	6.0	1.6	87.8	4.6	100.0	1,675
Fourth	9.1	1.8	83.8	5.3	100.0	1,477
Highest	16.9	5.7	71.9	5.5	100.0	903
Total	7.6	2.3	84.9	5.2	100.0	7,483

[1] Includes women who have a house with a title/deed, but they do not know if their name is on it (or this information is missing), and women who do not know if there is a title/deed for the house (or this information is missing)
[2] Includes sole, joint, or sole and joint ownership

Table 15.5.2 Ownership of title or deed for house: Men

Among men age 15-49 who own a house, percent distribution by whether the house owned has a title or deed and whether or not the man's name appears on the title or deed, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	House has a title or deed and: Man's name is on title/deed	Man's name is not on title/deed	Does not have a title/deed	Don't know/ missing[1]	Total	Number who own a house[2]
Age						
15-19	4.3	1.9	87.9	6.0	100.0	343
20-24	7.2	1.0	82.7	9.2	100.0	557
25-29	7.6	1.1	85.5	5.8	100.0	696
30-34	10.1	1.1	83.5	5.3	100.0	787
35-39	8.8	0.9	87.9	2.4	100.0	779
40-44	9.8	0.6	82.1	7.5	100.0	653
45-49	7.5	0.6	89.4	2.4	100.0	548
Residence						
Urban	16.3	3.2	77.3	3.3	100.0	303
Rural	7.6	0.8	86.0	5.5	100.0	4,060
Region						
Southern	8.7	1.3	86.7	3.2	100.0	687
Highlands	5.8	0.8	85.7	7.7	100.0	2,036
Momase	9.0	0.9	86.9	3.1	100.0	1,100
Islands	15.3	1.4	79.4	3.8	100.0	540
Province						
Western	9.1	1.3	86.4	3.3	100.0	81
Gulf	11.0	1.3	81.7	6.0	100.0	77
Central	17.7	1.7	75.3	5.2	100.0	130
National Capital District	20.8	9.0	64.3	5.8	100.0	42
Milne Bay	2.8	0.3	96.9	0.0	100.0	249
Northern	5.1	0.2	89.6	5.0	100.0	108
Southern Highlands	6.0	0.5	81.6	11.9	100.0	398
Enga	3.7	1.4	94.3	0.6	100.0	228
Western Highlands	6.6	1.9	61.5	29.9	100.0	240
Chimbu	5.8	1.4	85.5	7.3	100.0	246
Eastern Highlands	3.7	0.0	96.1	0.2	100.0	400
Morobe	13.0	0.0	84.1	3.0	100.0	371
Madang	3.8	0.0	92.0	4.3	100.0	320
East Sepik	5.1	1.2	89.7	3.9	100.0	226
West Sepik	15.1	4.1	80.2	0.6	100.0	184
Manus	9.6	0.6	88.7	1.1	100.0	33
New Ireland	6.3	0.3	88.2	5.2	100.0	75
East New Britain	2.2	0.5	96.7	0.7	100.0	129
West New Britain	28.8	3.1	64.7	3.4	100.0	165
Autonomous Region of Bougainville	17.6	1.3	74.0	7.2	100.0	138
Hela	11.9	1.0	82.1	4.9	100.0	320
Jiwaka	1.1	0.0	97.7	1.2	100.0	203
Education						
No education	5.1	0.5	86.4	8.1	100.0	748
Elementary	15.0	0.3	80.5	4.3	100.0	174
Primary	6.9	1.0	87.9	4.2	100.0	2,191
Secondary	9.5	1.2	83.0	6.3	100.0	1,069
Higher	24.3	2.7	69.1	3.9	100.0	181
Wealth quintile						
Lowest	6.0	0.6	87.4	6.0	100.0	1,059
Second	6.4	0.9	86.1	6.7	100.0	1,003
Middle	6.1	0.9	87.5	5.5	100.0	1,034
Fourth	7.4	0.8	88.1	3.7	100.0	788
Highest	23.2	2.6	70.4	3.8	100.0	478
Total	8.2	1.0	85.4	5.4	100.0	4,363

[1] Includes men who have a house with a title/deed, but they do not know if their name is on it (or this information is missing), and men who do not know if there is a title/deed for the house (or this information is missing)
[2] Includes sole, joint, or sole and joint ownership

Table 15.6.1 Ownership of title or deed for land: Women

Among women age 15-49 who own land, percent distribution by whether the land owned has a title or deed and whether or not the woman's name appears on the title or deed, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Land has a title or deed and: Woman's name is on title/deed	Woman's name is not on title/deed	Does not have a title/deed	Don't know/ missing[1]	Total	Number who own land[2]
Age						
15-19	7.2	2.0	83.8	7.0	100.0	587
20-24	7.7	4.3	85.0	3.1	100.0	921
25-29	10.5	1.8	81.9	5.7	100.0	1,240
30-34	10.4	3.0	81.9	4.7	100.0	1,179
35-39	8.8	2.0	82.7	6.5	100.0	1,144
40-44	11.1	2.3	81.2	5.4	100.0	843
45-49	9.1	2.3	82.9	5.7	100.0	751
Residence						
Urban	22.3	7.8	65.4	4.4	100.0	370
Rural	8.7	2.2	83.7	5.5	100.0	6,294
Region						
Southern	14.6	4.5	73.8	7.0	100.0	1,064
Highlands	6.3	1.5	86.7	5.5	100.0	3,336
Momase	5.8	2.4	89.9	1.9	100.0	1,412
Islands	21.2	4.2	65.9	8.7	100.0	852
Province						
Western	2.3	2.2	92.7	2.8	100.0	148
Gulf	28.3	0.9	55.2	15.6	100.0	85
Central	4.4	1.9	86.1	7.6	100.0	185
National Capital District	24.6	8.3	58.5	8.5	100.0	127
Milne Bay	18.2	8.3	71.4	2.2	100.0	334
Northern	15.2	1.3	69.8	13.7	100.0	185
Southern Highlands	9.0	2.2	76.0	12.9	100.0	459
Enga	0.5	0.0	95.5	3.9	100.0	408
Western Highlands	1.5	1.4	83.0	14.1	100.0	236
Chimbu	0.7	1.9	95.5	1.8	100.0	493
Eastern Highlands	7.3	1.0	89.8	1.9	100.0	836
Morobe	8.8	2.9	84.7	3.6	100.0	276
Madang	11.5	6.0	80.0	2.5	100.0	344
East Sepik	2.5	0.7	96.4	0.4	100.0	518
West Sepik	1.6	0.9	95.3	2.1	100.0	274
Manus	26.6	7.8	55.9	9.6	100.0	25
New Ireland	16.4	3.5	76.9	3.2	100.0	190
East New Britain	21.1	7.4	58.3	13.2	100.0	230
West New Britain	20.4	3.6	69.0	7.0	100.0	171
Autonomous Region of Bougainville	25.1	1.9	63.2	9.8	100.0	236
Hela	12.6	2.1	82.4	2.9	100.0	617
Jiwaka	7.1	2.1	79.0	11.9	100.0	287
Education						
No education	7.1	1.2	85.7	6.1	100.0	2,083
Elementary	4.5	2.4	88.7	4.4	100.0	363
Primary	10.0	2.9	81.5	5.7	100.0	2,953
Secondary	12.9	3.9	79.3	3.9	100.0	1,089
Higher	16.6	4.9	74.6	3.9	100.0	176
Wealth quintile						
Lowest	6.1	1.9	86.8	5.2	100.0	1,684
Second	8.0	2.1	83.8	6.0	100.0	1,504
Middle	8.5	2.0	85.7	3.8	100.0	1,375
Fourth	13.5	2.8	77.9	5.8	100.0	1,221
Highest	13.8	5.1	74.5	6.6	100.0	880
Total	9.4	2.5	82.6	5.4	100.0	6,664

[1] Includes women who have land with a title/deed, but they do not know if their name is on it (or this information is missing), and women who do not know if there is a title/deed for the land (or this information is missing)
[2] Includes sole, joint, or sole and joint ownership

Table 15.6.2 Ownership of title or deed for land: Men

Among men age 15-49 who own land, percent distribution by whether the land owned has a title or deed and whether or not the man's name appears on the title or deed, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Land has a title or deed and: Man's name is on title/deed	Man's name is not on title/deed	Does not have a title/deed	Don't know/ missing[1]	Total	Number who own land[2]
Age						
15-19	5.5	1.6	87.5	5.4	100.0	597
20-24	6.6	1.9	84.2	7.3	100.0	740
25-29	9.8	6.6	76.7	6.9	100.0	768
30-34	12.6	2.9	79.1	5.4	100.0	784
35-39	9.1	2.2	85.0	3.7	100.0	787
40-44	11.7	2.3	79.7	6.3	100.0	610
45-49	10.9	2.5	82.6	4.1	100.0	509
Residence						
Urban	22.5	4.4	68.6	4.5	100.0	344
Rural	8.5	2.8	83.0	5.7	100.0	4,452
Region						
Southern	13.2	2.9	79.2	4.7	100.0	902
Highlands	6.2	2.3	84.2	7.3	100.0	2,193
Momase	9.7	3.8	82.8	3.7	100.0	1,197
Islands	16.1	3.6	75.5	4.8	100.0	504
Province						
Western	11.6	2.6	84.3	1.5	100.0	87
Gulf	8.5	5.7	81.9	4.0	100.0	90
Central	14.1	5.7	75.8	4.4	100.0	150
National Capital District	29.0	4.4	58.3	8.3	100.0	82
Milne Bay	9.7	1.8	84.6	3.9	100.0	308
Northern	14.5	0.7	78.4	6.4	100.0	184
Southern Highlands	5.3	0.8	83.9	10.0	100.0	397
Enga	3.0	4.0	89.7	3.3	100.0	225
Western Highlands	7.8	2.2	63.6	26.4	100.0	235
Chimbu	4.2	5.6	83.5	6.7	100.0	300
Eastern Highlands	3.7	0.3	95.6	0.4	100.0	499
Morobe	13.1	7.2	77.2	2.6	100.0	413
Madang	5.3	1.9	87.5	5.3	100.0	323
East Sepik	3.9	2.3	88.2	5.7	100.0	245
West Sepik	16.6	1.9	80.2	1.3	100.0	216
Manus	10.9	0.9	80.9	7.3	100.0	41
New Ireland	9.5	1.4	82.9	6.2	100.0	80
East New Britain	8.6	4.4	84.5	2.5	100.0	119
West New Britain	25.4	5.5	63.1	6.0	100.0	137
Autonomous Region of Bougainville	19.0	3.2	74.0	3.8	100.0	128
Hela	14.3	2.4	75.3	8.1	100.0	321
Jiwaka	6.3	3.3	89.0	1.5	100.0	216
Education						
No education	6.7	2.1	83.1	8.1	100.0	751
Elementary	11.9	2.2	79.9	6.0	100.0	192
Primary	8.9	2.2	84.7	4.2	100.0	2,361
Secondary	9.6	4.9	78.4	7.2	100.0	1,259
Higher	21.4	3.0	71.7	3.8	100.0	232
Wealth quintile						
Lowest	6.8	1.3	86.2	5.7	100.0	1,140
Second	7.6	1.9	83.2	7.3	100.0	1,061
Middle	8.4	3.0	82.5	6.1	100.0	1,123
Fourth	9.6	2.9	83.2	4.4	100.0	796
Highest	18.4	7.2	70.6	3.9	100.0	677
Total	9.5	2.9	82.0	5.7	100.0	4,796

[1] Includes men who have land with a title/deed, but they do not know if their name is on it (or this information is missing), and men who do not know if there is a title/deed for the land (or this information is missing)
[2] Includes sole, joint, or sole and joint ownership

Table 15.7.1 Ownership and use of bank accounts and mobile phones: Women

Percentage of women age 15-49 who have and use an account in a bank or other financial institution and percentage who own a mobile phone, and among women who own a mobile phone, percentage who use it for financial transactions, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Have and use a bank account	Own a mobile phone	Number of women	Use mobile phone for financial transactions	Number of women who own a mobile phone
Age					
15-19	9.9	27.1	2,945	7.9	798
20-24	20.4	42.9	2,759	19.0	1,183
25-29	19.5	35.2	2,543	23.1	894
30-34	18.5	33.2	2,180	18.9	724
35-39	20.4	32.1	2,059	25.4	660
40-44	24.8	36.5	1,484	32.1	541
45-49	20.5	31.6	1,228	14.8	388
Residence					
Urban	43.8	63.2	2,018	27.2	1,276
Rural	14.5	29.7	13,180	17.4	3,912
Region					
Southern	22.1	35.8	2,899	21.5	1,038
Highlands	15.2	31.7	6,213	20.7	1,968
Momase	17.8	34.9	3,919	18.8	1,368
Islands	23.8	37.5	2,167	17.6	813
Province					
Western	18.8	20.8	352	17.1	73
Gulf	10.8	20.3	277	8.5	56
Central	18.2	37.6	557	13.1	209
National Capital District	51.4	70.6	526	32.0	371
Milne Bay	15.2	32.1	767	20.6	246
Northern	13.6	19.7	421	10.7	83
Southern Highlands	10.2	21.1	1,089	14.9	229
Enga	12.0	39.0	563	10.4	219
Western Highlands	18.5	44.4	746	18.9	331
Chimbu	24.9	35.8	1,038	37.1	371
Eastern Highlands	16.8	32.8	1,310	26.0	429
Morobe	28.8	48.0	1,514	23.3	726
Madang	10.1	25.0	987	10.2	247
East Sepik	12.2	33.6	872	15.3	293
West Sepik	10.0	18.6	545	17.1	102
Manus	31.1	57.4	135	18.4	78
New Ireland	31.2	40.6	385	21.9	156
East New Britain	27.4	40.0	572	17.4	229
West New Britain	20.6	31.3	532	12.5	167
Autonomous Region of Bougainville	15.9	33.9	544	18.5	184
Hela	6.1	20.5	874	7.8	179
Jiwaka	15.8	35.2	594	11.6	209
Education					
No education	2.9	12.4	3,488	2.4	432
Elementary	4.2	19.9	676	6.9	134
Primary	11.2	27.5	6,969	6.3	1,918
Secondary	38.4	62.5	3,460	25.4	2,164
Higher	92.6	89.3	605	62.9	540
Wealth quintile					
Lowest	1.2	7.1	2,783	5.2	199
Second	4.2	20.2	2,831	3.3	571
Middle	10.3	26.6	2,897	7.8	769
Fourth	20.2	40.8	3,118	14.2	1,273
Highest	48.1	66.6	3,569	32.0	2,375
Total	18.4	34.1	15,198	19.8	5,188

Table 15.7.2 Ownership and use of bank accounts and mobile phones: Men

Percentage of men age 15-49 who have and use an account in a bank or other financial institution and percentage who own a mobile phone, and among men who own a mobile phone, percentage who use it for financial transactions, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Have and use a bank account	Own a mobile phone	Number of men	Use mobile phone for financial transactions	Number of men who own a mobile phone
Age					
15-19	8.8	31.2	1,469	9.7	459
20-24	24.3	53.0	1,246	11.3	661
25-29	33.0	56.6	1,171	18.6	663
30-34	30.5	53.0	1,058	22.1	561
35-39	32.7	55.6	966	18.7	536
40-44	40.0	58.5	782	23.2	457
45-49	38.0	54.7	641	24.5	350
Residence					
Urban	50.9	70.4	976	30.3	687
Rural	23.9	47.2	6,357	15.0	3,000
Region					
Southern	30.0	45.8	1,490	21.4	682
Highlands	20.4	48.6	2,871	14.3	1,395
Momase	31.8	55.0	1,999	20.9	1,099
Islands	35.5	52.6	973	16.3	512
Province					
Western	35.7	32.9	182	17.0	60
Gulf	20.8	32.6	137	17.8	45
Central	24.4	44.3	272	17.6	121
National Capital District	59.1	79.2	251	29.9	199
Milne Bay	17.5	41.9	423	16.8	177
Northern	28.8	36.0	223	21.2	80
Southern Highlands	11.9	33.9	457	14.0	155
Enga	16.5	50.1	306	16.0	153
Western Highlands	20.4	62.4	378	16.1	236
Chimbu	29.1	44.2	397	8.1	175
Eastern Highlands	23.2	49.1	587	12.9	288
Morobe	46.4	61.5	796	29.4	490
Madang	22.6	51.7	493	10.4	255
East Sepik	18.2	55.5	435	12.3	241
West Sepik	27.8	41.0	276	25.9	113
Manus	45.1	64.3	64	19.2	41
New Ireland	31.6	46.9	171	21.6	80
East New Britain	39.6	53.5	247	17.5	132
West New Britain	36.9	50.8	260	10.2	132
Autonomous Region of Bougainville	29.7	54.6	231	17.2	126
Hela	16.6	47.8	438	9.9	210
Jiwaka	25.6	57.7	309	24.5	178
Education					
No education	5.6	26.8	941	4.7	252
Elementary	10.7	31.2	253	10.2	79
Primary	18.6	41.4	3,593	8.3	1,489
Secondary	43.9	69.5	2,156	21.1	1,499
Higher	82.0	94.7	389	54.1	369
Wealth quintile					
Lowest	3.6	19.3	1,366	4.9	264
Second	9.5	37.6	1,384	5.5	520
Middle	21.4	50.5	1,528	9.1	772
Fourth	36.1	61.4	1,399	16.9	858
Highest	60.4	76.9	1,656	31.6	1,273
Total	27.5	50.3	7,333	17.9	3,688

Table 15.8 Participation in decision making

Percent distribution of currently married women and currently married men age 15-49 by person who usually makes decisions about various issues, Papua New Guinea DHS 2016-18

Decision	Mainly wife	Wife and husband jointly	Mainly husband	Someone else	Other	Missing	Total	Number of respondents
			WOMEN					
Own health care	29.4	54.4	13.4	0.3	1.4	1.2	100.0	10,052
Major household purchases	15.8	54.2	25.1	0.7	2.9	1.4	100.0	10,052
Visits to her family or relatives	24.3	54.9	18.4	0.1	0.8	1.4	100.0	10,052
			MEN					
Own health care	16.6	57.8	23.9	0.4	0.4	0.9	100.0	3,947
Major household purchases	15.5	55.2	28.1	0.1	0.3	0.8	100.0	3,947

Table 15.9.1 Women's participation in decision making by background characteristics

Percentage of currently married women age 15-49 who usually make specific decisions either by themselves or jointly with their husband, by background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Specific decisions			All three decisions	None of the three decisions	Number of women
	Woman's own health care	Making major household purchases	Visits to her family or relatives			
Age						
15-19	76.7	55.1	68.6	45.2	11.2	403
20-24	82.4	65.8	77.3	55.7	10.1	1,594
25-29	80.5	68.2	77.3	60.0	12.3	2,110
30-34	85.8	72.7	78.6	62.8	8.9	1,878
35-39	84.7	70.6	82.2	64.0	9.3	1,764
40-44	85.6	74.8	81.4	66.7	9.0	1,273
45-49	87.4	74.0	83.3	67.9	7.8	1,029
Employment (past 12 months)						
Not employed	82.4	67.7	78.5	59.3	10.7	6,393
Employed for cash	90.0	77.7	83.8	69.5	4.9	1,638
Employed not for cash	85.1	72.8	79.6	63.9	8.8	1,932
Number of living children						
0	76.7	64.9	71.8	52.7	12.2	1,086
1-2	85.0	68.4	79.1	59.6	9.3	3,508
3-4	84.4	71.8	80.6	64.2	9.4	3,221
5+	84.2	72.3	80.7	65.2	10.3	2,238
Residence						
Urban	86.9	74.5	82.6	64.8	5.6	1,200
Rural	83.3	69.4	78.7	61.2	10.4	8,852
Region						
Southern	87.8	72.5	81.9	64.7	7.1	1,867
Highlands	80.4	65.3	75.5	55.1	11.2	4,189
Momase	84.8	73.0	81.4	65.7	9.8	2,630
Islands	86.1	75.0	82.4	69.4	9.5	1,366
Province						
Western	88.5	74.0	90.3	70.0	5.5	224
Gulf	89.0	79.0	86.2	75.3	7.5	184
Central	81.4	69.9	77.7	61.0	12.3	374
National Capital District	91.0	79.4	87.9	70.4	2.9	307
Milne Bay	93.3	69.5	79.3	58.5	1.6	516
Northern	81.1	67.9	75.9	63.1	16.0	263
Southern Highlands	74.6	49.5	77.5	46.1	16.3	732
Enga	85.0	70.3	77.3	55.3	6.6	404
Western Highlands	85.0	78.6	84.5	76.5	11.6	499
Chimbu	74.4	65.0	72.9	54.7	15.7	634
Eastern Highlands	81.5	67.8	68.8	50.6	7.0	922
Morobe	85.1	67.9	77.2	56.0	8.2	1,013
Madang	87.6	81.0	85.1	75.9	8.8	708
East Sepik	84.9	78.8	84.5	73.6	10.2	534
West Sepik	78.6	63.6	81.3	61.5	15.7	374
Manus	90.3	78.5	87.7	72.5	4.4	83
New Ireland	91.3	78.8	86.2	74.5	5.1	241
East New Britain	84.6	75.8	80.6	71.4	13.2	362
West New Britain	77.3	58.0	71.0	48.9	15.1	344
Autonomous Region of Bougainville	92.1	88.1	91.9	83.7	4.2	336
Hela	83.2	73.1	76.7	62.3	13.1	566
Jiwaka	83.8	57.4	76.2	46.1	6.7	433
Education						
No education	80.5	62.0	77.3	55.3	13.4	2,808
Elementary	79.4	68.3	71.1	57.6	10.3	465
Primary	84.8	72.3	80.2	63.7	8.8	4,381
Secondary	86.5	74.6	80.4	64.7	7.4	2,021
Higher	85.7	79.9	84.5	71.5	8.7	377
Wealth quintile						
Lowest	82.8	66.6	79.4	61.6	12.0	1,933
Second	80.9	65.5	76.9	57.8	12.1	1,946
Middle	83.8	71.4	79.5	62.4	9.5	2,021
Fourth	86.2	72.6	82.2	64.4	7.5	2,042
Highest	84.8	73.3	77.8	61.6	8.5	2,110
Total	83.7	70.0	79.2	61.6	9.9	10,052

Note: Total includes 89 women with missing information on their employment status in the past 12 months.

Table 15.9.2 Men's participation in decision making by background characteristics

Percentage of currently married men age 15-49 who usually make specific decisions either alone or jointly with their wife, by background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Specific decisions		Both decisions	Neither of the two decisions	Number of men
	Man's own health care	Making major household purchases			
Age					
15-19	(97.0)	(79.2)	(77.0)	(0.9)	21
20-24	82.7	86.7	76.9	7.5	292
25-29	81.2	82.7	75.4	11.5	695
30-34	80.6	85.0	76.8	11.2	825
35-39	80.2	81.8	72.9	10.8	848
40-44	82.5	81.5	75.5	11.6	687
45-49	83.8	84.2	77.3	9.2	580
Employment (past 12 months)					
Not employed	77.4	81.4	72.1	13.3	1,415
Employed for cash	81.6	80.9	73.4	10.8	1,391
Employed not for cash	88.1	89.9	83.7	5.7	1,093
Number of living children					
0	80.2	83.5	75.0	11.3	415
1-2	81.4	84.1	75.7	10.2	1,260
3-4	83.3	84.3	77.3	9.7	1,263
5+	80.5	80.9	73.5	12.0	1,009
Residence					
Urban	79.7	79.9	69.7	10.2	440
Rural	81.9	83.7	76.3	10.7	3,507
Region					
Southern	81.9	85.3	76.9	9.6	780
Highlands	77.9	80.6	71.4	12.8	1,543
Momase	88.4	88.9	82.7	5.5	1,100
Islands	78.1	76.5	71.0	16.4	526
Province					
Western	84.3	91.0	83.2	7.9	91
Gulf	78.2	73.4	71.3	19.7	76
Central	69.2	72.1	62.7	21.4	144
National Capital District	77.6	81.8	66.1	6.7	117
Milne Bay	91.5	94.3	88.1	2.2	234
Northern	83.2	90.4	81.3	7.7	118
Southern Highlands	82.7	84.7	76.9	9.5	276
Enga	79.5	77.4	73.2	16.3	164
Western Highlands	61.2	71.0	54.6	22.4	192
Chimbu	91.9	85.1	84.0	7.1	211
Eastern Highlands	80.9	89.1	76.4	6.4	306
Morobe	91.6	92.1	86.4	2.7	406
Madang	84.5	83.6	75.5	7.4	308
East Sepik	87.7	88.6	83.9	7.5	205
West Sepik	88.6	90.8	85.6	6.2	180
Manus	92.6	82.8	81.0	5.6	32
New Ireland	77.0	79.7	75.2	18.5	81
East New Britain	76.1	79.0	72.7	17.6	134
West New Britain	80.1	75.7	71.2	15.4	136
Autonomous Region of Bougainville	75.4	71.4	64.4	17.6	142
Hela	68.2	65.1	57.3	24.0	219
Jiwaka	77.4	87.1	72.9	8.4	175
Education					
No education	76.2	81.5	71.1	13.4	623
Elementary	84.2	81.2	75.6	10.2	164
Primary	82.9	84.5	77.9	10.5	1,857
Secondary	81.3	84.8	75.3	9.2	1,056
Higher	86.1	74.2	71.1	10.8	248
Wealth quintile					
Lowest	82.8	85.6	77.8	9.4	824
Second	79.4	86.3	76.4	10.8	783
Middle	83.6	83.1	76.5	9.8	817
Fourth	80.2	78.2	71.7	13.3	732
Highest	82.1	82.9	75.1	10.1	791
Total	81.7	83.3	75.6	10.6	3,947

Note: Total includes 49 men with missing information on their employment status in the past 12 months. Figures in parentheses are based on 25-49 unweighted cases.

Table 15.10.1 Attitude toward wife beating: Women

Percentage of all women age 15-49 who agree that a husband is justified in hitting or beating his wife for specific reasons, by background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Husband is justified in hitting or beating his wife if she:					Percentage who agree with at least one specified reason	Number
	Burns the food	Argues with him	Goes out without telling him	Neglects the children	Refuses to have sexual intercourse with him		
Age							
15-19	34.7	41.3	51.6	58.6	29.1	68.8	2,945
20-24	34.5	42.4	52.3	61.2	30.9	72.2	2,759
25-29	32.9	42.4	50.0	59.3	32.5	69.5	2,543
30-34	33.5	42.8	50.0	59.8	31.9	70.0	2,180
35-39	35.3	43.7	51.1	60.4	35.3	71.2	2,059
40-44	32.1	38.4	46.3	54.5	31.0	66.9	1,484
45-49	32.0	40.0	49.2	59.8	37.5	68.7	1,228
Employment (past 12 months)							
Not employed	35.1	42.4	51.6	59.6	33.6	69.6	10,142
Employed for cash	27.6	38.9	46.9	60.9	23.8	71.3	2,391
Employed not for cash	35.3	43.5	50.7	58.4	34.8	71.4	2,531
Number of living children							
0	33.4	41.1	51.1	57.9	28.3	68.1	4,957
1-2	35.3	42.0	50.9	60.7	33.7	71.7	4,273
3-4	33.0	41.8	49.9	59.4	33.8	70.5	3,554
5+	33.3	43.1	49.1	59.4	34.5	69.2	2,414
Marital status							
Never married	33.0	40.1	50.0	57.5	27.9	67.4	3,968
Married or living together	33.3	42.0	50.3	59.4	33.2	70.5	10,052
Divorced/separated/widowed	40.7	45.9	53.6	64.4	36.7	72.5	1,179
Residence							
Urban	32.0	37.6	46.1	58.7	23.6	70.6	2,018
Rural	34.1	42.5	51.1	59.4	33.4	69.7	13,180
Region							
Southern	25.2	39.2	39.9	51.3	25.8	61.7	2,899
Highlands	36.4	42.7	52.2	60.6	36.6	72.1	6,213
Momase	36.8	44.7	55.0	64.5	31.3	72.7	3,919
Islands	32.4	37.5	51.2	56.9	29.0	69.2	2,167
Province							
Western	19.6	22.4	20.0	33.9	15.5	41.8	352
Gulf	15.2	31.4	29.0	34.9	26.8	46.1	277
Central	34.6	43.3	46.6	53.2	34.9	64.4	557
National Capital District	26.6	28.7	36.6	50.1	20.5	60.4	526
Milne Bay	20.2	43.6	41.0	57.2	24.8	70.3	767
Northern	31.4	58.3	57.1	64.9	30.5	71.0	421
Southern Highlands	37.3	37.3	47.7	52.8	33.9	59.4	1,089
Enga	43.8	48.0	51.4	73.5	43.6	81.5	563
Western Highlands	33.2	44.1	55.4	58.6	40.0	72.2	746
Chimbu	27.4	49.0	53.8	64.7	40.9	78.1	1,038
Eastern Highlands	42.3	29.0	56.3	66.0	21.8	77.7	1,310
Morobe	35.5	35.9	51.8	64.4	15.7	73.7	1,514
Madang	38.9	57.9	63.1	69.4	47.2	75.1	987
East Sepik	36.4	45.0	56.7	64.8	36.1	75.7	872
West Sepik	37.1	44.8	46.6	55.1	38.4	61.0	545
Manus	32.3	37.3	45.1	51.1	27.4	60.3	135
New Ireland	26.6	24.0	46.8	42.8	17.5	58.9	385
East New Britain	33.3	33.6	52.6	66.6	26.5	71.0	572
West New Britain	32.5	41.5	47.3	65.3	24.9	72.6	532
Autonomous Region of Bougainville	35.2	47.3	58.1	49.9	44.0	73.3	544
Hela	46.1	54.9	48.5	54.5	39.7	66.6	874
Jiwaka	20.5	47.5	51.2	54.7	51.0	71.1	594
Education							
No education	35.2	44.6	50.2	56.5	38.4	67.2	3,488
Elementary	40.1	45.2	53.0	61.3	35.4	69.9	676
Primary	36.6	42.7	51.6	60.0	32.7	70.4	6,969
Secondary	28.1	40.0	52.1	63.1	27.1	73.2	3,460
Higher	19.3	21.8	26.6	42.6	13.5	58.7	605
Wealth quintile							
Lowest	35.3	43.2	50.5	57.1	35.5	66.0	2,783
Second	36.3	44.2	49.8	59.2	34.9	69.0	2,831
Middle	34.8	43.8	51.5	57.5	34.0	69.4	2,897
Fourth	35.6	41.7	52.8	61.7	33.4	72.2	3,118
Highest	28.3	37.4	48.1	60.3	24.6	71.8	3,569
Total	33.8	41.8	50.4	59.3	32.1	69.8	15,198

Note: Total includes 134 women with missing information on their employment status in the past 12 months.

Table 15.10.2 Attitude toward wife beating: Men

Percentage of all men age 15-49 who agree that a husband is justified in hitting or beating his wife for specific reasons, by background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Husband is justified in hitting or beating his wife if she:					Percentage who agree with at least one specified reason	Number
	Burns the food	Argues with him	Goes out without telling him	Neglects the children	Refuses to have sexual intercourse with him		
Age							
15-19	28.5	37.7	53.2	62.1	18.5	72.1	1,469
20-24	30.2	39.1	52.9	67.4	20.3	76.3	1,246
25-29	33.7	43.1	52.7	65.5	19.8	77.8	1,171
30-34	25.2	39.8	48.0	63.0	19.0	74.2	1,058
35-39	22.6	34.1	47.4	58.9	17.1	70.6	966
40-44	16.6	28.6	37.7	48.2	11.4	59.6	782
45-49	19.7	33.4	39.2	56.3	16.4	65.0	641
Employment (past 12 months)							
Not employed	29.1	38.6	50.2	60.6	20.2	71.0	3,562
Employed for cash	23.4	30.5	45.7	60.7	15.9	71.0	2,004
Employed not for cash	24.3	42.7	49.6	64.1	16.0	75.4	1,693
Number of living children							
0	29.4	38.4	51.8	62.4	20.8	72.7	3,503
1-2	26.4	39.4	49.4	63.5	14.8	75.3	1,444
3-4	22.6	34.4	45.0	60.3	15.9	69.9	1,348
5+	20.9	34.4	42.0	55.5	15.5	66.8	1,038
Marital status							
Never married	29.1	38.1	51.2	62.8	19.7	72.1	3,114
Married or living together	23.8	36.8	46.0	59.5	16.3	71.3	3,947
Divorced/separated/widowed	31.5	35.8	58.8	69.4	22.5	77.5	272
Residence							
Urban	20.0	30.2	40.8	56.3	12.8	66.1	976
Rural	27.3	38.4	49.9	62.0	18.8	72.7	6,357
Region							
Southern	22.8	38.5	38.7	56.2	12.5	64.8	1,490
Highlands	30.4	39.6	55.4	62.7	24.6	76.4	2,871
Momase	24.8	37.7	48.6	65.3	15.4	71.8	1,999
Islands	23.1	27.7	44.4	56.3	12.4	69.3	973
Province							
Western	11.2	14.7	20.3	23.1	7.6	30.1	182
Gulf	12.3	18.2	18.6	32.4	8.5	42.2	137
Central	36.5	42.9	50.9	59.3	24.2	69.0	272
National Capital District	17.5	23.6	25.5	42.0	9.0	53.8	251
Milne Bay	21.8	48.4	36.1	70.3	11.7	78.7	423
Northern	29.6	63.1	70.7	83.7	10.2	88.0	223
Southern Highlands	37.6	35.3	55.9	58.5	28.8	70.2	457
Enga	40.2	40.4	58.7	66.1	34.3	74.4	306
Western Highlands	18.5	30.7	53.9	42.7	13.6	76.6	378
Chimbu	19.7	39.3	53.7	63.2	17.2	79.7	397
Eastern Highlands	27.9	39.6	50.9	75.9	15.6	82.0	587
Morobe	28.8	32.7	46.9	67.4	18.9	71.7	796
Madang	23.8	28.6	43.5	67.5	14.4	75.3	493
East Sepik	20.7	56.7	60.7	67.0	8.4	73.5	435
West Sepik	21.5	38.7	43.5	52.9	18.1	63.6	276
Manus	15.7	24.7	31.1	50.3	10.3	53.7	64
New Ireland	18.6	24.5	33.4	54.4	4.2	62.4	171
East New Britain	26.5	24.9	49.3	62.2	9.0	70.2	247
West New Britain	32.5	45.7	59.8	63.4	25.1	78.3	260
Autonomous Region of Bougainville	14.3	13.4	33.8	45.3	8.2	67.6	231
Hela	47.8	61.8	66.0	64.3	45.3	77.3	438
Jiwaka	17.9	25.4	48.5	62.0	18.9	71.3	309
Education							
No education	32.1	45.6	50.0	56.8	27.6	70.1	941
Elementary	24.6	38.1	51.1	62.1	13.2	72.9	253
Primary	26.1	37.4	49.2	61.1	17.2	71.3	3,593
Secondary	26.2	36.7	50.0	64.2	17.4	74.7	2,156
Higher	16.7	19.1	31.9	57.0	8.5	64.1	389
Wealth quintile							
Lowest	31.3	44.1	54.8	61.2	25.7	74.4	1,366
Second	27.6	38.7	46.6	59.7	18.6	68.4	1,384
Middle	22.5	37.1	50.4	61.9	14.1	72.7	1,528
Fourth	27.7	34.4	45.8	58.9	16.8	68.7	1,399
Highest	23.6	33.1	46.2	64.0	15.6	74.6	1,656
Total	26.3	37.3	48.7	61.3	18.0	71.9	7,333

Note: Total includes 74 men with missing information on their employment status in the past 12 months.

Table 15.11 Attitudes toward negotiating safer sexual relations with husband

Percentage of women and men age 15-49 who believe that a woman is justified in refusing to have sexual intercourse with her husband if she knows that he has sexual intercourse with other women, and percentage who believe that a woman is justified in asking that they use a condom if she knows that her husband has a sexually transmitted infection (STI), according to background characteristics, Papua New Guinea DHS 2016-18

	Women			Men		
Background characteristic	Refusing to have sexual intercourse with her husband if she knows he has sex with other women	Asking that they use a condom if she knows that her husband has an STI	Number of women	Refusing to have sexual intercourse with her husband if she knows he has sex with other women	Asking that they use a condom if she knows that her husband has an STI	Number of men
Age						
15-24	68.2	66.3	5,704	70.1	73.2	2,715
15-19	61.1	59.8	2,945	65.0	69.3	1,469
20-24	75.8	73.2	2,759	76.2	77.9	1,246
25-29	74.9	72.8	2,543	74.2	80.1	1,171
30-39	75.4	73.1	4,239	73.9	75.5	2,024
40-49	75.1	70.1	2,712	71.4	74.0	1,423
Marital status						
Never married	64.0	63.3	3,968	68.8	72.6	3,114
Ever had sex	76.2	78.2	989	76.7	81.5	1,470
Never had sex	60.0	58.4	2,978	61.7	64.7	1,643
Married or living together	75.2	71.8	10,052	74.5	76.7	3,947
Divorced/separated/widowed	79.2	76.4	1,179	73.7	79.7	272
Residence						
Urban	84.3	82.7	2,018	82.2	84.1	976
Rural	70.8	68.0	13,180	70.5	73.7	6,357
Region						
Southern	73.5	71.5	2,899	75.9	77.9	1,490
Highlands	67.7	65.7	6,213	63.4	70.2	2,871
Momase	78.1	74.2	3,919	79.7	78.2	1,999
Islands	75.3	72.3	2,167	75.9	78.9	973
Province						
Western	63.6	63.9	352	72.1	75.0	182
Gulf	61.1	55.1	277	60.6	66.7	137
Central	64.0	59.9	557	73.9	68.7	272
National Capital District	89.4	85.3	526	93.1	93.8	251
Milne Bay	85.3	87.0	767	74.8	78.9	423
Northern	61.5	58.3	421	73.2	78.7	223
Southern Highlands	56.3	55.0	1,089	57.1	59.7	457
Enga	69.3	63.8	563	65.6	69.3	306
Western Highlands	69.5	65.4	746	57.9	62.7	378
Chimbu	79.9	79.5	1,038	68.6	77.6	397
Eastern Highlands	77.5	77.7	1,310	76.3	81.8	587
Morobe	83.8	82.0	1,514	84.3	87.5	796
Madang	77.7	73.6	987	73.7	67.4	493
East Sepik	80.7	77.8	872	81.6	79.3	435
West Sepik	58.9	47.9	545	74.2	69.0	276
Manus	87.2	87.1	135	79.6	81.2	64
New Ireland	87.3	82.5	385	89.3	88.2	171
East New Britain	82.4	77.5	572	76.3	77.6	247
West New Britain	72.8	65.1	532	59.7	61.5	260
Autonomous Region of Bougainville	58.8	63.0	544	82.9	92.4	231
Hela	51.3	43.2	874	39.0	52.7	438
Jiwaka	66.5	70.4	594	81.3	89.0	309
Education						
No education	58.7	52.9	3,488	51.3	56.7	941
Elementary	68.2	62.6	676	63.9	67.9	253
Primary	72.3	69.8	6,969	70.2	73.1	3,593
Secondary	84.6	84.8	3,460	81.9	84.3	2,156
Higher	92.7	92.8	605	90.1	92.1	389
Wealth quintile						
Lowest	58.7	53.7	2,783	57.8	61.9	1,366
Second	68.7	63.9	2,831	65.7	68.7	1,384
Middle	72.0	68.9	2,897	74.7	76.0	1,528
Fourth	74.7	74.7	3,118	75.5	78.2	1,399
Highest	85.1	84.2	3,569	83.8	87.9	1,656
Total	72.6	70.0	15,198	72.1	75.1	7,333

Table 15.12 Ability to negotiate sexual relations with husband

Percentage of currently married women age 15-49 who can say no to their husband if they do not want to have sexual intercourse, and percentage who can ask their husband to use a condom, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage who can say no to their husband if they do not want to have sexual intercourse	Percentage who can ask their husband to use a condom	Number of women
Age			
15-24	68.1	57.3	1,998
15-19	61.1	48.1	403
20-24	69.9	59.6	1,594
25-29	67.5	52.9	2,110
30-39	69.7	53.4	3,643
40-49	71.4	51.8	2,302
Residence			
Urban	82.0	68.9	1,200
Rural	67.6	51.6	8,852
Region			
Southern	75.7	62.4	1,867
Highlands	64.6	46.3	4,189
Momase	69.4	55.2	2,630
Islands	74.8	61.6	1,366
Province			
Western	66.4	52.1	224
Gulf	70.2	52.3	184
Central	66.9	39.4	374
National Capital District	85.7	75.5	307
Milne Bay	86.5	85.1	516
Northern	67.0	50.9	263
Southern Highlands	57.5	38.9	732
Enga	40.6	24.1	404
Western Highlands	67.3	53.9	499
Chimbu	72.2	46.0	634
Eastern Highlands	70.3	50.8	922
Morobe	67.8	56.5	1,013
Madang	76.4	62.4	708
East Sepik	69.8	58.5	534
West Sepik	60.0	33.2	374
Manus	80.0	76.0	83
New Ireland	77.4	66.2	241
East New Britain	71.2	60.2	362
West New Britain	72.7	53.0	344
Autonomous Region of Bougainville	77.7	65.1	336
Hela	57.9	42.4	566
Jiwaka	81.4	66.8	433
Education			
No education	55.4	34.2	2,808
Elementary	62.6	45.3	465
Primary	72.1	57.0	4,381
Secondary	82.5	71.0	2,021
Higher	79.0	77.9	377
Wealth quintile			
Lowest	57.0	38.1	1,933
Second	64.7	47.7	1,946
Middle	67.8	50.3	2,021
Fourth	76.0	61.7	2,042
Highest	79.7	69.1	2,110
Total	69.3	53.7	10,052

Table 15.13 Indicators of women's empowerment

Percentage of currently married women age 15-49 who participate in all decision making and percentage who disagree with all of the reasons justifying wife beating, by value on each of the indicators of women's empowerment, Papua New Guinea DHS 2016-18

Empowerment indicator	Percentage who participate in all decision making	Percentage who disagree with all of the reasons justifying wife beating	Number of women
Number of decisions in which women participate[1]			
0	na	32.4	991
1-2	na	29.7	2,870
3	na	28.9	6,191
Number of reasons for which wife beating is justified[2]			
0	60.4	na	2,966
1-2	61.7	na	2,576
3-4	61.0	na	2,905
5	64.6	na	1,605

na = Not applicable
[1] See Table 15.9.1 for the list of decisions.
[2] See Table 15.10.1 for the list of reasons.

Table 15.14 Current use of contraception by women's empowerment

Percent distribution of currently married women age 15-49 by current contraceptive method, according to selected indicators of women's status, Papua New Guinea DHS 2016-18

			Modern methods							
Empowerment indicator	Any method	Any modern method[1]	Female sterili-sation	Male sterili-sation	Temporary modern female methods[2]	Male condom	Any traditional method	Not currently using	Total	Number of women
Number of decisions in which women participate[3]										
0	30.9	26.9	6.8	1.0	19.0	0.0	4.0	69.1	100.0	991
1-2	33.4	27.6	6.0	0.7	20.4	0.4	5.8	66.6	100.0	2,870
3	39.2	32.4	9.1	0.9	21.8	0.7	6.8	60.8	100.0	6,191
Number of reasons for which wife beating is justified[4]										
0	35.5	29.5	7.2	0.7	21.1	0.5	5.9	64.5	100.0	2,966
1-2	39.1	31.6	8.0	1.1	22.1	0.4	7.5	60.9	100.0	2,576
3-4	37.4	31.9	8.9	0.8	21.7	0.6	5.5	62.6	100.0	2,905
5	33.9	27.9	7.8	0.8	18.4	0.9	6.1	66.1	100.0	1,605
Total	36.7	30.5	8.0	0.8	21.1	0.6	6.2	63.3	100.0	10,052

Note: If more than one method is used, only the most effective method is considered in this tabulation.
[1] Female sterilisation, male sterilisation, pill, IUD, injectables, implants, male condom, female condom, emergency contraception, lactational amenorrhoea method (LAM), and other modern methods
[2] Pill, IUD, injectables, implants, female condom, emergency contraception, standard days method, lactational amenorrhoea method, and other modern methods
[3] See Table 15.9.1 for the list of decisions.
[4] See Table 15.10.1 for the list of reasons.

Table 15.15 Ideal number of children and unmet need for family planning by women's empowerment

Mean ideal number of children for women age 15-49 and percentage of currently married women age 15-49 with an unmet need for family planning, by indicators of women's empowerment, Papua New Guinea DHS 2016-18

Empowerment indicator	Mean ideal number of children[1]	Number of women	Percentage of currently married women with an unmet need for family planning[2]			Number of women
			For spacing	For limiting	Total	
Number of decisions in which women participate[3]						
0	3.4	782	14.0	18.5	32.5	991
1-2	3.2	2,530	13.2	13.2	26.4	2,870
3	3.3	5,547	11.8	12.8	24.5	6,191
Number of reasons for which wife beating is justified[4]						
0	2.9	3,930	12.4	13.3	25.7	2,966
1-2	3.1	3,404	12.2	13.3	25.4	2,576
3-4	3.0	3,929	11.2	13.8	25.0	2,905
5	3.1	1,983	14.9	13.6	28.4	1,605
Total	3.0	13,246	12.4	13.5	25.9	10,052

[1] Mean excludes respondents who gave non-numeric responses.
[2] Figures for unmet need correspond to the revised definition described in Bradley et al. 2012.
[3] Restricted to currently married women. See Table 15.9.1 for the list of decisions.
[4] See Table 15.10.1 for the list of reasons.

Table 15.16 Reproductive health care by women's empowerment

Percentage of women age 15-49 with a live birth in the 5 years preceding the survey who received antenatal care, delivery assistance, and postnatal care from health personnel for the most recent birth, according to indicators of women's empowerment, Papua New Guinea DHS 2016-18

Empowerment indicator	Percentage receiving antenatal care from a skilled provider[1]	Percentage receiving delivery care from a skilled provider[1]	Percentage with a postnatal check during the first 2 days after birth[2]	Number of women with a child born in the last 5 years
Number of decisions in which women participate[3]				
0	61.3	42.0	33.6	625
1-2	76.9	59.0	50.0	1,695
3	78.0	60.2	51.0	3,770
Number of reasons for which wife beating is justified[4]				
0	73.6	56.8	47.5	1,975
1-2	81.0	63.3	53.5	1,701
3-4	77.2	59.2	50.4	1,912
5	71.3	54.0	44.6	1,171
Total	76.1	58.6	49.3	6,759

[1] Skilled provider includes doctor, midwife, nurse, or trained village health volunteer.
[2] Includes women who received a postnatal checkup from a doctor, midwife, nurse, trained village health worker, or village birth attendant in the first 2 days after the birth. Includes women who gave birth in a health facility and those who did not give birth in a health facility.
[3] Restricted to currently married women. See Table 15.9.1 for the list of decisions.
[4] See Table 15.10.1 for the list of reasons.

Table 15.17 Early childhood mortality rates by indicators of women's empowerment

Infant, child, and under-5 mortality rates for the 10-year period preceding the survey, according to indicators of women's empowerment, Papua New Guinea DHS 2016-18

Empowerment indicator	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-5 mortality ($_5q_0$)
Number of decisions in which women participate[1]			
0	48	18	65
1-2	48	15	63
3	30	14	44
Number of reasons for which wife beating is justified[2]			
0	42	13	54
1-2	34	13	47
3-4	33	16	49
5	43	18	60

[1] Restricted to currently married women. See Table 15.9.1 for the list of decisions.
[2] See Table 15.10.1 for the list of reasons.

DOMESTIC VIOLENCE 16

Key Findings

- ***Experience of violence:*** 56% of women age 15-49 in Papua New Guinea have experienced physical violence since age 15, and 28% have experienced sexual violence. Eighteen percent of women who have ever been pregnant have experienced violence during pregnancy.
- ***Spousal violence:*** 63% of ever-married women have experienced spousal physical, sexual, or emotional violence. The most common type of spousal violence is physical violence (54%), followed by emotional violence (51%). Twenty-nine percent of women have experienced spousal sexual violence.
- ***Injuries due to spousal violence:*** 57% of women who have experienced spousal physical or sexual violence have sustained injuries. Cuts, bruises, or aches are the most common types of injuries reported.
- ***Help seeking:*** 35% of women who have ever experienced physical or sexual violence have sought help, while 13% have never sought help but have told someone about the violence. Thirty-nine percent of women who have experienced any type of physical or sexual violence have not sought help or told anyone about the violence.

Gender-based violence against women has been acknowledged worldwide as a violation of basic human rights. Increasing research has highlighted the health burdens, intergenerational effects, and demographic consequences of such violence (United Nations 2006). Gender-based violence is defined by the United Nations as any act of violence that results in physical, sexual, or psychological harm or suffering to women, girls, men, and boys, as well as threats of such acts, coercion, or the arbitrary deprivation of liberty. This chapter focuses on domestic violence, a form of gender-based violence.

To help Papua New Guinea monitor progress toward reducing gender-based violence, the 2016-18 PNG DHS included a module of questions on domestic violence that was administered in the subsample of households selected for the men's survey. In accordance with the World Health Organization (WHO) guidelines on ethical collection of information on domestic violence, only one eligible woman per household was randomly selected for the module, and the module was not implemented if privacy could not be obtained (WHO 2001). In total, 4,873 women completed the module. One percent of women eligible for the domestic violence module could not be successfully interviewed with the module because privacy could not be obtained or for other reasons. Special weights were used to adjust for the selection of only one woman per household and to ensure that the domestic violence subsample was nationally representative.

16.1 MEASUREMENT OF VIOLENCE

In the 2016-18 PNG DHS, information was obtained from never-married women on their experience of violence committed by anyone and from ever-married women on their experience of violence committed by their current and former husbands/partners and by others. More specifically, violence committed by the current husband/partner (for currently married women) and by the most recent husband/partner (for formerly married women) was measured by asking all ever-married women if their husband/partner ever did the following to them:

> ***Physical spousal violence:*** push you, shake you, or throw something at you; slap you; twist your arm or pull your hair; punch you with his fist or with something that could hurt you; kick you, drag you, or beat you up; try to choke you or burn you on purpose; or threaten or attack you with a knife, gun, or any other weapon
>
> ***Sexual spousal violence*:** physically force you to have sexual intercourse with him even when you did not want to, physically force you to perform any other sexual acts you did not want to, or force you with threats or in any other way to perform sexual acts you did not want to
>
> ***Emotional spousal violence*:** say or do something to humiliate you in front of others, threaten to hurt or harm you or someone close to you, or insult you or make you feel bad about yourself

In addition, information was obtained from all women (married and unmarried) about physical violence committed by anyone (other than a current or most recent husband/partner) since they were age 15 by asking if anyone had hit, slapped, kicked, or done something else to hurt them physically. Similarly, information was gathered on experiences of sexual violence committed by anyone (other than a current or most recent husband/partner) by asking women if at any time in their life, as a child or as an adult, they were forced in any way to have sexual intercourse or to perform any other sexual acts when they did not want to. Women who had ever been pregnant were asked about their experience of physical violence committed by anyone during any pregnancy.

In this chapter, married women include both women who said they were married and women who said they were living with a man as if married. Correspondingly, husbands include both husbands of married women and partners of women who are not married but are living with a man as if married.

16.2 WOMEN'S EXPERIENCE OF PHYSICAL VIOLENCE

Physical violence by anyone

Percentage of women who have experienced any physical violence (committed by a husband or anyone else) since age 15 and in the 12 months before the survey.

Sample: Women age 15-49

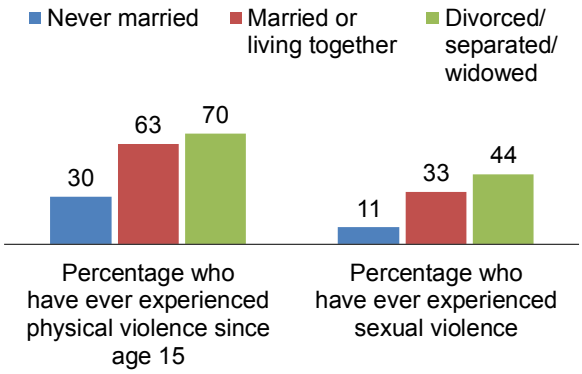
Fifty-six percent of women age 15-49 have experienced physical violence since age 15, and 38% experienced physical violence in the 12 months preceding the survey (**Table 16.1**). Eighteen percent of women who have ever been pregnant experienced violence during pregnancy (**Table 16.2**).

Patterns by background characteristics

- Women's experience of physical violence increases from 39% among those age 15-19 to 62% among those age 30-39 before dropping to 58% among those age 40-49 (**Table 16.1**).

- The percentage of women who have experienced physical violence is higher in urban areas than in rural areas (57% versus 55%).
- Women in the Islands region are more prone to experiencing physical violence than those in the Momase region (59% versus 51%).
- Divorced, separated, or widowed women are more likely to have experienced physical violence (70%) than currently married women (63%) and never-married women (30%) (**Figure 16.1**).
- Women with at least one child are more likely than those with no living children to have experienced physical violence. For example, 63% of women with one or two children have experienced physical violence, as compared with 41% of women with no living children.

Figure 16.1 **Women's experience of violence by marital status**



- Experience of physical violence is more common among employed women, irrespective of whether they are employed for cash (60%) or not for cash (62%), than among women who are not employed (53%).
- Women with a higher education (62%) and those in the highest wealth quintile (58%) are most likely to report experiencing physical violence.
- Violence during pregnancy is most common among women who are divorced, separated, or widowed (24%) and women in Eastern Highlands (32%) and New Ireland (30%) (**Table 16.2**).

16.2.1 Perpetrators of Physical Violence

Among ever-married women who have experienced physical violence since age 15, 78% report their current husband as the perpetrator, and 15% report a former husband as the perpetrator. Eighteen percent report violence by fathers/stepfathers, while 12% report violence by mothers/stepmothers and 13% brothers or sisters (**Table 16.3**).

16.3 Experience of Sexual Violence

Sexual violence

Percentage of women who have experienced any sexual violence (committed by a husband or anyone else) ever and in the 12 months before the survey.

Sample: Women age 15-49

16.3.1 Prevalence of Sexual Violence

Twenty-eight percent of women age 15-49 have ever experienced sexual violence, and 20% experienced sexual violence in the 12 months preceding the survey (**Table 16.4**). Eleven percent of women had experienced sexual violence by age 22, while 6% had experienced sexual violence by age 18 (**Table 16.5**).

Patterns by background characteristics

- Divorced, separated, or widowed women are much more likely to have experienced sexual violence (44%) than currently married women (33%) and never-married women (11%).
- Experience of sexual violence is more common among employed women, irrespective of whether they are employed for cash (32%) or not for cash (38%), than among women who are not employed (25%).

- Women with elementary education are more likely to experience sexual violence than other women.

16.3.2 Perpetrators of Sexual Violence

Among ever-married women who have experienced sexual violence, 77% report their current husband as the perpetrator, while 19% report a former husband as the perpetrator. Among women who have never been married, current or former boyfriends (66%), relatives (16%), and strangers (6%) are the most common perpetrators of sexual violence (**Table 16.6**).

16.4 Experience of Different Forms of Violence

Physical violence or sexual violence may not occur in isolation; rather, women may experience a combination of forms of violence, and these combinations of violence can have long-lasting negative effects on women's lives, health, and well-being. Overall, 59% of women have experienced physical or sexual violence: 31% have experienced physical violence only, 3% have experienced sexual violence only, and 25% have experienced both physical and sexual violence. The percentage of women who have experienced physical or sexual violence increases sharply from 38% among those age 15-17 to 65% among those age 30-39 before dropping to 62% among those age 40-49 (**Table 16.7**).

16.5 Marital Control by Husband

Marital control

Percentage of women whose current husband/partner (if currently married) or most recent husband/partner (if formerly married) demonstrates at least one of the following controlling behaviours: is jealous or angry if she talks to other men, frequently accuses her of being unfaithful, does not permit her to meet her female friends, tries to limit her contact with her family, and insists on knowing where she is at all times.

Sample: Ever-married women age 15-49

In a patriarchal society such as Papua New Guinea, women's lives are often controlled by male family members. Attempts by husbands to closely control and monitor their wives' behaviour can be another expression of women's subordinate status in the family. Marital controlling behaviours can also be important early warning signs and correlates of violence in a relationship. Because the concentration of behaviours is more significant than the display of any single behaviour, the proportion of women whose husbands display at least three of the specified behaviours is also discussed.

Forty-six percent of ever-married women report that their husband is jealous or angry if they talk to other men, 43% report that he insists on knowing where they are at all times, 39% say that he frequently accuses them of being unfaithful, 31% report that he does not permit them to meet female friends, and 23% say that he tries to limit their contact with their families. Thirty-seven percent of women report that their husband displays three or more of these behaviours, while 43% say that their husband displays none of the behaviours (**Table 16.8**).

Patterns by background characteristics

- Younger women are more likely than older women to report that their husbands displaying three or more of the specified behaviours. For instance, 56% of women age 15-19 say that their husbands display three or more of the behaviours, as compared with 30% of women age 40-49.
- Divorced, separated, or widowed women are more likely (45%) than currently married women (37%) to report that their husbands display three or more controlling behaviours.
- Women with elementary or no education and those in the lowest wealth quintile are less likely to experience controlling behaviours than other women.

- Women's fear of their husbands and controlling behaviours by husbands are highly correlated. Only 16% of women who say that they are never afraid of their husband report experiencing at least three controlling behaviours, as compared with 81% of women who say that they are afraid of their husband most of the time.

16.6 Forms of Spousal Violence

Spousal violence

Percentage of women who have experienced any of the specified acts of physical, sexual, or emotional violence committed by their current husband/partner (if currently married) or most recent husband/partner (if formerly married), ever and in the 12 months preceding the survey.

Sample: Ever-married women age 15-49

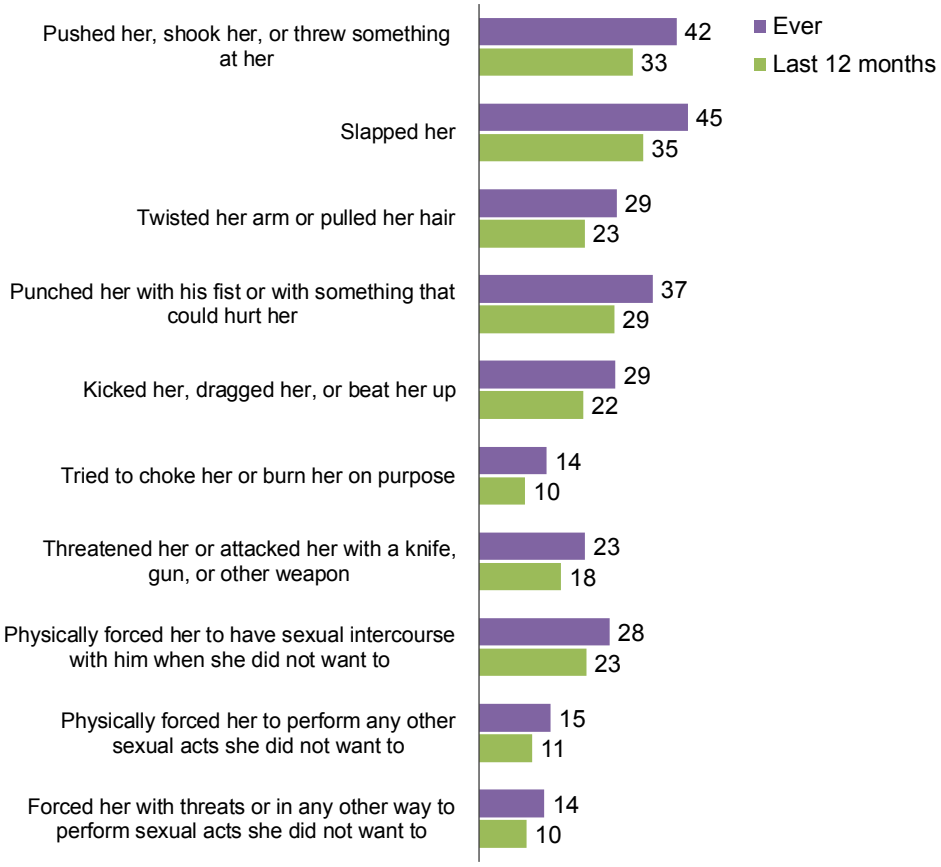
16.6.1 Prevalence of Spousal Violence

Sixty-three percent of women reported having ever experienced spousal physical, sexual, or emotional violence, and 54% reported having experienced such violence in the past 12 months. The most common type of spousal violence experienced by women is physical violence (54%), followed by emotional (51%) and sexual (29%) violence (**Table 16.9**).

Women experiencing spousal physical violence most often reported that their husband slapped them (45%). Forty-two percent of women reported that their husband pushed, shook, or threw something at them; 37% said that their husband punched them with his fist or with something else that could hurt them; 29% each reported that their husband twisted their arm or pulled their hair and that their husband kicked, dragged, or beat them up; and 23% said that their husband threatened them or attacked them with a knife, gun, or other weapon. Fourteen percent of women reported that their husband tried to choke them or burn them on purpose (**Figure 16.2**).

Figure 16.2 Forms of spousal violence

Percentage of ever-married women age 15-49 who have ever experienced specfic acts of violence by their husband/partner



With respect to sexual violence, women most commonly reported that their husband used physical force to have sexual intercourse with them when they did not want to (28%). Fifteen percent of women reported that their husband physically forced them to perform other sexual acts they did not want to, and 14% said that their husband forced them with threats or in other ways to perform sexual acts they did not want to (**Figure 16.2**).

Women experiencing emotional violence were most likely to report that their husband insulted them or made them feel bad about themselves (44%), followed by their husband saying or doing something to humiliate them in front of others (38%). Thirty-two percent of women said that their husband threatened to hurt or harm them or someone close to them (**Table 16.9**).

Women who were married more than once were also asked about spousal violence committed by any husband other than their current or former husband. Sixty-four percent of women have ever experienced spousal physical, sexual, or emotional violence committed by any husband, a slight increase from the percentage of women who have experienced such violence committed by their current or most recent husband (63%). During the 12 months preceding the survey, 54% of women experienced physical, sexual, or emotional violence by any husband, either current or previous (**Table 16.9** and **Table 16.12**).

Patterns by background characteristics

- Women's experience of spousal physical, sexual, or emotional violence varies by urban-rural residence; 72% of women in urban areas report experiencing spousal violence, as compared with 62% of women in rural areas (**Table 16.10**).

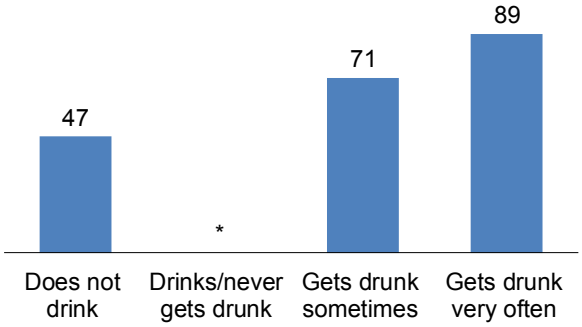
- Divorced, separated, or widowed women are more likely than currently married women to report ever experiencing spousal physical, sexual, or emotional violence (69% versus 62%).
- Women who are employed but do not earn for cash are more likely to have experienced spousal violence (68%) than women who are employed for cash (65%) and women who are not employed (61%).
- Overall, women's experience of spousal violence increases with increasing education and household wealth. Fifty-five percent of women with an elementary education report experiencing spousal violence, as compared with 76% of women with a higher education. Similarly, 57% of women in the second wealth quintile have experienced spousal violence, compared with 69% of those in the highest quintile.

Patterns by husband's characteristics and empowerment indicators

- Women's experience of spousal violence varies according to their own and their husband's education. Violence is more common among women whose husbands have a higher education (68%) and women who are better educated than their husbands (67%) (**Table 16.11**).
- Experience of spousal violence varies greatly with the level of husbands' alcohol consumption. Almost 9 in 10 women whose husbands often get drunk have experienced spousal violence (89%), as compared with 47% of women whose husbands do not drink alcohol (**Figure 16.3**).
- The likelihood of experiencing spousal violence increases sharply with the number of controlling behaviours displayed by husbands; 95% of women whose husbands display all five of the specified controlling behaviours have ever experienced spousal violence, compared with 30% of women whose husbands do not display any of the specified behaviours.

***Figure 16.3* Spousal violence by husband's alcohol consumption**

Percentage of ever-married women who have ever experienced spousal (physical, sexual, or emotional) violence by their husband/partner



Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

- Intergenerational effects of spousal violence are evident in Papua New Guinea. Women who report that their fathers beat their mothers are much more likely (70%) to have themselves experienced spousal violence than women who report that their fathers did not beat their mothers (57%).
- Women's fear of their husband and spousal violence are highly correlated. Women who say that they are afraid of their husband most of the time are most likely to have ever experienced spousal violence (88%), followed by women who are sometimes afraid of their husband (85%). Forty-three percent of women who say that they are never afraid of their husband have experienced spousal violence.

16.6.2 Onset of Spousal Violence

Table 16.13 shows when spousal violence first occurred in relation to the start of marriage among women married only once. Among currently married women age 15-49 who have been married only once, 21% first experienced spousal physical or sexual violence within the first 2 years of marriage, and 37% had experienced such violence within 5 years. This suggests that a large proportion of spousal violence begins early in marriage.

16.7 Injuries to Women due to Spousal Violence

Injuries due to spousal violence

Percentage of women who have the following types of injuries from spousal violence: cuts, bruises, or aches; eye injuries, sprains, dislocations, or burns; or deep wounds, broken bones, broken teeth, or any other serious injury.

Sample: Ever-married women age 15-49 who have experienced physical or sexual violence committed by their current husband (if currently married) or most recent husband (if formerly married)

Fifty-seven percent of ever-married women who have experienced spousal physical or sexual violence have sustained injuries, and 59% sustained injuries in the 12 months preceding the survey. Those who have experienced spousal sexual violence are more likely to have sustained injuries (66%) than those who have experienced spousal physical violence (60%) (**Table 16.14**).

Among women who have experienced physical or sexual violence, the most common injuries reported are cuts, bruises, or aches (53%), followed by eye injuries, sprains, dislocations, or burns (33%). Twenty-three percent of women who have experienced spousal violence report having deep wounds, broken bones, broken teeth, and other serious injuries.

16.8 Violence Initiated by Women against Husbands

Initiation of physical violence by wives

Percentage of women who have ever hit, slapped, kicked, or done anything else to physically hurt their current (if currently married) or most recent (if formerly married) husband at times when he was not already beating or physically hurting them.

Sample: Ever-married women age 15-49

Either spouse can play a role in instigating domestic violence. The 2016-18 PNG DHS asked all ever-married women if they had initiated acts of physical violence against their husband when he was not already hitting or beating them. Twenty-three percent of women said that they had initiated such violence, and 17% reported initiating violence in the past 12 months (**Table 16.15**).

Patterns by background characteristics

- Women who have themselves experienced spousal violence are much more likely than women who have not to have ever initiated violence against their husbands. Thirty-six percent of women who have experienced spousal violence have perpetrated such violence, as compared with 8% who have never experienced spousal violence (**Table 16.15**).
- Urban women are more likely to initiate violence against their husbands than rural women (32% versus 22%).
- Women in the Highlands region (28%) are more likely than women in other regions (17%-23%) to have initiated violence against their husband. By province, the proportion of women who have initiated violence against their husband ranges from a high of 41% in Chimbu to a low of 12% each in Milne Bay and Southern Highlands.
- Divorced, separated, or widowed women are more likely than currently married women to report initiating violence against their husbands (39% versus 22%).
- Women with a secondary education (32%) and those in the highest wealth quintile (28%) are more likely to initiate violence against their husband than other women.

- Women's initiation of spousal physical violence varies with husbands' alcohol consumption, from 18% among women whose husbands do not drink to 40% among women whose husbands get drunk very often (**Table 16.16**).
- The percentage of women who have initiated spousal physical violence increases sharply with the number of controlling behaviours exhibited by their husbands, from 10% among women whose husbands do not display any of the specified controlling behaviours to 47% among women whose husbands display all five specified behaviours.
- Women who have witnessed their father beating their mother are more likely to initiate violence themselves than those who have not witnessed such violence at home (30% versus 18%).
- Women who are afraid of their husband most of the time not only experience more violence but also are more likely to initiate violence: 33% of women who are afraid of their husband most of the time have initiated spousal violence, as compared with 17% of women who are never afraid of their husband.

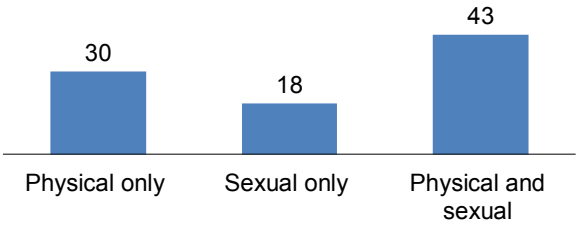
16.9 Help Seeking among Women Who Have Experienced Violence

Thirty-five percent of women who have ever experienced physical or sexual violence have sought help, while 13% have never sought help but have told someone about the violence. Thirty-nine percent of women who have experienced any type of physical or sexual violence have not sought help or told anyone about the violence (**Table 16.17**).

Women who have experienced both physical and sexual violence (43%) are more likely to seek help than women who have experienced only sexual violence (18%) (**Figure 16.4**).

***Figure 16.4* Help seeking by type of violence experienced**

Percentage of women age 15-49 who have experienced physical or sexual violence and sought help



Patterns by background characteristics

- Younger women age 15-19 (24%) are less likely to seek help to stop violence than women age 20 and above (33%-39%).
- The proportion of women seeking help to end violence is higher in urban areas (40%) than in rural areas (34%) (**Table 16.17**).
- Help seeking to stop violence varies substantially by province, from 18% among women in the Autonomous Region of Bougainville to 45% among women in Manus.
- Women who have never been married are less likely (19%) to seek help than women who are married (35%) and women who are divorced, separated, or widowed (55%).
- Women with no living children (27%) are less likely than women with one or more children (34%-40%) to seek help.

Sources for Help

Among women who have experienced physical or sexual violence and sought help, the most common source of help was their own family (72%), followed by their husband's family (13%), friends (11%), neighbours (11%), and the police (10%). Few women sought help from social work organisations or doctors/medical personnel (3% each) (**Table 16.18**). Fifteen percent of women who have experienced both physical and sexual violence have sought help from the police.

List of Tables

For more information on domestic violence, see the following tables:

Table 16.1 Experience of physical violence

Percentage of women age 15-49 who have experienced physical violence since age 15 and percentage who experienced physical violence during the 12 months preceding the survey, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage who have experienced physical violence since age 15[1]	Percentage who have experienced physical violence in the past 12 months			Number of women
		Often	Sometimes	Often or sometimes[2]	
Age					
15-19	39.4	3.4	22.1	25.5	881
20-24	54.5	5.9	31.1	37.0	939
25-29	60.5	6.0	40.3	46.3	783
30-39	62.4	9.1	35.5	44.5	1,379
40-49	57.9	4.4	28.9	33.3	891
Residence					
Urban	57.4	7.5	32.8	40.3	636
Rural	55.3	5.9	31.6	37.5	4,237
Region					
Southern	55.5	5.4	29.2	34.6	1,009
Highlands	57.3	7.3	32.5	39.8	1,794
Momase	51.3	5.9	33.1	39.0	1,350
Islands	59.3	4.6	31.0	35.6	720
Province					
Western	49.4	5.2	24.8	30.0	129
Gulf	46.4	5.8	30.3	36.1	94
Central	57.1	9.3	28.0	37.2	188
National Capital District	62.5	7.6	33.5	41.1	141
Milne Bay	63.7	3.0	32.1	35.0	273
Northern	45.2	3.4	25.5	28.8	184
Southern Highlands	49.4	8.3	27.3	35.6	310
Enga	61.1	1.1	42.8	43.9	125
Western Highlands	52.6	4.3	31.6	35.9	211
Chimbu	47.5	9.4	25.3	34.7	255
Eastern Highlands	66.9	9.6	30.1	39.7	417
Morobe	59.2	4.9	45.7	50.6	497
Madang	49.3	5.9	27.9	33.7	354
East Sepik	41.7	7.7	24.7	32.3	313
West Sepik	50.3	5.5	23.4	29.0	185
Manus	65.6	6.8	41.1	47.9	51
New Ireland	63.2	8.4	24.8	33.2	138
East New Britain	61.2	1.7	33.4	35.1	192
West New Britain	58.7	2.0	28.9	31.0	184
Autonomous Region of Bougainville	52.4	7.0	32.8	39.9	155
Hela	69.7	7.9	44.8	52.7	258
Jiwaka	49.5	4.6	33.4	37.9	218
Marital status					
Never married	30.1	1.2	11.8	13.1	1,172
Married or living together	63.1	7.2	39.3	46.5	3,375
Divorced/separated/widowed	69.7	11.9	25.8	37.7	326
Number of living children					
0	40.5	2.8	21.7	24.5	1,496
1-2	63.3	8.8	38.0	46.8	1,390
3-4	65.0	7.5	38.7	46.2	1,163
5+	56.8	5.7	29.7	35.5	824
Employment					
Employed for cash	60.4	7.0	30.2	37.2	719
Employed not for cash	62.0	8.2	35.0	43.2	877
Not employed	52.8	5.3	31.3	36.6	3,267
Education					
No education	55.4	6.9	29.8	36.7	1,166
Elementary	49.8	6.5	29.1	35.6	198
Primary	54.6	5.9	31.6	37.5	2,197
Secondary	57.7	4.8	33.3	38.1	1,101
Higher	61.5	10.3	38.5	48.8	211
Wealth quintile					
Lowest	51.9	4.8	31.8	36.7	898
Second	55.4	6.5	29.3	35.8	948
Middle	54.3	6.6	30.3	36.9	949
Fourth	57.2	7.2	29.8	37.0	968
Highest	58.3	5.4	36.7	42.2	1,111
Total	55.6	6.1	31.8	37.9	4,873

Note: Total includes 10 women with missing information on employment status.
[1] Includes violence in the past 12 months. For women who were married before age 15 and reported physical violence only by their husband/partner, the violence could have occurred before age 15.
[2] Includes women for whom frequency in the past 12 months is not known

Table 16.2 Experience of violence during pregnancy

Among women age 15-49 who have ever been pregnant, percentage who have ever experienced physical violence during pregnancy, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage who experienced violence during pregnancy	Number of women who have ever been pregnant
Age		
15-19	21.2	121
20-24	15.2	604
25-29	21.5	664
30-39	19.8	1,280
40-49	12.6	840
Residence		
Urban	18.9	403
Rural	17.5	3,107
Region		
Southern	15.2	731
Highlands	19.2	1,283
Momase	15.9	985
Islands	20.5	510
Province		
Western	17.9	98
Gulf	20.0	66
Central	11.8	149
National Capital District	12.5	88
Milne Bay	13.5	206
Northern	19.1	125
Southern Highlands	14.7	219
Enga	10.6	89
Western Highlands	14.6	146
Chimbu	21.9	169
Eastern Highlands	32.4	299
Morobe	22.4	383
Madang	9.4	275
East Sepik	14.2	197
West Sepik	12.7	129
Manus	13.2	39
New Ireland	29.8	104
East New Britain	12.7	137
West New Britain	22.0	123
Autonomous Region of Bougainville	22.7	106
Hela	17.8	208
Jiwaka	8.6	153
Marital status		
Never married	15.6	103
Married or living together	17.1	3,130
Divorced/separated/widowed	23.9	276
Number of living children		
0	19.3	132
1-2	17.2	1,390
3-4	19.3	1,163
5+	15.8	824
Education		
No education	13.2	941
Elementary	19.5	153
Primary	18.6	1,513
Secondary	21.2	729
Higher	17.0	174
Wealth quintile		
Lowest	17.2	652
Second	14.2	701
Middle	18.8	712
Fourth	19.8	685
Highest	18.1	759
Total	17.6	3,509

Table 16.3 Persons committing physical violence

Among women age 15-49 who have experienced physical violence since age 15, percentage who report specific persons who committed the violence, by the respondent's current marital status, Papua New Guinea DHS 2016-18

	Marital status		
Person	Ever married	Never married	Total
Current husband/partner	77.8	na	67.7
Former husband/partner	15.4	na	13.4
Current boyfriend	1.2	2.4	1.4
Former boyfriend	1.5	1.3	1.5
Father/stepfather	17.5	49.3	21.7
Mother/stepmother	11.8	33.7	14.7
Sister/brother	12.6	20.7	13.7
Daughter/son	0.1	0.0	0.1
Other relative	6.8	19.4	8.4
Mother-in-law	0.9	na	0.8
Father-in-law	0.8	na	0.7
Other in-law	1.2	na	1.0
Teacher	1.9	8.5	2.7
Other	1.7	4.4	2.1
Number of women who have experienced physical violence since age 15	2,356	353	2,709

Note: Women can report more than one person who committed the violence.
na = Not applicable

Table 16.4 Experience of sexual violence

Percentage of women age 15-49 who have ever experienced sexual violence and percentage who experienced sexual violence in the 12 months preceding the survey, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage who have experienced sexual violence: Ever[1]	In the past 12 months	Number of women
Age			
15-19	14.8	7.8	881
20-24	24.2	18.0	939
25-29	34.2	25.8	783
30-39	36.0	27.6	1,379
40-49	28.2	16.2	891
Residence			
Urban	30.0	20.7	636
Rural	27.9	19.7	4,237
Region			
Southern	24.4	16.7	1,009
Highlands	31.8	21.2	1,794
Momase	27.6	22.2	1,350
Islands	25.5	16.4	720
Province			
Western	26.8	17.1	129
Gulf	21.1	15.0	94
Central	28.4	23.4	188
National Capital District	25.5	13.4	141
Milne Bay	25.1	17.9	273
Northern	18.4	11.4	184
Southern Highlands	26.0	19.2	310
Enga	27.8	14.2	125
Western Highlands	21.2	12.8	211
Chimbu	31.2	25.3	255
Eastern Highlands	37.3	22.4	417
Morobe	29.4	23.1	497
Madang	23.8	19.0	354
East Sepik	31.7	26.2	313
West Sepik	23.1	18.8	185
Manus	25.5	19.4	51
New Ireland	37.5	20.6	138
East New Britain	20.1	11.7	192
West New Britain	21.6	14.2	184
Autonomous Region of Bougainville	26.0	20.5	155
Hela	41.3	24.9	258
Jiwaka	31.8	24.2	218
Marital status			
Never married	10.6	4.7	1,172
Married or living together	32.8	24.5	3,375
Divorced/separated/widowed	44.2	25.7	326
Number of living children			
0	18.7	11.0	1,496
1-2	31.7	23.4	1,390
3-4	32.8	24.9	1,163
5+	32.9	22.7	824
Employment			
Employed for cash	32.4	22.9	719
Employed not for cash	38.4	27.4	877
Not employed	24.5	17.1	3,267
Education			
No education	30.0	21.2	1,166
Elementary	31.4	23.7	198
Primary	26.9	19.4	2,197
Secondary	29.2	19.1	1,101
Higher	23.6	16.6	211
Wealth quintile			
Lowest	30.2	19.0	898
Second	25.3	19.0	948
Middle	28.7	21.7	949
Fourth	32.0	22.5	968
Highest	25.4	17.2	1,111
Total	28.2	19.8	4,873

Note: Total includes 10 women with missing information on employment status.
[1] Includes violence in the past 12 months

Table 16.5 Age at first experience of sexual violence

Percentage of women age 15-49 who experienced sexual violence by specific exact ages, according to current age and current marital status, Papua New Guinea DHS 2016-18

Background characteristic	Percentage who first experienced sexual violence by exact age: 10	12	15	18	22	Percentage who have not experienced sexual violence	Number of women
Age							
15-19	0.0	0.3	1.9	na	na	85.2	881
20-24	0.0	0.3	1.4	6.3	na	75.8	939
25-29	0.0	0.6	1.1	6.5	11.4	65.8	783
30-39	0.1	0.2	0.8	6.3	14.0	64.0	1,379
40-49	0.0	0.0	0.9	2.6	8.8	71.8	891
Marital status							
Never married	0.0	0.0	0.0	0.0	0.0	89.4	1,172
Ever married	0.0	0.3	1.5	7.2	14.4	66.2	3,701
Total	0.0	0.3	1.2	5.5	11.0	71.8	4,873

na = Not applicable

Table 16.6 Persons committing sexual violence

Among women age 15-49 who have experienced sexual violence, percentage who report specific persons who committed the violence, according to the respondent's current marital status, Papua New Guinea DHS 2016-18

Person	Marital status: Ever married	Never married	Total
Current husband/partner	77.0	na	70.0
Former husband/partner	19.0	na	17.3
Current/former boyfriend	6.0	65.9	11.4
Father/stepfather	0.5	0.0	0.4
Brother/stepbrother	0.1	5.2	0.6
Other relative	5.2	16.3	6.2
In-law	0.2	na	0.2
Own friend/acquaintance	1.2	4.6	1.5
Family friend	0.7	2.2	0.9
Teacher	0.0	0.0	0.0
Employer/someone at work	0.0	0.0	0.0
Stranger	3.7	5.8	3.9
Other	0.1	0.0	0.1
Missing	0.2	0.0	0.2
Number of women who have experienced sexual violence	1,250	124	1,374

Note: Ever-married women can report up to three perpetrators: a current husband, former husband, or one other person who is not a current or former husband. Never-married women can report only the person who was the first to commit the violence.
na = Not applicable

Table 16.7 Experience of different forms of violence

Percentage of women age 15-49 who have ever experienced different forms of violence, by current age, Papua New Guinea DHS 2016-18

Age	Physical violence only	Sexual violence only	Physical and sexual violence	Physical or sexual violence	Number of women
15-19	28.0	3.4	11.4	42.8	881
15-17	28.6	2.6	7.1	38.3	534
18-19	27.0	4.6	18.0	49.6	346
20-24	34.4	4.2	20.1	58.6	939
25-29	29.2	3.0	31.3	63.4	783
30-39	28.9	2.5	33.5	64.9	1,379
40-49	33.4	3.7	24.5	61.6	891
Total	30.7	3.3	24.9	58.9	4,873

Table 16.8 Marital control exercised by husbands

Percentage of ever-married women age 15-49 whose husbands/partners have ever demonstrated specific types of controlling behaviours, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage of women whose husband/partner: Is jealous or angry if she talks to other men	Frequently accuses her of being unfaithful	Does not permit her to meet her female friends	Tries to limit her contact with her family	Insists on knowing where she is at all times	Displays 3 or more of the specific behaviours	Displays none of the specific behaviours	Number of ever-married women
Age								
15-19	66.1	52.9	46.9	39.0	60.5	56.3	20.3	130
20-24	55.8	44.6	41.5	24.5	55.6	47.1	31.4	676
25-29	48.8	38.2	31.5	29.4	44.1	38.3	42.6	689
30-39	45.2	38.5	27.1	21.3	41.0	35.2	43.6	1,328
40-49	36.3	33.0	25.8	17.0	33.8	29.6	52.4	878
Residence								
Urban	48.2	43.9	29.5	22.5	50.6	38.7	31.9	423
Rural	46.2	38.1	31.1	23.0	42.3	37.2	43.8	3,278
Region								
Southern	40.0	38.8	27.3	25.3	42.5	34.9	44.9	733
Highlands	48.0	36.3	29.2	21.3	40.9	35.5	42.7	1,429
Momase	49.0	41.5	37.1	24.1	46.8	42.2	40.8	1,014
Islands	46.0	40.1	28.9	22.0	43.5	36.7	41.6	525
Province								
Western	32.8	32.4	21.9	18.5	28.5	24.8	57.7	92
Gulf	36.2	35.2	24.3	24.0	34.8	34.7	56.2	64
Central	43.1	36.6	32.8	30.3	48.3	39.2	42.6	153
National Capital District	40.4	41.2	26.5	24.7	50.7	35.8	31.1	96
Milne Bay	39.5	38.8	26.4	25.9	45.4	35.7	43.5	203
Northern	43.9	45.9	28.1	24.4	39.0	35.1	45.2	126
Southern Highlands	41.8	33.3	25.6	19.6	32.4	30.0	53.1	245
Enga	49.3	28.5	22.7	14.8	35.1	29.3	42.9	106
Western Highlands	39.3	26.2	14.5	12.8	26.0	21.6	54.1	164
Chimbu	53.1	50.0	40.7	29.7	51.8	47.8	35.1	185
Eastern Highlands	50.7	33.4	29.6	23.8	53.5	41.9	38.4	334
Morobe	65.1	50.0	51.9	22.9	66.2	57.9	23.6	400
Madang	37.5	36.7	28.8	28.3	37.7	33.1	49.5	278
East Sepik	35.7	33.6	25.4	20.3	27.6	28.8	57.5	204
West Sepik	45.0	38.4	27.9	25.0	37.3	34.1	48.9	133
Manus	47.0	45.8	39.5	29.3	53.6	46.1	36.6	38
New Ireland	51.4	49.3	36.2	31.2	55.1	43.2	34.8	107
East New Britain	40.0	32.2	20.3	16.2	32.2	26.5	46.8	134
West New Britain	43.8	40.8	27.3	22.2	40.9	35.3	43.4	130
Autonomous Region of Bougainville	50.2	38.4	30.6	17.9	45.4	41.0	41.3	116
Hela	59.4	50.6	43.1	23.3	46.6	44.8	28.3	223
Jiwaka	39.0	27.3	20.8	19.0	27.5	22.5	52.2	173
Marital status								
Married or living together	45.7	38.0	30.4	22.3	42.4	36.6	43.3	3,375
Divorced/separated/widowed	53.6	46.6	36.1	30.3	52.0	44.9	33.7	326
Number of living children								
0	58.1	40.3	34.5	30.3	56.9	44.8	29.2	411
1-2	50.2	42.1	36.1	24.6	48.6	42.0	37.5	1,311
3-4	43.9	39.7	26.8	20.7	40.2	35.2	46.4	1,155
5+	38.0	31.4	26.7	19.9	32.1	29.4	51.6	824
Employment								
Employed for cash	43.4	38.1	27.5	22.3	47.6	37.1	39.7	614
Employed not for cash	50.9	42.9	31.8	30.1	45.3	41.2	39.9	712
Not employed	45.8	37.7	31.6	20.9	41.5	36.3	44.0	2,369
Education								
No education	42.3	32.2	26.9	19.8	37.9	32.5	47.3	1,054
Elementary	45.3	37.0	22.3	20.7	29.8	31.5	51.5	152
Primary	44.7	39.4	31.0	24.0	42.5	36.6	43.0	1,563
Secondary	51.9	43.4	33.5	28.9	50.6	42.7	35.8	760
Higher	63.3	54.6	51.3	9.2	61.8	55.2	28.9	172
Wealth quintile								
Lowest	43.9	36.8	27.7	18.7	35.3	31.5	46.4	710
Second	42.7	33.3	26.7	26.5	37.7	34.5	49.4	743
Middle	43.2	37.4	29.1	23.1	41.8	34.7	44.9	729
Fourth	44.1	40.2	29.8	23.6	42.6	37.9	43.6	710
Highest	56.9	45.5	40.3	22.8	57.1	47.0	29.5	809
Woman afraid of husband/partner								
Afraid most of the time	85.6	69.2	74.0	51.5	84.9	81.2	5.3	413
Sometimes afraid	67.2	56.2	41.4	31.7	60.9	55.1	21.4	1,317
Never afraid	23.6	20.0	15.0	11.2	22.2	15.7	64.8	1,929
Total	46.4	38.8	30.9	23.0	43.2	37.4	42.5	3,701

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated, or widowed women. Total includes 7 women with missing information on employment status and 42 women with missing information on whether they are afraid of their husband/partner.

Table 16.9 Forms of spousal violence

Percentage of ever-married women age 15-49 who have experienced various forms of violence ever or in the 12 months preceding the survey committed by their current or most recent husband/partner, and percentage of ever-married women age 15-49 who have experienced various forms of violence ever or in the 12 months preceding the survey committed by any husband/partner, Papua New Guinea DHS 2016-18

Type of violence experienced	Ever experienced	Experienced in the past 12 months	Frequency in the past 12 months	
			Often	Sometimes
Spousal violence committed by current or most recent husband/partner[1]				
Physical violence				
Any physical violence	54.4	44.4	7.4	37.0
Pushed her, shook her, or threw something at her	42.1	33.5	4.6	28.9
Slapped her	44.5	35.0	5.2	29.9
Twisted her arm or pulled her hair	29.3	22.5	2.9	19.6
Punched her with his fist or with something that could hurt her	37.0	28.8	3.7	25.1
Kicked her, dragged her, or beat her up	29.1	22.2	3.2	19.0
Tried to choke her or burn her on purpose	14.4	9.8	1.6	8.2
Threatened her or attacked her with a knife, gun, or other weapon	22.6	17.5	2.4	15.1
Sexual violence				
Any sexual violence	29.2	24.1	5.4	18.7
Physically forced her to have sexual intercourse with him when she did not want to	27.8	22.8	5.2	17.7
Physically forced her to perform any other sexual acts she did not want to	15.2	11.3	2.1	9.2
Forced her with threats or in any other way to perform sexual acts she did not want to	13.9	10.1	1.8	8.3
Emotional violence				
Any emotional violence	51.1	43.7	8.1	35.6
Said or did something to humiliate her in front of others	37.5	30.5	5.1	25.3
Threatened to hurt or harm her or someone she cared about	31.5	25.1	4.4	20.7
Insulted her or made her feel bad about herself	43.8	36.8	6.2	30.6
Any form of physical and/or sexual violence	57.1	47.6	9.9	37.7
Any form of emotional and/or physical and/or sexual violence	62.9	54.3	13.0	41.3
Spousal violence committed by any husband/partner				
Physical violence	55.7	44.4	na	na
Sexual violence	30.6	24.2	na	na
Emotional violence	51.1	43.7	na	na
Any form of physical or sexual violence	58.3	47.6	na	na
Any form of emotional or physical or sexual violence	63.9	54.3	na	na
Number of ever-married women	3,701	3,701	3,701	3,701

[1] Includes current husband/partner for currently married women and most recent husband/partner for divorced, separated, or widowed women.
na = Not applicable

Table 16.10 Spousal violence by background characteristics

Percentage of ever-married women age 15-49 who have ever experienced emotional, physical, or sexual violence committed by their current or most recent husband/partner, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Emotional violence	Physical violence	Sexual violence	Physical and sexual	Physical and sexual and emotional	Physical or sexual	Physical or sexual or emotional	Number of ever-married women
Age								
15-19	58.2	64.2	41.9	39.4	37.8	66.7	68.9	130
20-24	55.6	58.7	23.9	20.8	19.4	61.8	66.9	676
25-29	49.3	58.2	31.6	29.5	25.9	60.3	66.0	689
30-39	52.9	55.0	32.7	30.1	27.0	57.6	64.0	1,328
40-49	45.3	45.7	24.0	21.1	17.8	48.6	55.0	878
Residence								
Urban	58.0	61.7	33.1	30.4	27.4	64.3	71.6	423
Rural	50.2	53.5	28.6	26.0	23.1	56.1	61.8	3,278
Region								
Southern	48.3	49.8	25.4	23.4	20.6	51.8	59.8	733
Highlands	52.4	56.2	31.3	28.1	25.0	59.3	64.4	1,429
Momase	53.1	55.0	30.4	27.5	24.9	58.0	63.3	1,014
Islands	47.7	54.8	26.1	24.4	21.6	56.6	62.7	525
Province								
Western	51.4	47.6	28.5	26.4	23.6	49.7	58.1	92
Gulf	45.9	47.1	22.3	19.0	16.7	50.4	55.5	64
Central	44.9	47.5	31.0	27.0	22.0	51.5	60.2	153
National Capital District	46.2	56.6	20.7	20.6	18.8	56.8	65.7	96
Milne Bay	52.0	52.4	26.1	24.6	21.7	53.9	63.0	203
Northern	47.2	45.9	20.6	19.3	18.2	47.2	52.9	126
Southern Highlands	46.4	48.0	28.4	25.2	24.4	51.2	54.2	245
Enga	49.0	55.9	20.3	19.2	17.7	57.0	62.4	106
Western Highlands	49.8	53.5	22.7	21.9	20.6	54.3	59.3	164
Chimbu	59.7	56.7	38.2	35.7	35.7	59.2	68.4	185
Eastern Highlands	57.9	54.3	31.9	28.2	25.4	58.0	64.8	334
Morobe	60.0	64.9	28.3	27.1	24.8	66.1	70.3	400
Madang	47.0	47.4	28.0	26.2	23.3	49.2	56.2	278
East Sepik	46.9	50.3	42.4	35.0	31.6	57.6	60.8	204
West Sepik	54.8	48.5	23.3	19.5	17.9	52.3	61.2	133
Manus	52.2	63.9	27.5	25.8	22.3	65.6	70.3	38
New Ireland	59.1	63.9	33.0	31.8	30.4	65.1	71.0	107
East New Britain	42.6	53.4	17.1	15.6	13.0	54.9	63.3	134
West New Britain	45.6	52.3	27.2	25.9	22.1	53.6	58.1	130
Autonomous Region of Bougainville	43.8	48.2	28.6	25.6	22.8	51.2	57.1	116
Hela	52.0	68.6	40.2	33.3	24.7	75.4	77.8	223
Jiwaka	47.2	57.4	30.2	28.5	22.4	59.0	62.2	173
Marital status								
Married or living together	50.5	53.9	28.0	25.3	22.8	56.5	62.4	3,375
Divorced/separated/ widowed	57.2	60.0	41.5	38.3	31.9	63.2	68.8	326
Number of living children								
0	52.3	58.6	31.6	28.3	23.4	62.0	65.2	411
1-2	53.7	57.4	28.5	26.4	24.6	59.5	65.6	1,311
3-4	51.3	55.9	28.8	26.4	23.8	58.3	64.5	1,155
5+	46.2	45.5	29.4	25.8	22.0	49.1	55.4	824
Employment								
Employed for cash	52.9	55.1	31.4	27.9	24.9	58.6	65.1	614
Employed not for cash	56.7	56.6	37.7	34.2	30.6	60.0	67.7	712
Not employed	49.0	53.5	26.0	23.8	21.1	55.7	60.9	2,369
Education								
No education	47.4	49.7	28.4	24.8	21.9	53.4	58.9	1,054
Elementary	45.6	47.4	31.1	26.8	23.3	51.7	54.7	152
Primary	51.0	54.6	30.4	28.5	24.9	56.5	62.6	1,563
Secondary	53.7	58.8	28.4	25.6	24.0	61.7	67.9	760
Higher	68.0	68.5	23.4	22.2	21.0	69.7	76.0	172
Wealth quintile								
Lowest	46.9	51.0	29.5	25.8	22.8	54.6	60.2	710
Second	48.0	50.6	26.7	25.0	21.8	52.4	57.4	743
Middle	50.2	54.1	31.4	28.7	25.8	56.9	62.0	729
Fourth	53.2	54.6	32.7	28.8	25.3	58.5	66.0	710
Highest	56.6	61.0	26.0	24.5	22.5	62.5	68.5	809
Total	51.1	54.4	29.2	26.5	23.6	57.1	62.9	3,701

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated, or widowed women. Total includes 7 women with missing information on employment status.

Table 16.11 Spousal violence by husband's characteristics and empowerment indicators

Percentage of ever-married women age 15-49 who have ever experienced emotional, physical, or sexual violence committed by their current or most recent husband/partner, according to husband's characteristics and women's empowerment indicators, Papua New Guinea DHS 2016-18

Background characteristic	Emotional violence	Physical violence	Sexual violence	Physical and sexual	Physical and sexual and emotional	Physical or sexual	Physical or sexual or emotional	Number of ever-married women
Husband's/partner's education[1]								
No education	50.8	51.7	26.1	24.7	23.0	53.0	59.4	640
Primary	50.3	52.8	29.5	26.6	23.4	55.7	61.5	1,456
Secondary	52.2	56.1	27.7	24.6	22.2	59.2	65.1	917
Higher	49.9	59.4	27.9	26.3	25.6	61.0	67.6	287
Don't know/missing	34.7	44.3	17.3	11.8	6.6	49.8	52.2	75
Husband's/partner's alcohol consumption								
Does not drink alcohol	37.9	39.1	23.0	20.1	17.6	42.0	47.3	1,495
Drinks alcohol but is never drunk	*	*	*	*	*	*	*	26
Is sometimes drunk	56.5	62.6	30.7	28.7	25.4	64.6	71.0	1,774
Is often drunk	82.4	80.0	48.6	43.9	42.4	84.7	89.0	365
Don't know/missing	(39.9)	(36.8)	(14.6)	(8.3)	(8.3)	(43.2)	(53.2)	41
Spousal education difference[1]								
Husband better educated	48.4	53.2	32.1	28.4	25.5	56.9	62.0	1,564
Wife better educated	56.7	57.8	27.4	25.5	23.4	59.6	66.6	771
Both equally educated	49.4	52.8	21.5	19.9	17.8	54.4	60.2	491
Neither educated	51.1	51.6	23.9	22.7	21.2	52.8	59.4	414
Don't know/missing	41.9	49.5	19.3	16.3	12.1	52.6	60.2	136
Spousal age difference[1]								
Wife older	48.5	51.9	23.4	20.5	19.1	54.9	59.0	286
Wife is same age	52.6	55.0	24.6	23.9	23.3	55.6	63.6	201
Wife 1-4 years younger	50.7	55.3	27.4	24.2	21.8	58.5	63.5	1,270
Wife 5-9 years younger	55.5	55.0	30.9	28.3	26.2	57.6	64.6	849
Wife 10 or more years younger	46.1	50.7	29.8	27.5	23.1	53.1	59.9	647
Missing	39.5	49.6	19.6	18.4	15.5	50.8	54.4	122
Number of marital control behaviours displayed by husband/partner[2]								
0	18.8	21.2	8.1	5.3	3.6	23.9	30.0	1,572
1-2	57.3	64.7	31.2	27.2	21.3	68.7	77.4	747
3-4	81.5	84.1	42.1	40.0	37.7	86.2	90.9	837
5	89.0	90.4	67.2	65.7	62.8	92.0	95.3	546
Number of decisions in which women participate[3]								
0	52.3	54.3	33.7	32.5	30.8	55.5	60.1	296
1-2	51.2	53.4	30.2	26.4	24.2	57.2	62.7	958
3	50.0	54.0	26.1	23.8	21.1	56.3	62.6	2,121
Number of reasons for which wife beating is justified[4]								
0	42.0	45.2	20.3	18.8	17.3	46.8	52.9	1,056
1-2	55.6	57.1	27.1	23.7	21.5	60.6	67.0	931
3-4	54.7	58.5	34.5	32.7	28.7	60.3	66.1	1,083
5	53.7	58.6	37.6	32.7	28.4	63.5	68.3	631
Father beat mother								
Yes	56.9	62.0	32.4	29.6	26.5	64.7	70.0	1,703
No	46.5	48.1	26.5	24.1	21.2	50.5	57.1	1,769
Don't know/missing	43.7	46.9	25.4	21.5	20.5	50.8	55.5	229
Woman afraid of husband/partner								
Afraid most of the time	81.0	84.9	61.6	59.5	57.5	86.9	88.0	413
Sometimes afraid	72.2	78.1	40.4	38.3	34.2	80.1	84.9	1,317
Never afraid	30.1	31.6	14.7	11.3	9.1	34.9	42.7	1,929
Missing	(59.1)	(57.1)	(25.1)	(25.1)	(25.1)	(57.1)	(59.1)	42
Total	51.1	54.4	29.2	26.5	23.6	57.1	62.9	3,701

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated, or widowed women. Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Includes only currently married women

[2] According to the wife's report. See Table 16.8 for the list of behaviours.

[3] According to the wife's report. Includes only currently married women. See Table 15.9.1 for the list of decisions.

[4] According to the wife's report. See Table 15.10.1 for the list of reasons.

Table 16.12 Violence by any husband/partner in the last 12 months

Percentage of ever-married women who have experienced emotional, physical, or sexual violence by any husband/partner in the past 12 months, according to background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Emotional violence	Physical violence	Sexual violence	Physical and sexual	Physical and sexual and emotional	Physical or sexual	Physical or sexual or emotional	Number of ever-married women
Age								
15-19	53.6	57.4	33.1	30.6	28.8	59.8	65.7	130
20-24	47.8	49.0	21.7	18.5	17.2	52.2	57.2	676
25-29	42.2	50.2	28.1	26.1	22.2	52.2	58.4	689
30-39	46.7	45.7	28.2	24.4	21.7	49.5	57.4	1,328
40-49	35.8	32.4	15.6	12.3	11.1	35.7	42.4	878
Residence								
Urban	51.7	52.6	29.0	25.4	23.2	56.2	63.2	423
Rural	42.7	43.3	23.5	20.4	18.1	46.5	53.2	3,278
Region								
Southern	40.2	40.4	21.0	18.7	16.2	42.7	50.7	733
Highlands	44.8	45.3	25.1	21.8	19.4	48.6	55.7	1,429
Momase	47.4	47.5	27.0	23.1	20.9	51.5	56.8	1,014
Islands	38.5	41.6	20.7	18.1	15.9	44.1	50.8	525
Province								
Western	33.6	38.6	22.3	20.1	18.8	40.7	44.3	92
Gulf	41.1	42.5	19.1	17.9	15.4	43.7	49.0	64
Central	40.8	39.8	26.1	21.3	17.6	44.6	54.6	153
National Capital District	38.6	45.6	18.8	18.6	16.9	45.9	50.6	96
Milne Bay	41.4	39.9	21.0	18.7	15.1	42.2	53.1	203
Northern	43.3	38.1	16.3	14.8	14.1	39.6	47.8	126
Southern Highlands	42.5	37.7	24.3	21.1	20.3	40.9	47.8	245
Enga	42.0	47.1	16.8	15.4	13.9	48.5	55.6	106
Western Highlands	42.1	43.8	15.3	14.1	12.5	45.0	51.7	164
Chimbu	55.2	47.1	34.4	30.8	30.8	50.7	61.6	185
Eastern Highlands	45.5	42.4	27.5	23.8	20.8	46.1	54.5	334
Morobe	56.0	60.0	25.6	23.8	21.8	61.9	66.4	400
Madang	39.8	40.1	24.0	20.4	17.0	43.7	48.9	278
East Sepik	43.2	41.9	37.1	29.0	28.0	50.0	54.3	204
West Sepik	43.5	34.4	21.5	17.4	15.8	38.6	48.3	133
Manus	44.4	53.9	24.7	23.4	19.6	55.2	61.0	38
New Ireland	41.2	41.2	19.8	18.1	17.2	42.8	51.0	107
East New Britain	36.3	41.0	15.2	12.9	10.9	43.3	50.7	134
West New Britain	36.0	37.2	19.8	17.1	15.0	39.9	44.2	130
Autonomous Region of Bougainville	39.6	43.5	27.4	23.7	20.2	47.2	54.6	116
Hela	46.9	55.8	27.8	20.4	17.5	63.1	67.5	223
Jiwaka	37.4	46.4	22.6	21.8	15.8	47.2	51.3	173
Education								
No education	39.5	37.5	23.1	18.7	16.7	42.0	48.8	1,054
Elementary	40.8	41.3	27.8	23.2	19.3	45.9	49.6	152
Primary	44.0	44.7	25.2	22.7	19.8	47.2	54.2	1,563
Secondary	45.6	50.7	23.7	20.8	19.2	53.7	60.2	760
Higher	60.8	58.9	19.9	18.8	18.4	60.1	66.8	172
Wealth quintile								
Lowest	40.9	39.8	22.9	18.7	17.1	44.0	51.5	710
Second	39.3	41.3	23.4	21.1	18.4	43.6	48.2	743
Middle	42.7	43.5	25.6	22.5	19.7	46.7	53.4	729
Fourth	45.0	43.8	26.9	22.5	19.1	48.2	56.7	710
Highest	50.0	52.7	22.3	20.3	19.2	54.6	61.1	809
Total	43.7	44.4	24.2	21.0	18.7	47.6	54.3	3,701

Note: Any husband/partner includes all current, most recent, and former husbands/partners.

Table 16.13 Experience of spousal violence by duration of marriage

Among currently married women age 15-49 who have been married only once, percentage who first experienced physical or sexual violence committed by their current husband/partner by specific exact years since marriage, according to marital duration, Papua New Guinea DHS 2016-18

Years since marriage	Percentage who first experienced spousal physical or sexual violence by exact marital duration				Percentage who have not experienced sexual or physical violence	Number of currently married women who have been married only once
	Before marriage	2 years	5 years	10 years		
<2	4.2	na	na	na	44.5	224
2-4	4.1	28.7	na	na	37.4	449
5-9	3.9	19.1	42.3	na	41.4	684
10+	4.2	16.4	27.3	35.6	49.8	1,573
Total	4.1	21.1	37.4	45.2	45.5	2,930

na = Not applicable

Table 16.14 Injuries to women due to spousal violence

Among ever-married women age 15-49 who have experienced violence committed by their current or most recent husband/partner, percentage who have been injured as a result of the violence, by types of injuries, according to type of violence, Papua New Guinea DHS 2016-18

Type of violence experienced	Cuts, bruises, or aches	Eye injuries, sprains, dislocations, or burns	Deep wounds, broken bones, broken teeth, or any other serious injury	Any of these injuries	Number of ever-married women who have experienced physical or sexual violence
Physical violence[1]					
Ever[2]	55.2	35.0	23.9	60.1	2,013
Past 12 months	57.5	37.3	25.2	62.7	1,643
Sexual violence					
Ever[2]	60.9	42.3	30.0	66.1	1,079
Past 12 months	63.0	45.3	31.6	67.9	892
Physical or sexual violence[1]					
Ever[2]	52.7	33.4	22.8	57.4	2,112
Past 12 months	54.4	35.2	23.9	59.3	1,761

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated, or widowed women.
[1] Excludes women who reported violence only in response to a direct question on violence during pregnancy
[2] Includes in the past 12 months

Table 16.15 Violence by women against their husband by women's background characteristics

Percentage of ever-married women who have committed physical violence against their current or most recent husband/partner when he was not already beating or physically hurting them, ever and in the past 12 months, according to women's own experience of spousal violence and background characteristics, Papua New Guinea DHS 2016-18

Background characteristic	Percentage who committed physical violence against their husband/partner		Number of ever-married women
	Ever[1]	Past 12 months	
Woman's experience of spousal physical violence			
Ever[1]	36.1	26.4	2,013
In the past 12 months	37.3	30.7	1,643
Never	8.3	5.5	1,688
Age			
15-19	17.3	15.3	130
20-24	21.0	15.6	676
25-29	27.1	21.1	689
30-39	24.8	17.6	1,328
40-49	21.3	13.6	878
Residence			
Urban	32.0	23.4	423
Rural	22.3	16.0	3,278
Region			
Southern	21.2	14.2	733
Highlands	27.5	18.8	1,429
Momase	22.8	18.5	1,014
Islands	16.9	12.0	525
Province			
Western	26.2	22.4	92
Gulf	19.7	14.5	64
Central	22.7	17.7	153
National Capital District	32.8	18.3	96
Milne Bay	11.6	5.5	203
Northern	23.2	15.1	126
Southern Highlands	12.0	8.4	245
Enga	28.7	23.5	106
Western Highlands	34.4	27.1	164
Chimbu	41.1	31.6	185
Eastern Highlands	30.2	15.4	334
Morobe	22.5	19.5	400
Madang	27.8	21.9	278
East Sepik	20.6	16.5	204
West Sepik	16.6	11.1	133
Manus	23.2	18.9	38
New Ireland	20.6	7.6	107
East New Britain	16.2	11.9	134
West New Britain	13.6	12.0	130
Autonomous Region of Bougainville	15.9	13.9	116
Hela	28.4	20.6	223
Jiwaka	20.9	13.5	173
Marital status			
Married or living together	21.9	16.6	3,375
Divorced/separated/widowed	38.9	19.7	326
Number of living children			
0	29.6	18.2	411
1-2	22.4	18.0	1,311
3-4	24.2	16.4	1,155
5+	20.9	15.1	824
Employment			
Employed for cash	23.9	13.5	614
Employed not for cash	21.9	17.2	712
Not employed	23.8	17.6	2,369
Education			
No education	20.4	12.5	1,054
Elementary	26.5	18.5	152
Primary	21.9	16.6	1,563
Secondary	32.3	24.6	760
Higher	14.6	10.6	172

Continued...

Table 16.15—*Continued*

Background characteristic	Percentage who committed physical violence against their husband/partner		Number of ever-married women
	Ever[1]	Past 12 months	
Wealth quintile			
Lowest	19.8	14.8	710
Second	23.0	15.3	743
Middle	19.0	13.0	729
Fourth	27.0	19.1	710
Highest	28.0	21.6	809
Total	23.4	16.9	3,701

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated, or widowed women. Total includes 7 women with missing information on employment status.
[1] Includes in the past 12 months

Table 16.16 Violence by women against their husband by husband's characteristics and empowerment indicators

Percentage of ever-married women who have committed physical violence against their current or most recent husband/partner when he was not already beating or physically hurting them, ever and in the past 12 months, according to their husband's characteristics and women's empowerment indicators, Papua New Guinea DHS 2016-18

Background characteristic	Percentage who committed physical violence against their husband/partner		Number of ever-married women
	Ever[1]	Past 12 months	
Husband's/partner's education[2]			
No education	18.5	12.5	640
Primary	22.3	17.9	1,456
Secondary	20.6	14.9	917
More than secondary	32.6	23.9	287
Don't know/missing	21.0	17.4	75
Husband's/partner's alcohol consumption			
Does not drink alcohol	18.2	14.1	1,495
Drinks alcohol but is never drunk	*	*	26
Is sometimes drunk	25.1	17.5	1,774
Is often drunk	40.3	27.9	365
Don't know/missing	(4.0)	(4.0)	41
Spousal education difference[2]			
Husband better educated	22.5	17.2	1,564
Wife better educated	22.5	18.6	771
Both equally educated	23.1	15.8	491
Neither educated	18.0	11.3	414
Don't know/missing	20.0	17.3	136
Spousal age difference[2]			
Wife older	20.8	15.0	286
Wife is same age	21.0	14.8	201
Wife 1-4 years younger	21.1	15.1	1,270
Wife 5-9 years younger	20.5	17.0	849
Wife 10 or more years younger	25.1	19.7	647
Missing	28.7	19.6	122
Number of marital control behaviours displayed by husband/partner[3]			
0	9.9	6.7	1,572
1-2	28.1	17.7	747
3-4	29.6	20.5	837
5	46.8	39.5	546
Number of decisions in which women participate[4]			
0	24.7	19.7	296
1-2	18.9	12.5	958
3	22.9	18.0	2,121
Number of reasons for which wife beating is justified[5]			
0	17.0	11.9	1,056
1-2	19.5	13.7	931
3-4	30.8	22.3	1,083
5	27.5	20.6	631
Father beat mother			
Yes	29.7	21.4	1,703
No	18.4	13.5	1,769
Don't know/missing	16.1	9.0	229
Woman afraid of husband/partner			
Afraid most of the time	32.8	26.3	413
Sometimes afraid	30.3	22.7	1,317
Never afraid	17.1	11.1	1,929
Missing	(7.0)	(7.0)	42
Total	23.4	16.9	3,701

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated, or widowed women. Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Includes in the past 12 months

[2] Includes only currently married women

[3] According to the wife's report. See Table 16.8 for the list of behaviours.

[4] According to the wife's report. Includes only currently married women. See Table 15.9.1 for the list of decisions.

[5] According to the wife's report. See Table 15.10.1 for the list of reasons.

Table 16.17 Help seeking to stop violence

Percent distribution of women age 15-49 who have ever experienced physical or sexual violence by their help-seeking behaviour, according to type of violence and background characteristics, Papua New Guinea DHS 2016-18

Type of violence/background characteristic	Sought help to stop violence	Never sought help but told someone	Never sought help, never told anyone	Missing/don't know	Total	Number of women who have ever experienced any physical or sexual violence
Type of violence experienced						
Physical only	29.6	14.2	36.8	19.4	100.0	1,494
Sexual only	18.1	6.5	61.9	13.6	100.0	160
Both physical and sexual	42.7	12.5	39.7	5.1	100.0	1,214
Age						
15-19	24.4	13.9	35.0	26.7	100.0	377
20-24	33.2	18.1	37.9	10.9	100.0	551
25-29	32.1	12.8	44.9	10.2	100.0	497
30-39	38.8	11.2	39.3	10.6	100.0	895
40-49	38.0	10.7	39.1	12.2	100.0	549
Residence						
Urban	40.0	12.3	32.0	15.7	100.0	385
Rural	33.7	13.2	40.6	12.6	100.0	2,483
Region						
Southern	38.2	10.9	36.7	14.2	100.0	585
Highlands	37.4	11.9	37.2	13.6	100.0	1,095
Momase	29.7	15.4	43.8	11.1	100.0	741
Islands	30.5	14.8	41.2	13.5	100.0	447
Province						
Western	42.7	15.3	36.5	5.5	100.0	66
Gulf	30.3	4.0	38.7	27.0	100.0	50
Central	33.7	12.7	45.5	8.1	100.0	110
National Capital District	43.3	9.7	32.8	14.1	100.0	92
Milne Bay	41.7	11.1	31.4	15.8	100.0	180
Northern	32.1	10.3	39.9	17.7	100.0	86
Southern Highlands	35.4	14.5	39.3	10.8	100.0	163
Enga	33.8	16.3	43.4	6.4	100.0	81
Western Highlands	39.5	17.8	24.3	18.4	100.0	111
Chimbu	27.6	19.6	43.0	9.8	100.0	126
Eastern Highlands	42.3	8.5	39.7	9.5	100.0	294
Morobe	22.9	23.0	45.0	9.0	100.0	308
Madang	36.6	7.7	39.9	15.8	100.0	180
East Sepik	32.7	14.6	44.8	7.9	100.0	154
West Sepik	33.8	6.9	45.5	13.8	100.0	99
Manus	44.6	18.4	29.3	7.7	100.0	34
New Ireland	34.3	17.8	38.7	9.2	100.0	96
East New Britain	29.2	20.9	45.1	4.8	100.0	122
West New Britain	34.0	8.2	40.9	16.8	100.0	110
Autonomous Region of Bougainville	18.4	9.9	43.3	28.5	100.0	86
Hela	39.0	7.8	28.6	24.5	100.0	195
Jiwaka	36.4	6.7	43.1	13.9	100.0	125
Marital status						
Never married	19.1	11.1	36.9	32.9	100.0	417
Married or living together	35.2	13.8	40.9	10.1	100.0	2,217
Divorced/separated/widowed	55.4	9.3	29.5	5.7	100.0	235
Number of living children						
0	26.8	11.5	38.6	23.1	100.0	671
1-2	36.0	16.7	38.5	8.8	100.0	911
3-4	39.9	11.7	39.1	9.3	100.0	785
5+	33.6	10.6	42.7	13.1	100.0	502
Employment						
Employed for cash	45.3	14.6	31.5	8.5	100.0	461
Employed not for cash	36.8	9.6	41.7	11.8	100.0	581
Not employed	31.0	13.8	40.8	14.4	100.0	1,820
Education						
No education	31.7	10.8	44.2	13.2	100.0	690
Elementary	39.3	12.3	39.6	8.8	100.0	107
Primary	34.6	12.8	38.3	14.4	100.0	1,258
Secondary	36.2	9.7	41.2	12.9	100.0	678
Higher	35.7	44.5	16.0	3.8	100.0	135
Wealth quintile						
Lowest	33.0	12.2	40.9	13.8	100.0	509
Second	36.5	10.4	38.2	14.9	100.0	549
Middle	33.5	12.8	42.5	11.2	100.0	541
Fourth	34.0	12.5	40.5	13.1	100.0	597
Highest	35.3	16.5	35.8	12.3	100.0	673
Total	34.5	13.0	39.4	13.0	100.0	2,868

Note: Total includes 7 women with missing information on employment.

Table 16.18 Sources for help to stop the violence

Percentage of women age 15-49 who have experienced physical or sexual violence and sought help by sources from which they sought help, according to the type of violence that women reported, Papua New Guinea DHS 2016-18

	Type of violence experienced			Physical or sexual violence
Source	Physical only	Sexual only	Both physical and sexual	
Own family	73.6	*	69.3	71.7
Husband/partner's family	10.4	*	16.6	13.4
Husband/partner	0.1	*	1.0	0.6
Boyfriend	0.0	*	1.0	0.5
Friend	8.4	*	12.5	10.7
Neighbour	7.7	*	14.2	11.0
Religious leader	7.1	*	11.6	9.3
Doctor/medical personnel	4.7	*	2.2	3.3
Police	5.0	*	14.9	10.1
Lawyer	0.1	*	0.4	0.3
Social work organisation	3.0	*	2.5	2.7
Other	3.6	*	5.6	4.7
Number of women who have sought help	442	29	519	990

Note: Women can report more than one source from which they sought help. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

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SAMPLE DESIGN

Appendix A

A.1 INTRODUCTION

This appendix describes the objectives of the survey, the overall sample size, survey domains, and any subsamples used. The 2016-18 Papua New Guinea Demographic and Health Survey (2016-18 PNG DHS) is a nationwide survey with a nationally representative sample of approximately 19,200 selected households. All women age 15-49 who are usual members of the selected households or who spent the night before the survey in the selected households were eligible for individual interviews. In half of the selected households, all men age 15-49 who are usual members of the selected households or spent the night before the survey in the selected households were eligible for individual interviews. In households selected for men interviews, all children under age 5 were eligible for height and weight measurement, and one woman age 15-49 was selected from each household to complete the domestic violence module.

The survey was designed to produce reliable estimates for key indicators at the national level as well as for urban and rural areas and each of the 22 provinces.

A.2 SAMPLE FRAME

The sampling frame used for the 2016-18 PNG DHS is a frame of Census Units (CUs) created for the National Population and Housing Census (NPHC) conducted in Papua New Guinea in 2011, provided by the National Statistical Office (NSO). Administratively, Papua New Guinea is divided into 22 provinces; each province is subdivided into urban and rural areas. The whole country is divided into districts distributed over the country provinces. Each district is divided into Local Level Governments (LLGs), which are divided into wards. Each ward is divided into CUs. The sampling frame contains information about the CU location, type of residence (urban or rural), and estimated number of residential households, and male/female population.

Table A.1 indicates the percentage distribution of households by province and by type of residence. The table indicates that Papua New Guinea's households are evenly distributed over the country's provinces, ranging from 0.75% in Manus province to about 10% in Eastern Highlands province. In Papua New Guinea, 10% of the households live in urban areas. Other than the predominantly urban National Capital District province, the percentage of urban household population varies from 19.6% in Western province to 0.47% in Hela province. **Table A.2** indicates the distribution of CUs and their average size in number of households by province and by type of residence. There are altogether 27,478 CUs, 1,961 CUs in urban areas, and 25,517 CUs in rural areas. The average CU size is 50 households; the urban CUs are a larger size, with an average of 70 households per CU, whereas the rural CUs have an average of 48 households per CU.

Table A.1 Household distribution

Distribution of residential households in the census frame by provinces and residence

Provinces	Residential households			Percentage	
	Urban	Rural	Total	Provinces	Urban
Western	6,135	25,187	31,322	2.28	19.59
Gulf	1,789	24,030	25,819	1.88	6.93
Central	1,204	40,105	41,309	3.01	2.91
National Capital District	47,559	0	47,559	3.46	100.00
Milne Bay	2,573	52,689	55,262	4.02	4.66
Northern (Oro)	2,593	31,524	34,117	2.48	7.60
Southern Highlands	2,215	85,826	88,041	6.40	2.52
Enga	2,068	74,353	76,421	5.56	2.71
Western Highlands	5,681	79,420	85,101	6.19	6.68
Chimbu (Simbu)	3,130	73,068	76,198	5.54	4.11
Eastern Highlands	5,231	131,761	136,992	9.97	3.82
Morobe	24,544	105,565	130,109	9.46	18.86
Madang	6,639	79,501	86,140	6.27	7.71
East Sepik	7,757	79,708	87,465	6.36	8.87
West Sepik (Sandaun)	3,522	41,412	44,934	3.27	7.84
Manus	1,478	8,882	10,360	0.75	14.27
New Ireland	2,336	27,298	29,634	2.16	7.88
East New Britain	2,268	56,190	58,458	4.25	3.88
West New Britain	6,314	44,430	50,744	3.69	12.44
Autonomous Region of Bougainville	1,736	46,497	48,233	3.51	3.60
Hela	310	64,961	65,271	4.75	0.47
Jiwaka	724	64,431	65,155	4.74	1.11
Papua New Guinea	137,806	1,236,838	1,374,644	100.00	10.02

Source: The 2011 National Population and Housing Census (NPHC) sampling frame provided by the NSO.

Table A.2 Census units

Distribution of Census Units and their average size in number of households by provinces and residence

Provinces	Number of CUs			Average CU size		
	Urban	Rural	Total	Urban	Rural	Total
Western	79	707	786	78	36	40
Gulf	38	493	531	47	49	49
Central	25	1,084	1,109	48	37	37
National Capital District	520	0	520	91	0	91
Milne Bay	46	1,123	1,169	56	47	47
Northern (Oro)	46	902	948	56	35	36
Southern Highlands	50	2,578	2,628	44	33	34
Enga	32	983	1,015	65	76	75
Western Highlands	70	1,075	1,145	81	74	74
Chimbu (Simbu)	70	1,365	1,435	45	54	53
Eastern Highlands	96	3,297	3,393	54	40	40
Morobe	354	2,075	2,429	69	51	54
Madang	122	1,586	1,708	54	50	50
East Sepik	122	1,359	1,481	64	59	59
West Sepik (Sandaun)	43	883	926	82	47	49
Manus	29	195	224	51	46	46
New Ireland	47	584	631	50	47	47
East New Britain	49	741	790	46	76	74
West New Britain	79	655	734	80	68	69
Autonomous Region of Bougainville	21	1,048	1,069	83	44	45
Hela	4	1,612	1,616	78	40	40
Jiwaka	19	1,172	1,191	38	55	55
Papua New Guinea	1,961	25,517	27,478	70	48	50

Source: The 2011 National Population and Housing Census (NPHC) sampling frame provided by the NSO.

A.3 SAMPLE DESIGN AND IMPLEMENTATION

The 2016-18 PNG DHS sample is stratified and selected in two stages. Each province is stratified into urban and rural areas yielding 43 sampling strata, since the National Capital District has no rural areas. Samples of CUs are selected independently in each stratum in two stages. Implicit stratification and proportional allocation are achieved at each of the lower administrative levels by sorting the sampling frame within each sampling stratum before sample selection, according to administrative units in different levels, and by using a probability proportional to size selection at the first stage of sampling.

In the first stage, 800 CUs were selected with probability proportional to the CU size and with independent selection in each sampling stratum with the sample allocation given in **Table A.3**. The CU size is the number of residential households residing in the CU according to the 2011 NPHC. A household listing operation, right before the data collection, was carried out in the selected sampling clusters, and the resulting lists of households served as sampling frame for the selection of households in the next stage.

In the last stage of selection, a fixed number of 24 households per cluster was selected with an equal probability systematic selection from the newly created household listing. The survey interviewer interviewed only the pre-selected households. No replacements and no changes of the pre-selected households were allowed in the implementing stages in order to prevent bias. All women age 15-49 who are usual members of the selected households or who spent the night before the survey in the selected households were eligible for the female survey. In half of the selected households, all men age 15-49 who are usual members of the households or who spent the night before the survey in the households were eligible for the male survey.

Table A.3 shows the allocation of selected households according to provinces and urban-rural areas, and **Table A.4** shows the expected number of completed women and men interviews according to provinces and urban-rural areas. Based on a fixed sample take of 24 households per cluster, a sample of 800 CUs was selected, 158 in urban areas and 642 in rural areas. The survey was designed so that a total of 19,200 residential households would be selected, 3,792 in urban areas and 15,408 in rural areas. The sample was expected to result in about 19,730 completed interviews with women age 15-49, 3,897 in urban areas and 15,833 in rural areas, and 9,706 completed interviews with men age 15-49, 1,802 in urban areas and 7,904 in rural areas.

Table A.3 Sample allocation of clusters and households by province

Sample allocation of clusters and households by provinces, according to residence, Papua New Guinea 2016-18

	Allocation of clusters			Allocation of households		
Provinces	Urban	Rural	Total	Urban	Rural	Total
Western	10	23	33	240	552	792
Gulf	6	27	33	144	648	792
Central	4	31	35	96	744	840
National Capital District	35	0	35	840	0	840
Milne Bay	5	31	36	120	744	864
Northern (Oro)	6	28	34	144	672	816
Southern Highlands	4	35	39	96	840	936
Enga	4	34	38	96	816	912
Western Highlands	7	32	39	168	768	936
Chimbu (Simbu)	5	33	38	120	792	912
Eastern Highlands	5	35	40	120	840	960
Morobe	12	28	40	288	672	960
Madang	7	31	38	168	744	912
East Sepik	8	31	39	192	744	936
West Sepik (Sandaun)	7	29	36	168	696	864
Manus	6	27	33	144	648	792
New Ireland	6	27	33	144	648	792
East New Britain	5	32	37	120	768	888
West New Britain	8	27	35	192	648	840
Autonomous Region of Bougainville	4	31	35	96	744	840
Hela	2	35	37	48	840	888
Jiwaka	2	35	37	48	840	888
Papua New Guinea	158	642	800	3,792	15,408	19,200

Table A.4 Sample allocation of expected completed interviews with women and men age 15-49 by province

Sample allocation expected completed interviews by provinces, according to residence, Papua New Guinea 2016-18

	Allocation of expected number of interviews with women age 15-49			Allocation of eexpected number of interviews with men age 15-49		
Provinces	Urban	Rural	Total	Urban	Rural	Total
Western	247	567	814	114	283	397
Gulf	148	666	814	69	332	401
Central	98	765	863	45	381	426
National Capital District	863	0	863	400	0	400
Milne Bay	123	765	888	57	381	438
Northern (Oro)	148	690	838	69	345	414
Southern Highlands	98	863	961	45	432	477
Enga	98	839	937	45	419	464
Western Highlands	173	788	961	80	394	474
Chimbu (Simbu)	123	814	937	57	406	463
Eastern Highlands	123	863	986	57	432	489
Morobe	296	690	986	136	345	481
Madang	173	765	938	80	381	461
East Sepik	198	765	963	91	381	472
West Sepik (Sandaun)	173	716	889	80	357	437
Manus	148	666	814	69	332	401
New Ireland	148	666	814	69	332	401
East New Britain	123	788	911	57	394	451
West New Britain	198	666	864	91	332	423
Autonomous Region of Bougainville	98	765	863	45	381	426
Hela	50	863	913	23	432	455
Jiwaka	50	863	913	23	432	455
Papua New Guinea	3,897	15,833	19,730	1,802	7,904	9,706

The sample allocations were derived using information obtained from the 2006 PNG DHS; the average number of women age 15-49 or men age 15-49 per household is 1.27; the household completion rate is 90%; the completion rate between women age 15-49 is 90% either in urban areas or in rural areas; the completion rate between men age 15-49 is 83.3% in urban areas and 89.9% in rural areas.

Table A.5 and **Table A.6** present response rates for women and men, respectively, by urban and rural areas and by regions. The male subsample constituted one in two of the households selected for the women's sample.

Table A.5 Sample implementation: Women

Percent distribution of households and eligible women age 15-49 by results of the household and individual interviews, and household, eligible women and overall women response rates, according to residence and province (unweighted), Papua New Guinea DHS 2016-18

	Residence		Region				
Result	Urban	Rural	Southern	Highlands	Momase	Islands	Total
Selected households							
Completed (C)	90.2	91.9	90.0	91.4	93.4	91.7	91.5
Household present but no competent respondent at home (HP)	2.1	1.8	2.6	2.1	1.1	1.6	1.9
Postponed (P)	0.2	0.1	0.2	0.2	0.1	0.0	0.1
Refused (R)	2.9	1.9	2.6	1.8	1.8	2.4	2.1
Dwelling not found (DNF)	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Household absent (HA)	2.7	3.4	3.7	3.0	2.7	3.6	3.2
Dwelling vacant/address not a dwelling (DV)	1.0	0.3	0.5	0.8	0.2	0.2	0.5
Dwelling destroyed (DD)	0.2	0.1	0.1	0.1	0.1	0.1	0.1
Other (O)	0.7	0.4	0.4	0.6	0.6	0.3	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of sampled households	3,652	13,853	4,496	5,554	3,452	4,003	17,505
Household response rate (HRR)[1]	94.5	95.9	94.4	95.7	96.9	95.8	95.6
Eligible women							
Completed (EWC)	81.2	84.5	84.0	77.9	85.3	89.1	83.6
Not at home (EWNH)	9.1	6.9	7.2	11.9	5.2	4.3	7.5
Postponed (EWP)	0.3	0.4	0.3	0.5	0.4	0.2	0.4
Refused (EWR)	4.9	3.3	3.9	3.9	3.9	3.1	3.7
Partly completed (EWPC)	0.6	0.5	0.5	0.5	0.5	0.4	0.5
Incapacitated (EWI)	0.8	1.3	1.4	0.9	1.3	1.0	1.1
Other (EWO)	3.2	3.1	2.8	4.4	3.3	1.9	3.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	4,981	13,194	5,215	5,294	3,587	4,079	18,175
Eligible women response rate (EWRR)[2]	81.2	84.5	84.0	77.9	85.3	89.1	83.6
Overall women response rate (ORR)[3]	76.8	81.1	79.3	74.5	82.7	85.4	80.0

[1] Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$\frac{100 * C}{C + HP + P + R + DNF}$$

[2] The eligible women response rate (EWRR) is equivalent to the percentage of interviews completed (EWC)
[3] The overall women response rate (OWRR) is calculated as:

$$OWRR = HRR * EWRR/100$$

Table A.6 Sample implementation: Men

Percent distribution of households and eligible men age 15-49 by results of the household and individual interviews, and household, eligible men and overall men response rates, according to urban-rural residence and region (unweighted), Papua New Guinea DHS 2016-18

	Residence		Region				
Result	Urban	Rural	Southern	Highlands	Momase	Islands	Total
Selected households							
Completed (C)	90.0	92.4	90.5	91.9	94.0	91.7	91.9
Household present but no competent respondent at home (HP)	2.2	1.5	2.0	1.8	1.0	1.4	1.6
Postponed (P)	0.2	0.1	0.1	0.2	0.1	0.1	0.1
Refused (R)	2.8	1.8	2.7	1.9	1.6	1.8	2.0
Dwelling not found (DNF)	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Household absent (HA)	3.0	3.4	3.8	2.7	2.6	4.1	3.3
Dwelling vacant/address not a dwelling (DV)	0.9	0.3	0.5	0.6	0.1	0.3	0.4
Dwelling destroyed (DD)	0.2	0.1	0.1	0.0	0.0	0.3	0.1
Other (O)	0.7	0.5	0.4	0.7	0.7	0.4	0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of sampled households	1,820	6,864	2,237	2,764	1,707	1,976	8,684
Household response rate (HRR)[1]	94.5	96.5	95.0	95.9	97.3	96.5	96.1
Eligible men							
Completed (EMC)	74.8	82.2	79.4	76.9	82.2	84.2	80.2
Not at home (EMNH)	12.7	8.0	10.2	11.4	7.0	6.9	9.2
Postponed (EMP)	0.7	0.4	0.3	0.7	0.7	0.4	0.5
Refused (EMR)	5.0	3.3	3.6	3.7	4.2	3.7	3.8
Partly completed (EMPC)	0.2	0.3	0.3	0.1	0.2	0.4	0.2
Incapacitated (EMI)	1.0	1.2	1.5	0.7	1.3	1.1	1.1
Other (EMO)	5.7	4.6	4.9	6.4	4.4	3.3	4.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of men	2,442	6,699	2,738	2,672	1,823	1,908	9,141
Eligible men response rate (EMRR)[2]	74.8	82.2	79.4	76.9	82.2	84.2	80.2
Overall men response rate (ORR)[3]	70.7	79.3	75.4	73.8	79.9	81.3	77.1

[1] Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$\frac{100 * C}{C + HP + P + R + DNF}$$

[2] The eligible men response rate (EMRR) is equivalent to the percentage of interviews completed (EMC)
[3] The overall men response rate (OMRR) is calculated as:

$$OMRR = HRR * EMRR/100$$

A.4 SAMPLE PROBABILITIES AND SAMPLING WEIGHTS

Due to the non-proportional allocation of sample to different provinces and to their urban and rural areas and the possible differences in response rates, sampling weight is required for any analysis using the 2016-18 PNG DHS data to ensure the actual representative of the survey results at national level and as well as at domain level. Because the 2016-18 PNG DHS sample is a two-stage stratified cluster sample, sampling weight was calculated based on sampling probabilities separately for each sampling stage and for each cluster. We use the following notations:

P_{1hi}: first-stage sampling probability of the i^{th} cluster in stratum h
P_{2hi}: second-stage sampling probability within the i^{th} cluster (households)
P_{hi}: overall sampling probability of any households of the i^{th} cluster in stratum h

Let a_h be the number of clusters selected in stratum h, M_{hi} the number of households according to the sampling frame in the i^{th} cluster, and $\sum M_{hi}$ the total number of structures in the stratum h. The probability of selecting the i^{th} cluster in stratum h is calculated as follows:

$$P_{1h\,i} = \frac{a_h M_{hi}}{\sum M_{hi}}$$

Let L_{hi} be the number of households listed in the household listing operation in cluster *i* in stratum *h*, let g_{hi} be the number of households selected in the cluster. The second stage's selection probability for each household in the cluster is calculated as follows:

$$P_{2hi} = \frac{g_{hi}}{L_{hi}}$$

The overall selection probability of each household in cluster *i* of stratum *h* is therefore the production of the two stages selection probabilities:

$$P_{hi} = P_{1hi} \times P_{2hi}$$

The sampling weight for each household in cluster i of stratum h is the inverse of its overall selection probability:

$$W_{hi} = 1 / P_{hi}$$

The design weights were adjusted for household non-response and individual non-response to get the sampling weights for households and for women and men, respectively. Non-response is adjusted at the sampling stratum level. For the household sampling weight, the household design weight is multiplied by the inverse of the household response rate, by stratum. For the women's individual sampling weight, the household sampling weight is multiplied by the inverse of the women's individual response rate, by stratum. After adjusting for non-response, the sampling weights are normalized to get the final standard weights that appear in the data files. The normalization process is done to obtain a total number of un-weighted cases equal to the total number of weighted cases at the national level, for the total number of households, women and men. Normalization is done by multiplying the sampling weight by the estimated sampling fraction obtained from the survey for the household weight and the individual woman's and man's weights. The normalized weights are relative weights, which are valid for estimating means, proportions, ratios, and rates, but are not valid for estimating population totals or for pooled data. A special weight for domestic violence was calculated that accounts for the selection of one woman per household.

ESTIMATES OF SAMPLING ERRORS

Appendix B

The estimates from a sample survey are affected by two types of errors: nonsampling errors and sampling errors. Nonsampling errors are the result of mistakes made in implementing data collection and data processing, such as failure to locate and interview the correct household, misunderstanding of the questions on the part of either the interviewer or the respondent, and data entry errors. Although numerous efforts were made during the implementation of the 2016-18 Papua New Guinea Demographic and Health Survey (PNG DHS) to minimize this type of error, nonsampling errors are impossible to avoid and difficult to evaluate statistically.

Sampling errors, on the other hand, can be evaluated statistically. The sample of respondents selected in the 2016-18 PNG DHS is only one of many samples that could have been selected from the same population, using the same design and expected size. Each of these samples would yield results that differ somewhat from the results of the actual sample selected. Sampling errors are a measure of the variability among all possible samples. Although the degree of variability is not known exactly, it can be estimated from the survey results.

Sampling error is usually measured in terms of the *standard error* for a particular statistic (mean, percentage, etc.), which is the square root of the variance. The standard error can be used to calculate confidence intervals within which the true value for the population can reasonably be assumed to fall. For example, for any given statistic calculated from a sample survey, the value of that statistic will fall within a range of plus or minus two times the standard error of that statistic in 95% of all possible samples of identical size and design.

If the sample of respondents had been selected as a simple random sample, it would have been possible to use straightforward formulas for calculating sampling errors. However, the 2016-18 PNG DHS sample is the result of a multi-stage stratified design, and, consequently, it was necessary to use more complex formulas. Sampling errors are computed in SAS, using programs developed by ICF. These programs use the Taylor linearization method to estimate variances for survey estimates that are means, proportions, or ratios. The Jackknife repeated replication method is used for variance estimation of more complex statistics such as fertility and mortality rates.

The Taylor linearization method treats any percentage or average as a ratio estimate, $r = y/x$, where y represents the total sample value for variable y, and x represents the total number of cases in the group or subgroup under consideration. The variance of r is computed using the formula given below, with the standard error being the square root of the variance:

$$SE^2(r) = var(r) = \frac{1-f}{x^2}\sum_{h=1}^{H}\left[\frac{m_h}{m_h-1}\left(\sum_{i=1}^{m_h} z_{hi}^2 - \frac{z_h^2}{m_h}\right)\right]$$

in which

$$z_{hi} = y_{hi} - rx_{hi}\text{, and } z_h = y_h - rx_h$$

where h represents the stratum which varies from 1 to H,
m_h is the total number of clusters selected in the h^{th} stratum,
y_{hi} is the sum of the weighted values of variable y in the i^{th} cluster in the h^{th} stratum,
x_{hi} is the sum of the weighted number of cases in the i^{th} cluster in the h^{th} stratum, and
f is the overall sampling fraction, which is so small that it is ignored.

The Jackknife repeated replication method derives estimates of complex rates from each of several replications of the parent sample, and calculates standard errors for these estimates using simple formulas. Each replication considers *all but one* cluster in the calculation of the estimates. Pseudo-independent replications are thus created. In the 2016-18 PNG DHS there were 767 non-empty clusters. Hence, 767 replications were created. The variance of a rate r is calculated as follows:

$$SE^2(r) = var(r) = \frac{1}{k(k-1)} \sum_{i=1}^{k} (r_i - r)^2$$

in which

$$r_i = kr - (k-1)r_{(i)}$$

where r is the estimate computed from the full sample of 767 clusters,
$r_{(i)}$ is the estimate computed from the reduced sample of 766 clusters (i^{th} cluster excluded), and
k is the total number of clusters.

In addition to the standard error, the design effect (DEFT) for each estimate is calculated. The design effect is defined as the ratio between the standard error using the given sample design and the standard error that would result if a simple random sample had been used. A DEFT value of 1.0 indicates that the sample design is as efficient as a simple random sample, while a value greater than 1.0 indicates the increase in the sampling error is due to the use of a more complex and less statistically efficient design. Relative standard errors and confidence limits for the estimates are also calculated.

Sampling errors for the 2016-18 PNG DHS are calculated for selected variables considered to be of primary interest. The results are presented in this appendix for the country as a whole, for urban and rural areas, and for each of the four regions. For each variable, the type of statistic (mean, proportion, or rate) and the base population are given in Table B.1. Tables B.2 through B.8 present the value of the statistic (R), its standard error (SE), the number of unweighted (N) and weighted (WN) cases, the design effect (DEFT), the relative standard error (SE/R), and the 95% confidence limits (R±2SE), for each selected variable. The DEFT is considered undefined when the standard error considering a simple random sample is zero (when the estimate is close to 0 or 1).

The confidence interval (e.g., as calculated for *the ideal number of children*) can be interpreted as follows: the overall average from the national sample is 3.041 and its standard error is 0.027. Therefore, to obtain the 95% confidence limits, one adds and subtracts twice the standard error to the sample estimate, i.e., 3.041 ± 2×0.027. There is a high probability (95%) that the true ideal number of children is between 2.986 and 3.096.

For the total sample, the value of the DEFT, averaged over all variables, is about 2. This means that, due to multi-stage clustering of the sample, the average standard error is increased by a factor of 2 over that in an equivalent simple random sample.

Table B.1 List of selected variables for sampling errors, Papua New Guinea DHS 2016-18

Variable	Estimate	Base population
HOUSEHOLDS AND POPULATION		
Ownership of at least one ITN	Proportion	Households
De facto population with access to an ITN	Proportion	De facto household population
Household population that slept under an ITN last night	Proportion	De facto household population
WOMEN		
Urban residence	Proportion	Women 15-49
Literacy	Proportion	Women 15-49
No education	Proportion	Women 15-49
Secondary education or higher	Proportion	Women 15-49
Never married/never in union	Proportion	Women 15-49
Currently married/in union	Proportion	Women 15-49
Married before age 18	Proportion	Women 20-49
Had sexual intercourse before age 18	Proportion	Women 20-49
Currently pregnant	Proportion	Women 15-49
Know any contraceptive method	Proportion	Currently married women 15-49
Know a modern method	Proportion	Currently married women 15-49
Currently using any method	Proportion	Currently married women 15-49
Currently using a modern method	Proportion	Currently married women 15-49
Currently using pill	Proportion	Currently married women 15-49
Currently using male condoms	Proportion	Currently married women 15-49
Currently using injectables	Proportion	Currently married women 15-49
Currently using implants	Proportion	Currently married women 15-49
Currently using female sterilisation	Proportion	Currently married women 15-49
Currently using withdrawal	Proportion	Currently married women 15-49
Currently using rhythm	Proportion	Currently married women 15-49
Want no more children	Proportion	Currently married women 15-49
Want to delay next birth at least 2 years	Proportion	Currently married women 15-49
Ideal number of children	Mean	Women 15-49
Mothers protected against tetanus for last birth	Proportion	Women with a live birth in last 5 years
Births with skilled attendant at delivery	Proportion	Births occurring 1-59 months before survey
Received 3+ doses of SP/Fansidar	Proportion	Last birth of women 15-49 with live births in the last 2 years
Treated with ORS	Proportion	Children under 5 with diarrhoea in past 2 weeks
Sought medical treatment for diarrhoea	Proportion	Children under 5 with diarrhoea in past 2 weeks
Ever had vaccination card	Proportion	Children 12-23 months
Received BCG vaccination	Proportion	Children 12-23 months
Received birth dose HepB vaccination	Proportion	Children 12-23 months
Received DPT-HepB-Hib vaccination (3 doses)	Proportion	Children 12-23 months
Received inactivated polio vaccine (1 dose)	Proportion	Children 12-23 months
Received polio vaccination (3 doses)	Proportion	Children 12-23 months
Received pneumococcal vaccination (3 doses)	Proportion	Children 12-23 months
Received measles 1 vaccination	Proportion	Children 12-23 months
Received all basic vaccinations (12-23 months)	Proportion	Children 12-23 months
Received all age appropriate vaccinations (12-23 months)	Proportion	Children 12-23 months
Had 2+ sexual partners in past 12 months	Proportion	Women 15-49
Abstinence among young people (never had sex)	Proportion	Never-married women 15-24
Discriminatory attitudes towards people with HIV	Proportion	Women who have heard of HIV/AIDS
Total fertility rate (3 years)	Rate	Women-years of exposure to childbearing
Neonatal mortality rate[1]	Rate	Children exposed to the risk of mortality
Post-neonatal mortality rate[1]	Rate	Children exposed to the risk of mortality
Infant mortality rate[1]	Rate	Children exposed to the risk of mortality
Child mortality rate[1]	Rate	Children exposed to the risk of mortality
Under-5 mortality rate[1]	Rate	Children exposed to the risk of mortality
MEN		
Urban residence	Proportion	Men 15-49
Literacy	Proportion	Men 15-49
No education	Proportion	Men 15-49
Secondary education or higher	Proportion	Men 15-49
Never married/never in union	Proportion	Men 15-49
Currently married/in union	Proportion	Men 15-49
Had sexual intercourse before age 18	Proportion	Men 20-49
Know any contraceptive method	Proportion	Currently married men 15-49
Know a modern method	Proportion	Currently married men 15-49
Want no more children	Proportion	Currently married men 15-49
Want to delay next birth at least 2 years	Proportion	Currently married men 15-49
Ideal number of children	Mean	Men 15-49
Had 2+ sexual partners in past 12 months	Proportion	Men 15-49
Abstinence among young people (never had sex)	Proportion	Never-married men 15-24
Paid for sexual intercourse in past 12 months	Proportion	Men 15-49
Discriminatory attitudes towards people with HIV	Proportion	Men who have heard of HIV/AIDS

[1] The mortality rates are calculated for 5 years before the survey for the national sample, urban, and rural samples and for 10 years before the survey for the regions.

Table B.2 Sampling errors: National sample, Papua New Guinea DHS 2016-18

Variable	Value (R)	Standard error (SE)	Number of cases: Un-weighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: Lower (R-2SE)	Confidence limits: Upper (R+2SE)
HOUSEHOLDS AND POPULATION								
Ownership of at least one ITN	0.685	0.013	16,021	16,021	3.425	0.018	0.660	0.710
De facto population with access to an ITN	0.579	0.011	81,816	79,353	3.073	0.020	0.556	0.602
Household population that slept under an ITN last night	0.460	0.013	81,816	79,353	3.407	0.029	0.433	0.486
WOMEN								
Urban residence	0.133	0.009	15,198	15,198	3.432	0.071	0.114	0.152
Literacy	0.664	0.012	15,198	15,198	3.136	0.018	0.640	0.688
No education	0.230	0.011	15,198	15,198	3.168	0.047	0.208	0.251
Secondary or higher education	0.267	0.019	15,198	15,198	5.207	0.070	0.230	0.305
Never married (never in union)	0.261	0.007	15,198	15,198	2.012	0.027	0.247	0.275
Currently married (in union)	0.661	0.009	15,198	15,198	2.312	0.013	0.644	0.679
Married before age 18	0.284	0.007	12,218	12,253	1.681	0.024	0.270	0.298
Had sexual intercourse before age 18	0.338	0.009	12,218	12,253	2.120	0.027	0.319	0.356
Currently pregnant	0.051	0.003	15,198	15,198	1.702	0.060	0.045	0.057
Know any contraceptive method	0.876	0.010	9,943	10,052	3.143	0.012	0.855	0.897
Know a modern method	0.860	0.011	9,943	10,052	3.129	0.013	0.838	0.881
Currently using any method	0.367	0.011	9,943	10,052	2.300	0.030	0.345	0.389
Currently using a modern method	0.305	0.010	9,943	10,052	2.253	0.034	0.284	0.326
Currently using pill	0.025	0.004	9,943	10,052	2.364	0.148	0.018	0.033
Currently using male condoms	0.006	0.001	9,943	10,052	1.396	0.185	0.004	0.008
Currently using injectables	0.091	0.006	9,943	10,052	1.913	0.061	0.080	0.102
Currently using implants	0.088	0.005	9,943	10,052	1.601	0.052	0.079	0.097
Currently using female sterilisation	0.080	0.006	9,943	10,052	2.156	0.073	0.068	0.092
Currently using withdrawal	0.015	0.002	9,943	10,052	1.346	0.110	0.012	0.018
Currently using rhythm	0.032	0.003	9,943	10,052	1.555	0.086	0.026	0.037
Want no more children	0.462	0.011	9,943	10,052	2.155	0.023	0.440	0.483
Want to delay next birth at least 2 years	0.163	0.005	9,943	10,052	1.484	0.034	0.152	0.174
Ideal number of children	3.041	0.027	13,602	13,246	1.877	0.009	2.986	3.096
Mothers protected against tetanus for last birth	0.380	0.013	6,652	6,759	2.274	0.035	0.353	0.407
Births with skilled attendant at delivery	0.564	0.019	9,514	9,761	3.114	0.033	0.527	0.602
Received 3+ doses of SP/Fansidar	0.235	0.015	3,605	3,642	2.129	0.064	0.205	0.264
Treated with ORS	0.300	0.024	1,313	1,315	1.741	0.079	0.253	0.347
Sought medical treatment for diarrhoea	0.384	0.025	1,313	1,315	1.694	0.064	0.335	0.433
Ever had vaccination card	0.801	0.016	1,816	1,763	1.676	0.020	0.768	0.833
Received BCG vaccination	0.694	0.020	1,816	1,763	1.797	0.029	0.654	0.734
Received birth dose HepB vaccination	0.575	0.021	1,816	1,763	1.773	0.037	0.533	0.617
Received DPT-HepB-Hib vaccination (3 doses)	0.417	0.020	1,816	1,763	1.653	0.047	0.377	0.456
Received inactivated polio vaccine (1 dose)	0.391	0.018	1,816	1,763	1.567	0.047	0.354	0.428
Received polio vaccination (3 doses)	0.422	0.019	1,816	1,763	1.634	0.046	0.383	0.461
Received pneumococcal vaccination (3 doses)	0.354	0.018	1,816	1,763	1.547	0.051	0.318	0.389
Received measles 1 vaccination	0.587	0.022	1,816	1,763	1.887	0.038	0.542	0.632
Received all basic vaccinations (12-23 months)	0.353	0.018	1,816	1,763	1.594	0.052	0.316	0.389
Received all age appropriate vaccinations (12-23)	0.202	0.015	1,816	1,763	1.579	0.076	0.172	0.233
Had 2+ sexual partners in past 12 months	0.013	0.002	15,198	15,198	2.016	0.140	0.010	0.017
Abstinence among never-married youth (never had sex)	0.789	0.015	3,632	3,511	2.175	0.019	0.760	0.818
Discriminatory attitudes towards people living with HIV	0.440	0.013	12,454	12,443	2.996	0.030	0.413	0.466
Total fertility rate (last 3 years)	4.196	0.115	42,864	43,013	2.238	0.027	3.966	4.425
Neonatal mortality (last 0-4 years)	20.388	2.111	9,548	9,741	1.445	0.104	16.166	24.611
Post-neonatal mortality (last 0-4 years)	12.783	1.887	9,560	9,758	1.630	0.148	9.009	16.556
Infant mortality (last 0-4 years)	33.171	2.915	9,551	9,744	1.532	0.088	27.342	39.000
Child mortality (last 0-4 years)	15.891	2.101	9,386	9,517	1.653	0.132	11.689	20.093
Under-5 mortality (last 0-4 years)	48.535	3.487	9,606	9,815	1.515	0.072	41.562	55.508
MEN								
Urban residence	0.133	0.010	7,333	7,333	2.460	0.073	0.114	0.153
Literacy	0.799	0.011	7,333	7,333	2.368	0.014	0.777	0.822
No education	0.128	0.009	7,333	7,333	2.430	0.074	0.109	0.147
Secondary or higher education	0.347	0.016	7,333	7,333	2.858	0.046	0.315	0.379
Never married (in union)	0.425	0.009	7,333	7,333	1.558	0.021	0.407	0.443
Currently married (in union)	0.538	0.010	7,333	7,333	1.763	0.019	0.518	0.559
Had first sexual intercourse before age 18	0.291	0.011	5,831	5,864	1.807	0.037	0.270	0.313
Knows any contraceptive method	0.915	0.010	3,931	3,947	2.280	0.011	0.894	0.935
Knows any modern contraceptive method	0.894	0.012	3,931	3,947	2.392	0.013	0.871	0.918
Want no more children	0.399	0.012	3,931	3,947	1.540	0.030	0.375	0.423
Want to delay birth at least 2 years	0.233	0.009	3,931	3,947	1.396	0.040	0.214	0.252
Ideal number of children	3.571	0.045	6,816	6,727	1.843	0.013	3.481	3.662
Had 2+ sexual partners in past 12 months	0.079	0.007	7,333	7,333	2.264	0.090	0.065	0.093
Abstinence among never married youth (never had sex)	0.603	0.020	2,414	2,373	2.018	0.033	0.562	0.643
Had paid sex in past 12 months	0.025	0.003	7,333	7,333	1.485	0.108	0.020	0.030
Discriminatory attitudes towards people living with HIV	0.433	0.013	6,575	6,602	2.046	0.029	0.408	0.458

Table B.3 Sampling errors: Urban sample, Papua New Guinea DHS 2016-18

Variable	Value	Standard error	Number of cases: Un-weighted	Number of cases: Weighted	Design effect	Relative error	Confidence limits: Lower	Confidence limits: Upper
	(R)	(SE)	(N)	(WN)	(DEFT)	(SE/R)	(R-2SE)	(R+2SE)
HOUSEHOLDS AND POPULATION								
Ownership of at least one ITN	0.715	0.023	3,295	1,521	2.861	0.032	0.669	0.760
De facto population with access to an ITN	0.568	0.020	19,730	9,219	2.561	0.036	0.527	0.609
Household population that slept under an ITN last night	0.464	0.031	19,730	9,219	3.640	0.067	0.402	0.525
WOMEN								
Urban residence	1.000	0.000	4,045	2,018	0.000	0.000	1.000	1.000
Literacy	0.848	0.019	4,045	2,018	3.299	0.022	0.811	0.886
No education	0.069	0.012	4,045	2,018	3.049	0.177	0.044	0.093
Secondary or higher education	0.523	0.028	4,045	2,018	3.529	0.053	0.468	0.579
Never married (never in union)	0.324	0.012	4,045	2,018	1.564	0.036	0.301	0.347
Currently married (in union)	0.595	0.012	4,045	2,018	1.541	0.020	0.571	0.618
Married before age 18	0.215	0.011	3,212	1,602	1.547	0.052	0.192	0.237
Had sexual intercourse before age 18	0.261	0.016	3,212	1,602	2.118	0.063	0.228	0.294
Currently pregnant	0.044	0.005	4,045	2,018	1.673	0.123	0.033	0.055
Know any contraceptive method	0.984	0.003	2,435	1,200	1.302	0.003	0.977	0.991
Know a modern method	0.981	0.004	2,435	1,200	1.257	0.004	0.973	0.988
Currently using any method	0.502	0.016	2,435	1,200	1.546	0.031	0.470	0.533
Currently using a modern method	0.415	0.016	2,435	1,200	1.581	0.038	0.383	0.446
Currently using pill	0.035	0.005	2,435	1,200	1.465	0.157	0.024	0.045
Currently using male condoms	0.012	0.004	2,435	1,200	1.781	0.325	0.004	0.020
Currently using injectables	0.111	0.008	2,435	1,200	1.266	0.073	0.095	0.127
Currently using implants	0.096	0.010	2,435	1,200	1.648	0.102	0.076	0.116
Currently using female sterilisation	0.144	0.013	2,435	1,200	1.892	0.093	0.117	0.171
Currently using withdrawal	0.032	0.007	2,435	1,200	1.910	0.213	0.018	0.045
Currently using rhythm	0.051	0.007	2,435	1,200	1.474	0.130	0.037	0.064
Want no more children	0.514	0.022	2,435	1,200	2.180	0.043	0.470	0.559
Want to delay next birth at least 2 years	0.181	0.012	2,435	1,200	1.486	0.064	0.158	0.205
Ideal number of children	2.841	0.042	3,786	1,912	1.707	0.015	2.758	2.925
Mothers protected against tetanus for last birth	0.501	0.033	1,558	761	2.604	0.066	0.435	0.567
Births with skilled attendant at delivery	0.865	0.039	2,116	1,017	4.668	0.045	0.786	0.943
Received 3+ doses of SP/Fansidar	0.273	0.024	825	409	1.566	0.088	0.225	0.321
Treated with ORS	0.423	0.060	450	214	2.405	0.141	0.304	0.543
Sought medical treatment for diarrhoea	0.515	0.053	450	214	2.135	0.104	0.408	0.622
Ever had vaccination card	0.927	0.016	416	215	1.264	0.017	0.896	0.958
Received BCG vaccination	0.909	0.016	416	215	1.177	0.018	0.877	0.942
Received birth dose HepB vaccination	0.810	0.026	416	215	1.404	0.032	0.758	0.863
Received DPT-HepB-Hib vaccination (3 doses)	0.574	0.063	416	215	2.641	0.110	0.447	0.700
Received inactivated polio vaccine (1 dose)	0.501	0.047	416	215	1.925	0.093	0.408	0.594
Received polio vaccination (3 doses)	0.608	0.062	416	215	2.620	0.102	0.484	0.732
Received pneumococcal vaccination (3 doses)	0.499	0.042	416	215	1.729	0.084	0.415	0.582
Received measles 1 vaccination	0.746	0.039	416	215	1.839	0.052	0.668	0.824
Received all basic vaccinations (12-23 months)	0.488	0.057	416	215	2.369	0.117	0.373	0.602
Received all age appropriate vaccinations (12-23)	0.273	0.035	416	215	1.635	0.128	0.203	0.343
Had 2+ sexual partners in past 12 months	0.018	0.003	4,045	2,018	1.465	0.169	0.012	0.024
Abstinence among never-married youth (never had sex)	0.785	0.021	1,092	574	1.689	0.027	0.743	0.827
Discriminatory attitudes towards people living with HIV	0.458	0.016	3,860	1,927	1.957	0.034	0.427	0.489
Total fertility rate (last 3 years)	3.540	0.186	11,396	5,693	1.718	0.052	3.169	3.912
Neonatal mortality (last 0-9 years)	25.092	2.955	3,980	1,946	1.161	0.118	19.183	31.001
Post-neonatal mortality (last 0-9 years)	8.426	2.072	3,974	1,945	1.383	0.246	4.282	12.570
Infant mortality (last 0-9 years)	33.518	3.756	3,981	1,946	1.217	0.112	26.006	41.030
Child mortality (last 0-9 years)	11.458	2.898	3,875	1,907	1.644	0.253	5.661	17.255
Under-5 mortality (last 0-9 years)	44.592	4.193	3,984	1,950	1.208	0.094	36.205	52.979
MEN								
Urban residence	1.000	0.000	1,826	976	na	na	na	na
Literacy	0.918	0.014	1,826	976	2.131	0.015	0.890	0.945
No education	0.041	0.009	1,826	976	1.952	0.222	0.023	0.059
Secondary or higher education	0.604	0.026	1,826	976	2.225	0.042	0.553	0.655
Never married (in union)	0.507	0.014	1,826	976	1.154	0.027	0.480	0.534
Currently married (in union)	0.451	0.015	1,826	976	1.277	0.033	0.421	0.480
Had first sexual intercourse before age 18	0.329	0.023	1,432	760	1.839	0.070	0.283	0.374
Knows any contraceptive method	0.982	0.005	866	440	1.187	0.005	0.971	0.993
Knows any modern contraceptive method	0.976	0.006	866	440	1.256	0.007	0.963	0.989
Want no more children	0.377	0.024	866	440	1.481	0.065	0.329	0.426
Want to delay birth at least 2 years	0.236	0.023	866	440	1.579	0.097	0.191	0.282
Ideal number of children	3.100	0.077	1,739	938	1.901	0.025	2.945	3.254
Had 2+ sexual partners in past 12 months	0.111	0.013	1,826	976	1.708	0.113	0.086	0.136
Abstinence among never married youth (never had sex)	0.492	0.035	655	363	1.774	0.071	0.422	0.561
Had paid sex in past 12 months	0.031	0.005	1,826	976	1.188	0.156	0.021	0.040
Discriminatory attitudes towards people living with HIV	0.407	0.027	1,773	953	2.280	0.065	0.354	0.461

Table B.4 Sampling errors: Rural sample, Papua New Guinea DHS 2016-18

Variable	Value (R)	Standard error (SE)	Number of cases: Un-weighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: Lower (R-2SE)	Confidence limits: Upper (R+2SE)
HOUSEHOLDS AND POPULATION								
Ownership of at least one ITN	0.682	0.014	12,726	14,500	3.303	0.020	0.654	0.709
De facto population with access to an ITN	0.580	0.013	62,086	70,134	3.034	0.022	0.555	0.605
Household population that slept under an ITN last night	0.459	0.014	62,086	70,134	3.310	0.031	0.431	0.488
WOMEN								
Urban residence	0.000	0.000	11,153	13,180	na	na	na	na
Literacy	0.636	0.014	11,153	13,180	3.072	0.022	0.608	0.664
No education	0.254	0.013	11,153	13,180	3.075	0.050	0.229	0.280
Secondary or higher education	0.228	0.022	11,153	13,180	5.569	0.097	0.184	0.273
Never married (never in union)	0.251	0.008	11,153	13,180	1.977	0.032	0.235	0.268
Currently married (in union)	0.672	0.010	11,153	13,180	2.303	0.015	0.651	0.692
Married before age 18	0.294	0.008	9,006	10,651	1.574	0.026	0.279	0.309
Had sexual intercourse before age 18	0.349	0.010	9,006	10,651	1.987	0.029	0.329	0.369
Currently pregnant	0.052	0.003	11,153	13,180	1.626	0.066	0.045	0.059
Know any contraceptive method	0.861	0.012	7,508	8,852	2.973	0.014	0.838	0.885
Know a modern method	0.843	0.012	7,508	8,852	2.971	0.015	0.818	0.868
Currently using any method	0.349	0.012	7,508	8,852	2.213	0.035	0.325	0.373
Currently using a modern method	0.290	0.011	7,508	8,852	2.191	0.040	0.267	0.313
Currently using pill	0.024	0.004	7,508	8,852	2.360	0.174	0.016	0.032
Currently using male condoms	0.005	0.001	7,508	8,852	1.341	0.223	0.003	0.007
Currently using injectables	0.088	0.006	7,508	8,852	1.874	0.070	0.076	0.100
Currently using implants	0.087	0.005	7,508	8,852	1.535	0.057	0.077	0.097
Currently using female sterilisation	0.071	0.006	7,508	8,852	2.116	0.088	0.059	0.084
Currently using withdrawal	0.013	0.002	7,508	8,852	1.224	0.125	0.009	0.016
Currently using rhythm	0.029	0.003	7,508	8,852	1.514	0.100	0.023	0.035
Want no more children	0.455	0.012	7,508	8,852	2.029	0.026	0.431	0.478
Want to delay next birth at least 2 years	0.160	0.006	7,508	8,852	1.429	0.038	0.148	0.172
Ideal number of children	3.075	0.031	9,816	11,335	1.785	0.010	3.012	3.138
Mothers protected against tetanus for last birth	0.364	0.015	5,094	5,998	2.195	0.041	0.335	0.394
Births with skilled attendant at delivery	0.529	0.020	7,398	8,745	2.941	0.039	0.489	0.570
Received 3+ doses of SP/Fansidar	0.230	0.017	2,780	3,233	2.071	0.072	0.196	0.263
Treated with ORS	0.276	0.025	863	1,100	1.578	0.090	0.226	0.325
Sought medical treatment for diarrhoea	0.358	0.026	863	1,100	1.552	0.074	0.306	0.411
Ever had vaccination card	0.783	0.018	1,400	1,548	1.594	0.024	0.746	0.820
Received BCG vaccination	0.664	0.022	1,400	1,548	1.708	0.034	0.619	0.709
Received birth dose HepB vaccination	0.542	0.024	1,400	1,548	1.719	0.044	0.495	0.590
Received DPT-HepB-Hib vaccination (3 doses)	0.395	0.021	1,400	1,548	1.519	0.053	0.353	0.436
Received inactivated polio vaccine (1 dose)	0.376	0.020	1,400	1,548	1.487	0.053	0.336	0.416
Received polio vaccination (3 doses)	0.396	0.020	1,400	1,548	1.501	0.052	0.355	0.437
Received pneumococcal vaccination (3 doses)	0.334	0.020	1,400	1,548	1.483	0.059	0.294	0.373
Received measles 1 vaccination	0.565	0.025	1,400	1,548	1.818	0.044	0.515	0.615
Received all basic vaccinations (12-23 months)	0.334	0.020	1,400	1,548	1.479	0.058	0.295	0.373
Received all age appropriate vaccinations (12-23)	0.192	0.017	1,400	1,548	1.515	0.087	0.159	0.226
Had 2+ sexual partners in past 12 months	0.013	0.002	11,153	13,180	2.009	0.168	0.008	0.017
Abstinence among never-married youth (never had sex)	0.790	0.017	2,540	2,936	2.117	0.022	0.756	0.824
Discriminatory attitudes towards people living with HIV	0.436	0.015	8,594	10,516	2.880	0.035	0.405	0.467
Total fertility rate (last 3 years)	4.293	0.132	31,468	37,321	2.196	0.031	4.028	4.557
Neonatal mortality (last 0-4 years)	20.304	2.302	7,422	8,724	1.369	0.113	15.700	24.908
Post-neonatal mortality (last 0-4 years)	13.535	2.082	7,434	8,739	1.524	0.154	9.371	17.699
Infant mortality (last 0-4 years)	33.839	3.205	7,424	8,726	1.447	0.095	27.429	40.250
Child mortality (last 0-4 years)	16.111	2.291	7,316	8,516	1.549	0.142	11.529	20.692
Under-5 mortality (last 0-4 years)	49.405	3.830	7,472	8,791	1.430	0.078	41.745	57.064
MEN								
Urban residence	0.000	0.000	5,507	6,357	na	na	na	na
Literacy	0.781	0.013	5,507	6,357	2.306	0.016	0.756	0.807
No education	0.142	0.011	5,507	6,357	2.334	0.077	0.120	0.164
Secondary or higher education	0.308	0.019	5,507	6,357	2.980	0.060	0.271	0.345
Never married (in union)	0.412	0.010	5,507	6,357	1.528	0.025	0.392	0.432
Currently married (in union)	0.552	0.012	5,507	6,357	1.723	0.021	0.529	0.575
Had first sexual intercourse before age 18	0.286	0.012	4,399	5,104	1.758	0.042	0.262	0.310
Knows any contraceptive method	0.906	0.011	3,065	3,507	2.177	0.013	0.883	0.929
Knows any modern contraceptive method	0.884	0.013	3,065	3,507	2.289	0.015	0.857	0.910
Want no more children	0.402	0.013	3,065	3,507	1.494	0.033	0.376	0.429
Want to delay birth at least 2 years	0.233	0.010	3,065	3,507	1.336	0.044	0.212	0.253
Ideal number of children	3.648	0.052	5,077	5,788	1.785	0.014	3.544	3.752
Had 2+ sexual partners in past 12 months	0.074	0.008	5,507	6,357	2.297	0.109	0.058	0.091
Abstinence among never married youth (never had sex)	0.623	0.023	1,759	2,009	2.012	0.037	0.576	0.669
Had paid sex in past 12 months	0.024	0.003	5,507	6,357	1.465	0.125	0.018	0.030
Discriminatory attitudes towards people living with HIV	0.437	0.014	4,802	5,649	1.960	0.032	0.409	0.465

Table B.5 Sampling errors: Southern region sample, Papua New Guinea DHS 2016-18

Variable	Value	Standard error	Number of cases		Design effect	Relative error	Confidence limits	
			Un-weighted	Weighted			Lower	Upper
	(R)	(SE)	(N)	(WN)	(DEFT)	(SE/R)	(R-2SE)	(R+2SE)
HOUSEHOLDS AND POPULATION								
Ownership of at least one ITN	0.841	0.015	4,048	2,681	2.593	0.018	0.811	0.871
De facto population with access to an ITN	0.701	0.015	22,928	14,957	2.302	0.022	0.671	0.731
Household population that slept under an ITN last night	0.548	0.019	22,928	14,957	2.462	0.034	0.510	0.586
WOMEN								
Urban residence	0.258	0.025	4,380	2,899	3.789	0.097	0.208	0.309
Literacy	0.748	0.017	4,380	2,899	2.645	0.023	0.713	0.783
No education	0.122	0.012	4,380	2,899	2.392	0.097	0.098	0.145
Secondary or higher education	0.313	0.020	4,380	2,899	2.830	0.063	0.273	0.353
Never married (never in union)	0.288	0.009	4,380	2,899	1.355	0.032	0.270	0.307
Currently married (in union)	0.644	0.010	4,380	2,899	1.399	0.016	0.624	0.664
Married before age 18	0.237	0.011	3,468	2,309	1.578	0.048	0.214	0.259
Had sexual intercourse before age 18	0.336	0.012	3,468	2,309	1.513	0.036	0.312	0.360
Currently pregnant	0.048	0.004	4,380	2,899	1.188	0.080	0.041	0.056
Know any contraceptive method	0.906	0.011	2,822	1,867	1.968	0.012	0.884	0.928
Know a modern method	0.889	0.012	2,822	1,867	1.979	0.013	0.865	0.912
Currently using any method	0.489	0.014	2,822	1,867	1.512	0.029	0.460	0.517
Currently using a modern method	0.411	0.014	2,822	1,867	1.550	0.035	0.382	0.440
Currently using pill	0.025	0.004	2,822	1,867	1.538	0.182	0.016	0.034
Currently using male condoms	0.008	0.002	2,822	1,867	1.319	0.269	0.004	0.013
Currently using injectables	0.123	0.008	2,822	1,867	1.307	0.066	0.107	0.139
Currently using implants	0.121	0.011	2,822	1,867	1.814	0.092	0.099	0.144
Currently using female sterilisation	0.120	0.010	2,822	1,867	1.645	0.084	0.100	0.140
Currently using withdrawal	0.018	0.003	2,822	1,867	1.208	0.168	0.012	0.024
Currently using rhythm	0.034	0.007	2,822	1,867	1.954	0.196	0.021	0.047
Want no more children	0.551	0.013	2,822	1,867	1.395	0.024	0.525	0.577
Want to delay next birth at least 2 years	0.163	0.009	2,822	1,867	1.363	0.058	0.144	0.181
Ideal number of children	2.929	0.042	4,105	2,739	1.632	0.014	2.845	3.014
Mothers protected against tetanus for last birth	0.404	0.016	1,952	1,327	1.440	0.039	0.373	0.436
Births with skilled attendant at delivery	0.644	0.025	2,786	1,914	2.370	0.039	0.594	0.694
Received 3+ doses of SP/Fansidar	0.245	0.018	1,078	727	1.409	0.075	0.208	0.282
Treated with ORS	0.391	0.034	398	233	1.216	0.086	0.324	0.458
Sought medical treatment for diarrhoea	0.544	0.041	398	233	1.459	0.075	0.462	0.626
Ever had vaccination card	0.855	0.022	543	369	1.395	0.026	0.812	0.899
Received BCG vaccination	0.793	0.022	543	369	1.291	0.028	0.749	0.838
Received birth dose HepB vaccination	0.677	0.028	543	369	1.418	0.042	0.620	0.734
Received DPT-HepB-Hib vaccination (3 doses)	0.520	0.032	543	369	1.473	0.061	0.456	0.584
Received inactivated polio vaccine (1 dose)	0.502	0.032	543	369	1.500	0.065	0.437	0.567
Received polio vaccination (3 doses)	0.539	0.031	543	369	1.449	0.058	0.477	0.601
Received pneumococcal vaccination (3 doses)	0.460	0.033	543	369	1.548	0.073	0.393	0.527
Received measles 1 vaccination	0.695	0.031	543	369	1.529	0.044	0.633	0.756
Received all basic vaccinations (12-23 months)	0.458	0.031	543	369	1.431	0.068	0.396	0.520
Received all age appropriate vaccinations (12-23)	0.305	0.031	543	369	1.535	0.100	0.244	0.366
Had 2+ sexual partners in past 12 months	0.009	0.002	4,380	2,899	1.205	0.195	0.005	0.012
Abstinence among never-married youth (never had sex)	0.732	0.017	1,108	729	1.303	0.024	0.697	0.767
Discriminatory attitudes towards people living with HIV	0.565	0.015	3,407	2,262	1.784	0.027	0.534	0.595
Total fertility rate (last 3 years)	4.512	0.141	12,222	8,100	1.347	0.031	4.231	4.794
Neonatal mortality (last 0-9 years)	22.553	3.442	5,382	3,673	1.577	0.153	15.669	29.438
Post-neonatal mortality (last 0-9 years)	6.556	1.259	5,364	3,669	1.153	0.192	4.038	9.074
Infant mortality (last 0-9 years)	29.109	3.817	5,382	3,673	1.501	0.131	21.475	36.744
Child mortality (last 0-9 years)	11.333	2.358	5,237	3,581	1.415	0.208	6.618	16.048
Under-5 mortality (last 0-9 years)	40.113	4.490	5,387	3,677	1.485	0.112	31.133	49.093
MEN								
Urban residence	0.244	0.025	2,173	1,490	2.731	0.103	0.193	0.294
Literacy	0.844	0.015	2,173	1,490	1.965	0.018	0.813	0.875
No education	0.073	0.010	2,173	1,490	1.822	0.140	0.052	0.093
Secondary or higher education	0.372	0.021	2,173	1,490	2.055	0.057	0.329	0.414
Never married (in union)	0.439	0.013	2,173	1,490	1.254	0.030	0.412	0.465
Currently married (in union)	0.523	0.015	2,173	1,490	1.403	0.029	0.493	0.553
Had first sexual intercourse before age 18	0.337	0.018	1,756	1,208	1.620	0.054	0.300	0.373
Knows any contraceptive method	0.945	0.010	1,145	780	1.441	0.010	0.926	0.965
Knows any modern contraceptive method	0.934	0.010	1,145	780	1.399	0.011	0.914	0.955
Want no more children	0.467	0.022	1,145	780	1.487	0.047	0.423	0.510
Want to delay birth at least 2 years	0.218	0.015	1,145	780	1.208	0.068	0.189	0.248
Ideal number of children	3.407	0.068	2,053	1,396	1.676	0.020	3.270	3.544
Had 2+ sexual partners in past 12 months	0.057	0.007	2,173	1,490	1.429	0.125	0.042	0.071
Abstinence among never married youth (never had sex)	0.531	0.026	702	476	1.357	0.048	0.480	0.582
Had paid sex in past 12 months	0.014	0.003	2,173	1,490	1.274	0.232	0.007	0.020
Discriminatory attitudes towards people living with HIV	0.531	0.025	1,819	1,235	2.118	0.047	0.481	0.580

Table B.6 Sampling errors: Highlands region sample, Papua New Guinea DHS 2016-18

Variable	Value	Standard error	Number of cases		Design effect	Relative error	Confidence limits	
			Un-weighted	Weighted			Lower	Upper
	(R)	(SE)	(N)	(WN)	(DEFT)	(SE/R)	(R-2SE)	(R+2SE)
HOUSEHOLDS AND POPULATION								
Ownership of at least one ITN	0.482	0.021	5,078	6,916	3.007	0.044	0.439	0.524
De facto population with access to an ITN	0.373	0.018	23,781	31,760	2.763	0.048	0.337	0.409
Household population that slept under an ITN last night	0.274	0.015	23,781	31,760	2.506	0.054	0.245	0.304
WOMEN								
Urban residence	0.053	0.007	4,123	6,213	2.062	0.136	0.039	0.068
Literacy	0.543	0.025	4,123	6,213	3.159	0.045	0.494	0.592
No education	0.365	0.024	4,123	6,213	3.240	0.067	0.316	0.413
Secondary or higher education	0.238	0.033	4,123	6,213	4.959	0.139	0.172	0.304
Never married (never in union)	0.238	0.016	4,123	6,213	2.383	0.066	0.207	0.270
Currently married (in union)	0.674	0.020	4,123	6,213	2.774	0.030	0.634	0.715
Married before age 18	0.348	0.012	3,344	4,958	1.409	0.033	0.325	0.371
Had sexual intercourse before age 18	0.374	0.017	3,344	4,958	2.009	0.045	0.340	0.408
Currently pregnant	0.055	0.006	4,123	6,213	1.566	0.101	0.044	0.066
Know any contraceptive method	0.824	0.020	2,862	4,189	2.835	0.025	0.783	0.864
Know a modern method	0.811	0.021	2,862	4,189	2.826	0.026	0.770	0.852
Currently using any method	0.275	0.018	2,862	4,189	2.168	0.066	0.239	0.312
Currently using a modern method	0.250	0.018	2,862	4,189	2.263	0.073	0.213	0.287
Currently using pill	0.023	0.006	2,862	4,189	2.312	0.284	0.010	0.036
Currently using male condoms	0.005	0.002	2,862	4,189	1.279	0.323	0.002	0.009
Currently using injectables	0.086	0.010	2,862	4,189	1.854	0.113	0.067	0.105
Currently using implants	0.056	0.005	2,862	4,189	1.260	0.097	0.045	0.067
Currently using female sterilisation	0.058	0.010	2,862	4,189	2.357	0.178	0.037	0.079
Currently using withdrawal	0.008	0.002	2,862	4,189	1.292	0.268	0.004	0.012
Currently using rhythm	0.013	0.003	2,862	4,189	1.287	0.208	0.008	0.019
Want no more children	0.350	0.015	2,862	4,189	1.728	0.044	0.319	0.381
Want to delay next birth at least 2 years	0.161	0.010	2,862	4,189	1.466	0.063	0.140	0.181
Ideal number of children	3.362	0.058	3,311	4,916	1.849	0.017	3.246	3.478
Mothers protected against tetanus for last birth	0.340	0.027	1,737	2,621	2.368	0.079	0.287	0.394
Births with skilled attendant at delivery	0.542	0.036	2,416	3,757	3.039	0.067	0.469	0.614
Received 3+ doses of SP/Fansidar	0.165	0.019	909	1,382	1.529	0.113	0.128	0.202
Treated with ORS	0.242	0.037	384	580	1.589	0.152	0.168	0.316
Sought medical treatment for diarrhoea	0.284	0.036	384	580	1.492	0.128	0.212	0.357
Ever had vaccination card	0.759	0.032	435	648	1.546	0.042	0.696	0.823
Received BCG vaccination	0.625	0.042	435	648	1.809	0.067	0.541	0.709
Received birth dose HepB vaccination	0.528	0.046	435	648	1.915	0.087	0.436	0.620
Received DPT-HepB-Hib vaccination (3 doses)	0.333	0.034	435	648	1.495	0.102	0.265	0.401
Received inactivated polio vaccine (1 dose)	0.300	0.033	435	648	1.494	0.110	0.235	0.366
Received polio vaccination (3 doses)	0.335	0.035	435	648	1.523	0.103	0.266	0.404
Received pneumococcal vaccination (3 doses)	0.288	0.033	435	648	1.495	0.113	0.223	0.353
Received measles 1 vaccination	0.516	0.049	435	648	2.025	0.095	0.418	0.613
Received all basic vaccinations (12-23 months)	0.278	0.033	435	648	1.526	0.118	0.212	0.344
Received all age appropriate vaccinations (12-23)	0.144	0.026	435	648	1.538	0.180	0.092	0.196
Had 2+ sexual partners in past 12 months	0.020	0.004	4,123	6,213	1.834	0.202	0.012	0.028
Abstinence among never-married youth (never had sex)	0.843	0.019	835	1,346	1.505	0.023	0.805	0.881
Discriminatory attitudes towards people living with HIV	0.279	0.019	3,585	5,307	2.535	0.068	0.241	0.317
Total fertility rate (last 3 years)	3.768	0.169	11,696	17,599	1.836	0.045	3.430	4.107
Neonatal mortality (last 0-9 years)	22.740	2.824	4,889	7,458	1.245	0.124	17.092	28.388
Post-neonatal mortality (last 0-9 years)	24.071	4.448	4,907	7,486	1.867	0.185	15.174	32.968
Infant mortality (last 0-9 years)	46.811	5.365	4,892	7,462	1.567	0.115	36.081	57.541
Child mortality (last 0-9 years)	19.953	4.343	4,866	7,399	1.928	0.218	11.267	28.639
Under-5 mortality (last 0-9 years)	65.830	6.776	4,910	7,490	1.664	0.103	52.277	79.382
MEN								
Urban residence	0.051	0.007	2,056	2,871	1.366	0.130	0.037	0.064
Literacy	0.721	0.019	2,056	2,871	1.960	0.027	0.682	0.760
No education	0.220	0.019	2,056	2,871	2.105	0.087	0.182	0.259
Secondary or higher education	0.334	0.022	2,056	2,871	2.160	0.067	0.289	0.379
Never married (in union)	0.409	0.016	2,056	2,871	1.469	0.039	0.377	0.441
Currently married (in union)	0.537	0.019	2,056	2,871	1.733	0.035	0.499	0.575
Had first sexual intercourse before age 18	0.259	0.017	1,643	2,294	1.588	0.066	0.224	0.293
Knows any contraceptive method	0.883	0.019	1,145	1,543	2.033	0.022	0.844	0.921
Knows any modern contraceptive method	0.849	0.023	1,145	1,543	2.210	0.028	0.802	0.896
Want no more children	0.305	0.016	1,145	1,543	1.210	0.054	0.272	0.338
Want to delay birth at least 2 years	0.253	0.017	1,145	1,543	1.352	0.069	0.218	0.288
Ideal number of children	4.116	0.078	1,860	2,548	1.513	0.019	3.959	4.273
Had 2+ sexual partners in past 12 months	0.112	0.011	2,056	2,871	1.632	0.101	0.090	0.135
Abstinence among never married youth (never had sex)	0.660	0.025	655	925	1.324	0.037	0.611	0.709
Had paid sex in past 12 months	0.044	0.006	2,056	2,871	1.353	0.139	0.032	0.056
Discriminatory attitudes towards people living with HIV	0.302	0.018	1,902	2,629	1.664	0.058	0.267	0.337

Table B.7 Sampling errors: Momase region sample, Papua New Guinea DHS 2016-18

Variable	Value	Standard error	Number of cases: Un-weighted	Number of cases: Weighted	Design effect	Relative error	Confidence limits: Lower	Confidence limits: Upper
	(R)	(SE)	(N)	(WN)	(DEFT)	(SE/R)	(R-2SE)	(R+2SE)
HOUSEHOLDS AND POPULATION								
Ownership of at least one ITN	0.843	0.020	3,223	4,075	3.150	0.024	0.802	0.883
De facto population with access to an ITN	0.734	0.021	16,400	21,039	3.032	0.029	0.691	0.777
Household population that slept under an ITN last night	0.667	0.044	16,400	21,039	5.217	0.066	0.579	0.755
WOMEN								
Urban residence	0.193	0.027	3,060	3,919	3.723	0.138	0.139	0.246
Literacy	0.690	0.024	3,060	3,919	2.843	0.034	0.642	0.738
No education	0.185	0.019	3,060	3,919	2.688	0.102	0.147	0.222
Secondary or higher education	0.247	0.050	3,060	3,919	6.411	0.204	0.146	0.347
Never married (never in union)	0.257	0.011	3,060	3,919	1.338	0.041	0.236	0.278
Currently married (in union)	0.671	0.011	3,060	3,919	1.263	0.016	0.650	0.693
Married before age 18	0.271	0.016	2,498	3,258	1.748	0.057	0.240	0.302
Had sexual intercourse before age 18	0.332	0.018	2,498	3,258	1.942	0.055	0.296	0.369
Currently pregnant	0.044	0.006	3,060	3,919	1.594	0.135	0.032	0.056
Know any contraceptive method	0.888	0.022	2,021	2,630	3.076	0.024	0.845	0.931
Know a modern method	0.871	0.023	2,021	2,630	3.129	0.027	0.825	0.918
Currently using any method	0.373	0.029	2,021	2,630	2.680	0.077	0.315	0.431
Currently using a modern method	0.316	0.025	2,021	2,630	2.383	0.078	0.267	0.365
Currently using pill	0.036	0.009	2,021	2,630	2.254	0.259	0.017	0.055
Currently using male condoms	0.003	0.002	2,021	2,630	1.467	0.582	0.000	0.007
Currently using injectables	0.094	0.012	2,021	2,630	1.911	0.132	0.069	0.118
Currently using implants	0.114	0.011	2,021	2,630	1.566	0.097	0.092	0.137
Currently using female sterilisation	0.056	0.009	2,021	2,630	1.800	0.165	0.037	0.074
Currently using withdrawal	0.015	0.004	2,021	2,630	1.413	0.252	0.008	0.023
Currently using rhythm	0.019	0.003	2,021	2,630	1.138	0.180	0.012	0.026
Want no more children	0.537	0.031	2,021	2,630	2.748	0.057	0.476	0.598
Want to delay next birth at least 2 years	0.168	0.011	2,021	2,630	1.267	0.063	0.147	0.189
Ideal number of children	2.858	0.055	2,778	3,580	1.810	0.019	2.749	2.968
Mothers protected against tetanus for last birth	0.380	0.028	1,400	1,851	2.137	0.072	0.325	0.435
Births with skilled attendant at delivery	0.445	0.041	2,009	2,675	3.150	0.092	0.363	0.527
Received 3+ doses of SP/Fansidar	0.261	0.042	738	990	2.665	0.163	0.176	0.346
Treated with ORS	0.303	0.047	268	368	1.587	0.155	0.209	0.397
Sought medical treatment for diarrhoea	0.392	0.045	268	368	1.409	0.115	0.302	0.482
Ever had vaccination card	0.764	0.037	376	467	1.584	0.048	0.690	0.838
Received BCG vaccination	0.616	0.041	376	467	1.559	0.066	0.534	0.698
Received birth dose HepB vaccination	0.459	0.038	376	467	1.407	0.082	0.383	0.534
Received DPT-HepB-Hib vaccination (3 doses)	0.364	0.044	376	467	1.704	0.122	0.276	0.453
Received inactivated polio vaccine (1 dose)	0.357	0.038	376	467	1.492	0.107	0.280	0.433
Received polio vaccination (3 doses)	0.366	0.042	376	467	1.624	0.115	0.282	0.451
Received pneumococcal vaccination (3 doses)	0.302	0.035	376	467	1.409	0.116	0.232	0.372
Received measles 1 vaccination	0.516	0.040	376	467	1.489	0.077	0.437	0.596
Received all basic vaccinations (12-23 months)	0.304	0.040	376	467	1.601	0.132	0.224	0.384
Received all age appropriate vaccinations (12-23)	0.158	0.028	376	467	1.435	0.179	0.101	0.215
Had 2+ sexual partners in past 12 months	0.007	0.002	3,060	3,919	1.295	0.272	0.003	0.011
Abstinence among never-married youth (never had sex)	0.750	0.043	723	873	2.642	0.057	0.664	0.836
Discriminatory attitudes towards people living with HIV	0.566	0.023	2,240	3,006	2.239	0.041	0.519	0.613
Total fertility rate (last 3 years)	4.442	0.327	8,708	11,207	2.703	0.074	3.789	5.095
Neonatal mortality (last 0-9 years)	24.894	3.700	3,914	5,065	1.406	0.149	17.494	32.294
Post-neonatal mortality (last 0-9 years)	8.854	1.630	3,927	5,076	1.106	0.184	5.595	12.113
Infant mortality (last 0-9 years)	33.748	3.974	3,914	5,065	1.289	0.118	25.800	41.697
Child mortality (last 0-9 years)	14.949	2.786	3,880	4,992	1.397	0.186	9.376	20.521
Under-5 mortality (last 0-9 years)	48.193	5.080	3,922	5,077	1.375	0.105	38.032	58.354
MEN								
Urban residence	0.192	0.029	1,498	1,999	2.831	0.151	0.134	0.250
Literacy	0.831	0.023	1,498	1,999	2.393	0.028	0.785	0.878
No education	0.078	0.014	1,498	1,999	2.087	0.186	0.049	0.106
Secondary or higher education	0.339	0.045	1,498	1,999	3.681	0.133	0.248	0.429
Never married (in union)	0.431	0.020	1,498	1,999	1.587	0.047	0.390	0.471
Currently married (in union)	0.550	0.021	1,498	1,999	1.668	0.039	0.507	0.593
Had first sexual intercourse before age 18	0.265	0.026	1,186	1,594	2.033	0.098	0.213	0.317
Knows any contraceptive method	0.915	0.022	815	1,100	2.298	0.025	0.870	0.960
Knows any modern contraceptive method	0.906	0.023	815	1,100	2.286	0.026	0.859	0.953
Want no more children	0.438	0.032	815	1,100	1.857	0.074	0.374	0.503
Want to delay birth at least 2 years	0.222	0.018	815	1,100	1.216	0.080	0.187	0.258
Ideal number of children	3.142	0.067	1,400	1,878	1.399	0.021	3.009	3.276
Had 2+ sexual partners in past 12 months	0.067	0.020	1,498	1,999	3.071	0.298	0.027	0.106
Abstinence among never married youth (never had sex)	0.554	0.057	492	646	2.545	0.104	0.439	0.669
Had paid sex in past 12 months	0.012	0.003	1,498	1,999	1.033	0.244	0.006	0.018
Discriminatory attitudes towards people living with HIV	0.533	0.037	1,335	1,823	2.730	0.070	0.458	0.607

Table B.8 Sampling errors: Islands region sample, Papua New Guinea DHS 2016-18

Variable	Value	Standard error	Number of cases: Un-weighted	Number of cases: Weighted	Design effect	Relative error	Confidence limits: Lower	Confidence limits: Upper
	(R)	(SE)	(N)	(WN)	(DEFT)	(SE/R)	(R-2SE)	(R+2SE)
HOUSEHOLDS AND POPULATION								
Ownership of at least one ITN	0.832	0.014	3,672	2,349	2.297	0.017	0.803	0.860
De facto population with access to an ITN	0.705	0.015	18,707	11,598	2.189	0.021	0.675	0.735
Household population that slept under an ITN last night	0.477	0.018	18,707	11,598	2.389	0.038	0.440	0.513
WOMEN								
Urban residence	0.085	0.009	3,635	2,167	1.877	0.102	0.067	0.102
Literacy	0.851	0.016	3,635	2,167	2.667	0.019	0.819	0.882
No education	0.068	0.012	3,635	2,167	2.898	0.179	0.044	0.092
Secondary or higher education	0.329	0.017	3,635	2,167	2.240	0.053	0.294	0.364
Never married (never in union)	0.297	0.010	3,635	2,167	1.351	0.035	0.276	0.317
Currently married (in union)	0.630	0.011	3,635	2,167	1.317	0.017	0.609	0.651
Married before age 18	0.187	0.010	2,908	1,728	1.440	0.056	0.166	0.208
Had sexual intercourse before age 18	0.246	0.015	2,908	1,728	1.933	0.063	0.215	0.277
Currently pregnant	0.056	0.007	3,635	2,167	1.832	0.125	0.042	0.070
Know any contraceptive method	0.972	0.006	2,238	1,366	1.654	0.006	0.961	0.984
Know a modern method	0.947	0.011	2,238	1,366	2.371	0.012	0.924	0.969
Currently using any method	0.472	0.019	2,238	1,366	1.760	0.039	0.435	0.509
Currently using a modern method	0.307	0.020	2,238	1,366	2.018	0.064	0.268	0.347
Currently using pill	0.012	0.004	2,238	1,366	1.637	0.315	0.004	0.019
Currently using male condoms	0.007	0.003	2,238	1,366	1.558	0.381	0.002	0.013
Currently using injectables	0.054	0.008	2,238	1,366	1.614	0.142	0.039	0.070
Currently using implants	0.091	0.009	2,238	1,366	1.559	0.104	0.072	0.110
Currently using female sterilisation	0.137	0.017	2,238	1,366	2.289	0.121	0.104	0.171
Currently using withdrawal	0.030	0.005	2,238	1,366	1.316	0.158	0.021	0.040
Currently using rhythm	0.111	0.012	2,238	1,366	1.767	0.106	0.087	0.134
Want no more children	0.536	0.018	2,238	1,366	1.668	0.033	0.501	0.572
Want to delay next birth at least 2 years	0.160	0.009	2,238	1,366	1.212	0.059	0.141	0.179
Ideal number of children	2.735	0.058	3,408	2,011	2.091	0.021	2.620	2.851
Mothers protected against tetanus for last birth	0.453	0.021	1,563	961	1.717	0.047	0.410	0.496
Births with skilled attendant at delivery	0.743	0.026	2,303	1,416	2.442	0.035	0.690	0.795
Received 3+ doses of SP/Fansidar	0.349	0.025	880	543	1.601	0.073	0.298	0.399
Treated with ORS	0.384	0.046	263	134	1.331	0.121	0.291	0.476
Sought medical treatment for diarrhoea	0.516	0.046	263	134	1.253	0.088	0.424	0.607
Ever had vaccination card	0.887	0.023	462	279	1.605	0.026	0.840	0.934
Received BCG vaccination	0.852	0.026	462	279	1.575	0.030	0.800	0.904
Received birth dose HepB vaccination	0.743	0.032	462	279	1.588	0.044	0.678	0.808
Received DPT-HepB-Hib vaccination (3 doses)	0.562	0.038	462	279	1.640	0.068	0.486	0.638
Received inactivated polio vaccine (1 dose)	0.512	0.032	462	279	1.389	0.063	0.448	0.577
Received polio vaccination (3 doses)	0.563	0.035	462	279	1.515	0.062	0.493	0.633
Received pneumococcal vaccination (3 doses)	0.452	0.037	462	279	1.574	0.081	0.379	0.525
Received measles 1 vaccination	0.729	0.037	462	279	1.771	0.050	0.656	0.802
Received all basic vaccinations (12-23 months)	0.468	0.036	462	279	1.560	0.078	0.395	0.540
Received all age appropriate vaccinations (12-23)	0.275	0.031	462	279	1.487	0.113	0.213	0.337
Had 2+ sexual partners in past 12 months	0.013	0.003	3,635	2,167	1.411	0.204	0.008	0.018
Abstinence among never-married youth (never had sex)	0.794	0.024	966	562	1.869	0.031	0.745	0.843
Discriminatory attitudes towards people living with HIV	0.541	0.021	3,222	1,867	2.376	0.039	0.499	0.583
Total fertility rate (last 3 years)	4.524	0.184	10,237	6,107	1.704	0.041	4.157	4.892
Neonatal mortality (last 0-9 years)	25.565	3.751	4,448	2,760	1.399	0.147	18.064	33.067
Post-neonatal mortality (last 0-9 years)	5.903	1.291	4,449	2,766	1.108	0.219	3.321	8.485
Infant mortality (last 0-9 years)	31.468	3.897	4,452	2,764	1.334	0.124	23.674	39.263
Child mortality (last 0-9 years)	4.863	1.151	4,387	2,723	1.105	0.237	2.562	7.164
Under-5 mortality (last 0-9 years)	36.179	4.278	4,454	2,765	1.376	0.118	27.622	44.735
MEN								
Urban residence	0.086	0.010	1,606	973	1.428	0.116	0.066	0.106
Literacy	0.899	0.016	1,606	973	2.160	0.018	0.866	0.931
No education	0.047	0.012	1,606	973	2.306	0.260	0.022	0.071
Secondary or higher education	0.365	0.022	1,606	973	1.859	0.061	0.320	0.409
Never married (in union)	0.438	0.016	1,606	973	1.328	0.038	0.405	0.471
Currently married (in union)	0.540	0.017	1,606	973	1.347	0.031	0.507	0.574
Had first sexual intercourse before age 18	0.372	0.023	1,246	769	1.693	0.062	0.325	0.418
Knows any contraceptive method	0.961	0.011	826	526	1.585	0.011	0.940	0.982
Knows any modern contraceptive method	0.945	0.012	826	526	1.541	0.013	0.921	0.969
Want no more children	0.494	0.029	826	526	1.667	0.059	0.436	0.552
Want to delay birth at least 2 years	0.220	0.023	826	526	1.593	0.104	0.174	0.266
Ideal number of children	3.184	0.081	1,503	905	1.736	0.026	3.022	3.347
Had 2+ sexual partners in past 12 months	0.042	0.007	1,606	973	1.428	0.171	0.028	0.056
Abstinence among never married youth (never had sex)	0.642	0.025	565	325	1.239	0.039	0.592	0.692
Had paid sex in past 12 months	0.014	0.004	1,606	973	1.256	0.265	0.007	0.021
Discriminatory attitudes towards people living with HIV	0.479	0.020	1,519	915	1.545	0.041	0.440	0.519

Table B.9 Adult mortality rates and maternal mortality rates for last 0-6 years, Papua New Guinea DHS 2016-18

Variable	Value (R)	Standard error (SE)	Number of cases: Un-weighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: Lower (R-2SE)	Confidence limits: Upper (R+2SE)
			WOMEN					
Adult mortality rates								
15-19	**1.549**	0.297	28,668	28,889	1.288	0.192	0.954	2.143
20-24	**2.206**	0.344	32,716	31,773	1.307	0.156	1.517	2.894
25-29	**2.287**	0.364	31,616	30,786	1.328	0.159	1.559	3.014
30-34	**3.025**	0.510	27,131	25,755	1.482	0.169	2.005	4.045
35-39	**2.988**	0.503	21,954	20,903	1.335	0.168	1.982	3.994
40-44	**2.705**	0.543	14,976	14,448	1.218	0.201	1.619	3.790
45-49	**4.574**	0.971	9,242	8,445	1.294	0.212	2.631	6.516
15-49 (Age adjusted)	**2.555**	0.210	166,303	160,999	1.326	0.082	2.135	2.976
Adult mortality probabilities								
$_{35}q_{15}$	**92.165**	7.554	166,303	160,999	1.742	0.082	77.057	107.273
Maternal mortality rates								
15-19	**0.077**	0.058	28,668	28,889	1.133	0.759	0.000	0.194
20-24	**0.270**	0.102	32,716	31,773	1.107	0.378	0.066	0.474
25-29	**0.121**	0.056	31,616	30,786	0.889	0.460	0.010	0.233
30-34	**0.348**	0.125	27,131	25,755	1.079	0.361	0.097	0.598
35-39	**0.432**	0.188	21,954	20,903	1.308	0.435	0.056	0.808
40-44	**0.290**	0.136	14,976	14,448	0.963	0.471	0.017	0.562
45-49	**0.245**	0.225	9,242	8,445	0.956	0.918	0.000	0.696
15-49 (Age adjusted)	**0.241**	0.054	166,303	160,999	1.095	0.224	0.133	0.348
Maternal mortality ratio	**170.845**	38.059	166,303	160,999	1.095	0.223	94.727	246.963
PR Maternal mortality rates								
15-19	**0.118**	0.065	28,668	28,889	1.015	0.550	0.000	0.247
20-24	**0.328**	0.118	32,716	31,773	1.158	0.359	0.093	0.563
25-29	**0.121**	0.056	31,616	30,786	0.889	0.460	0.010	0.233
30-34	**0.401**	0.131	27,131	25,755	1.052	0.327	0.139	0.664
35-39	**0.432**	0.188	21,954	20,903	1.308	0.435	0.056	0.808
40-44	**0.521**	0.268	14,976	14,448	1.413	0.515	0.000	1.057
45-49	**0.245**	0.225	9,242	8,445	0.956	0.918	0.000	0.696
15-49 (Age adjusted)	**0.289**	0.060	166,303	160,999	1.164	0.207	0.170	0.409
PR Maternal mortality ratio	**205.440**	42.333	166,303	160,999	1.164	0.206	120.773	290.107
			MEN					
Adult mortality rates								
15-19	**1.292**	0.284	31,938	31,377	1.400	0.219	0.725	1.859
20-24	**2.435**	0.343	36,014	35,695	1.315	0.141	1.749	3.122
25-29	**3.297**	0.623	33,963	33,207	1.845	0.189	2.050	4.543
30-34	**3.436**	0.513	29,212	28,531	1.471	0.149	2.410	4.462
35-39	**3.229**	0.468	23,839	23,287	1.253	0.145	2.293	4.165
40-44	**3.873**	0.674	16,346	15,543	1.354	0.174	2.524	5.221
45-49	**5.010**	0.950	10,340	9,762	1.257	0.190	3.109	6.910
15-49 (Age adjusted)	**2.957**	0.229	181,651	177,401	1.437	0.077	2.500	3.415
Adult mortality probabilities								
$_{35}q_{15}$	**106.757**	7.746	181,651	177,401	1.966	0.073	91.265	122.250

Note: All rates are calculated for last 0-6 years before the survey.

DATA QUALITY TABLES

Appendix C

Table C.1 Household age distribution

Single-year age distribution of the de facto household population by sex (weighted), Papua New Guinea DHS 2016-18

	Women		Men			Women		Men	
Age	Number	Percent	Number	Percent	Age	Number	Percent	Number	Percent
0	942	2.4	1,062	2.6	37	415	1.1	433	1.1
1	911	2.4	1,071	2.6	38	443	1.1	408	1.0
2	1,017	2.6	1,167	2.9	39	394	1.0	357	0.9
3	1,222	3.2	1,214	3.0	40	507	1.3	562	1.4
4	1,055	2.7	1,259	3.1	41	270	0.7	297	0.7
5	937	2.4	1,050	2.6	42	311	0.8	425	1.0
6	1,375	3.6	1,465	3.6	43	306	0.8	281	0.7
7	1,154	3.0	1,219	3.0	44	269	0.7	226	0.6
8	1,104	2.9	1,293	3.2	45	359	0.9	487	1.2
9	964	2.5	1,084	2.7	46	229	0.6	278	0.7
10	1,073	2.8	1,246	3.1	47	256	0.7	305	0.7
11	770	2.0	949	2.3	48	307	0.8	338	0.8
12	1,047	2.7	1,134	2.8	49	197	0.5	223	0.5
13	926	2.4	927	2.3	50	905	2.3	491	1.2
14	1,241	3.2	1,199	2.9	51	379	1.0	284	0.7
15	580	1.5	803	2.0	52	531	1.4	376	0.9
16	808	2.1	903	2.2	53	319	0.8	340	0.8
17	689	1.8	807	2.0	54	293	0.8	381	0.9
18	758	2.0	857	2.1	55	300	0.8	322	0.8
19	686	1.8	749	1.8	56	277	0.7	276	0.7
20	786	2.0	882	2.2	57	209	0.5	241	0.6
21	529	1.4	606	1.5	58	148	0.4	274	0.7
22	616	1.6	566	1.4	59	139	0.4	177	0.4
23	579	1.5	505	1.2	60	343	0.9	310	0.8
24	666	1.7	600	1.5	61	112	0.3	106	0.3
25	686	1.8	715	1.8	62	167	0.4	136	0.3
26	549	1.4	569	1.4	63	101	0.3	138	0.3
27	484	1.3	574	1.4	64	89	0.2	127	0.3
28	647	1.7	515	1.3	65	220	0.6	270	0.7
29	543	1.4	458	1.1	66	51	0.1	56	0.1
30	782	2.0	662	1.6	67	64	0.2	94	0.2
31	349	0.9	355	0.9	68	81	0.2	113	0.3
32	574	1.5	518	1.3	69	50	0.1	105	0.3
33	366	0.9	353	0.9	70+	576	1.5	618	1.5
34	443	1.1	480	1.2	Don't know	79	0.2	79	0.2
35	572	1.5	574	1.4					
36	458	1.2	445	1.1	Total	38,581	100.0	40,772	100.0

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview.

Table C.2.1 Age distribution of eligible and interviewed women

De facto household population of women age 10-54, number and percent distribution of interviewed women age 15-49, and percentage of eligible women who were interviewed (weighted), by 5-year age groups, Papua New Guinea DHS 2016-18

	Household population of	Interviewed women age 15-49		Percentage of eligible women
Age group	women age 10-54	Number	Percentage	interviewed
10-14	5,057	na	na	na
15-19	3,521	2,758	19.0	78.3
20-24	3,175	2,709	18.7	85.3
25-29	2,908	2,414	16.7	83.0
30-34	2,514	2,091	14.4	83.2
35-39	2,282	1,930	13.3	84.6
40-44	1,663	1,439	9.9	86.5
45-49	1,349	1,154	8.0	85.6
50-54	2,427	na	na	na
15-49	17,412	14,493	100.0	83.2

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview. Weights for both the household population of women and interviewed women are household weights. Age is based on the Household Questionnaire.
na = Not applicable

Table C.2.2 Age distribution of eligible and interviewed men

De facto household population of men age 10-54, interviewed men age 15-49, and number and percent distribution of eligible men who were interviewed (weighted), by 5-year age groups, Papua New Guinea DHS 2016-18

Age group	Household population of men age 10-54	Interviewed men age 15-49		Percentage of eligible men interviewed
		Number	Percentage	
10-14	2,848	na	na	na
15-19	1,918	1,366	19.6	71.2
20-24	1,536	1,212	17.4	78.9
25-29	1,330	1,080	15.5	81.2
30-34	1,181	1,013	14.5	85.7
35-39	1,091	917	13.2	84.0
40-44	925	756	10.9	81.8
45-49	779	623	8.9	80.0
50-54	959	na	na	na
15-49	8,760	6,967	100.0	79.5

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview. Weights for both the household population of men and interviewed men are household weights. Age is based on the Household Questionnaire.
na = Not applicable

Table C.3 Completeness of reporting

Percentage of observations missing information for selected demographic and health questions (weighted), Papua New Guinea DHS 2016-18

Subject	Reference group	Percentage with information missing	Number of cases
Birth date	Births in the 15 years preceding the survey		
Day only		2.58	26,027
Month only		6.72	26,027
Month and year		0.48	26,027
Age at death	Deceased children born in the 15 years preceding the survey	1.24	1,405
Age/date at first union[1]	Ever-married women age 15-49	2.03	11,230
	Ever-married men age 15-49	5.15	4,219
Respondent's education	All women age 15-49	0.34	15,198
	All men age 15-49	0.93	7,333
Diarrhoea in last 2 weeks	Living children age 0-59 months	9.01	9,371
Anthropometry of children	Living children age 0-59 months (from the Biomarker Questionnaire)		
Height		22.47	5,646
Weight		20.75	5,646
Height or weight		23.68	5,646

[1] Both year and age missing

Table C.4 Births by calendar years

Number of births, percentage with complete birth date, sex ratio at birth, and calendar year ratio by calendar year, according to living, dead, and total children (weighted), Papua New Guinea DHS 2016-18

	Number of births			Percentage with year and month of birth given			Sex ratio at birth[1]			Calendar year ratio[2]		
Calendar year	Living	Dead	Total	Living	Dead	Total	Living	Dead	Total	Living	Dead	Total
2018	1,825	86	1,911	100.0	100.0	100.0	103.4	69.0	101.5	na	na	na
2017	1,853	86	1,940	99.8	100.0	99.8	107.1	153.5	108.8	na	na	na
2016	1,905	90	1,995	99.9	100.0	100.0	109.2	95.2	108.6	104.8	111.7	105.1
2015	1,782	75	1,856	99.2	96.5	99.1	101.4	157.3	103.2	93.6	88.6	93.4
2014	1,903	79	1,982	96.4	96.1	96.4	121.8	120.2	121.8	106.0	97.7	105.7
2013	1,807	86	1,894	91.7	83.6	91.3	106.1	131.0	107.1	92.5	86.4	92.2
2012	2,005	121	2,125	89.9	82.2	89.4	103.7	117.2	104.4	117.0	97.2	115.7
2011	1,619	163	1,782	89.0	55.1	85.9	106.2	146.2	109.3	89.0	152.5	92.5
2010	1,636	92	1,728	89.4	61.0	87.8	113.7	65.3	110.4	105.7	70.6	102.9
2009	1,477	99	1,576	86.8	68.3	85.6	109.9	85.7	108.2	95.8	102.3	96.2
2014-2018	9,267	415	9,683	99.0	98.6	99.0	108.5	112.3	108.7	na	na	na
2009-2013	8,544	561	9,104	89.5	68.6	88.2	107.6	109.2	107.7	na	na	na
2004-2008	6,213	450	6,663	88.7	64.0	87.0	106.5	124.9	107.6	na	na	na
1999-2003	4,167	328	4,495	88.1	79.2	87.4	119.5	120.2	119.6	na	na	na
Before 1999	3,344	310	3,654	87.5	75.2	86.5	110.4	112.2	110.5	na	na	na
All	31,535	2,064	33,599	91.7	76.3	90.8	109.4	115.3	109.8	na	na	na

na = Not applicable
[1] (Bm/Bf)x100, where Bm and Bf are the numbers of male and female births, respectively
[2] [2Bx/(Bx-1+Bx+1)]x100, where Bx is the number of births in calendar year x

Table C.5 Reporting of age at death in days

Distribution of reported deaths under age 1 month by age at death in days and percentage of neonatal deaths reported to occur at age 0-6 days, for 5-year periods preceding the survey (weighted), Papua New Guinea DHS 2016-18

	Number of years preceding the survey				
Age at death (days)	0-4	5-9	10-14	15-19	Total 0-19
<1	62	102	52	43	259
1	46	55	43	30	174
2	13	22	7	8	49
3	9	9	9	13	40
4	8	6	0	0	14
5	3	3	16	0	22
6	1	4	0	0	5
7	14	14	23	8	59
8	0	4	0	0	4
9	1	0	0	0	1
10	0	1	0	1	2
11	1	0	0	0	1
12	0	1	0	0	1
13	2	0	0	0	2
14	6	10	7	8	32
16	0	0	0	2	2
20	0	0	0	0	0
21	5	1	2	1	9
24	1	0	0	0	1
28	3	0	2	0	5
30	0	1	0	0	1
Missing	0	0	2	0	2
Total 0-30	175	232	160	113	681
Percentage early neonatal[1]	81.0	86.5	79.0	82.3	82.6

[1] 0-6 days/0-30 days

Table C.6 Reporting of age at death in months

Distribution of reported deaths under age 2 by age at death in months and percentage of infant deaths reported to occur under age 1 month, for 5-year periods preceding the survey (weighted), Papua New Guinea DHS 2016-18

	Number of years preceding the survey				
Age at death (months)	0-4	5-9	10-14	15-19	Total 0-19
<1[a]	175	232	162	113	682
1	15	23	18	7	63
2	9	8	21	4	42
3	15	14	10	12	51
4	18	9	19	6	53
5	11	16	11	6	44
6	11	7	6	14	38
7	17	11	15	3	45
8	2	9	5	7	23
9	7	7	2	2	19
10	1	6	1	3	12
11	14	7	1	1	23
12	3	23	15	11	52
14	0	1	1	0	2
16	2	0	0	0	2
17	0	1	0	1	3
18	0	4	2	1	8
19	0	2	0	6	7
24+	0	2	0	0	2
Missing	2	4	0	0	6
1 Year	24	7	9	15	55
Total 0-11	295	349	272	179	1,095
Percentage neonatal[1]	59.4	66.5	59.6	63.1	62.3

[a] Includes deaths under 1 month reported in days
[1] Under 1 month/under 1 year

Table C.7 Height and weight data completeness and quality for children

Among children under age 5 (age 0-59 months) who were eligible for anthropometry, percentage with incomplete or missing height and/or weight measurements and/or date of birth; percentage with out-of-range height-for-age, and/or weight-for-height, and/or weight-for-age data; and percentage with valid data, according to background characteristics (unweighted), Papua New Guinea DHS 2016-18

	Percentage with data missing or incomplete:				Percentage with implausible data for:						Percentage with valid data for[8]:			
Background characteristic	Height[1]	Weight[2]	Month and/or year[3]	Number of children	Height-for-age[4]	Number of children with complete height and age[5]	Weight-for-height[6]	Number of children with complete weight and height	Weight-for-age[7]	Number of children with complete weight and age[5]	Height-for-age	Weight-for-height	Weight-for-age	Number of children
Age in months														
<6	26.1	22.5	8.2	551	19.3	399	23.4	401	8.6	418	58.4	55.7	69.3	551
6-11	18.8	17.1	5.7	543	12.2	434	14.1	434	2.7	444	70.2	68.7	79.6	543
12-23	18.2	16.4	7.9	1,059	10.1	850	10.4	852	2.0	869	72.1	72.0	80.5	1,059
24-35	16.6	15.6	7.2	1,194	8.0	971	8.0	975	1.3	984	74.8	75.1	81.3	1,194
36-47	20.9	19.9	11.0	1,189	7.2	908	8.5	926	1.8	919	70.9	71.2	75.9	1,189
48-59	16.0	15.7	9.6	1,149	6.0	923	8.0	952	0.4	928	75.5	76.2	80.4	1,149
Sex														
Male	17.8	17.0	8.7	3,011	10.0	2,399	10.7	2,429	2.1	2,424	71.7	72.0	78.8	3,011
Female	19.9	18.0	8.5	2,674	8.4	2,086	10.3	2,111	2.2	2,138	71.5	70.8	78.2	2,674
Mother's interview status														
Interviewed	13.4	12.0	0.1	4,282	9.1	3,707	10.2	3,653	1.9	3,766	78.7	76.6	86.3	4,282
Not interviewed but in household	44.9	43.8	42.1	858	11.9	394	15.4	460	4.4	405	40.4	45.3	45.1	858
Not interviewed and not in the household[9]	20.3	18.8	22.1	543	8.1	384	8.0	427	2.8	391	65.0	72.4	70.0	543
Residence														
Urban	13.1	11.9	7.0	1,291	6.8	1,096	6.7	1,103	1.2	1,112	79.2	79.7	85.1	1,291
Rural	20.5	19.1	9.0	4,394	10.0	3,389	11.7	3,437	2.5	3,450	69.4	69.0	76.6	4,394
Region														
Southern	13.9	12.1	5.8	1,682	8.5	1,417	9.7	1,436	2.1	1,446	77.1	77.1	84.1	1,682
Highlands	32.3	30.1	16.6	1,543	17.2	990	19.3	1,030	3.0	1,024	53.1	53.9	64.4	1,543
Momase	14.8	12.8	6.7	1,153	4.2	960	6.1	977	1.2	983	79.8	79.5	84.2	1,153
Islands	12.8	13.6	4.3	1,307	7.5	1,118	7.1	1,097	2.3	1,109	79.1	78.0	82.9	1,307
Province														
Western	19.0	18.6	5.9	237	16.5	188	12.6	191	4.2	189	66.2	70.5	76.4	237
Gulf	14.8	12.3	4.3	277	11.7	231	14.4	236	4.2	238	73.6	72.9	82.3	277
Central	9.9	10.3	6.3	272	2.5	239	4.5	243	1.3	238	85.7	85.3	86.4	272
National Capital District	19.8	17.1	15.0	293	8.5	223	9.1	230	0.9	231	69.6	71.3	78.2	293
Milne Bay	6.5	6.5	2.6	306	5.7	283	8.1	285	1.8	283	87.3	85.6	90.8	306
Northern	14.1	9.4	1.0	297	8.3	253	10.8	251	1.1	267	78.1	75.4	88.9	297
Southern Highlands	23.0	23.9	6.6	243	29.3	184	28.3	180	3.3	183	53.5	53.1	72.8	243
Enga	44.6	44.1	30.2	222	15.7	115	14.8	122	1.7	116	43.7	46.8	51.4	222
Western Highlands	28.7	24.7	15.5	251	13.3	166	18.0	178	4.5	176	57.4	58.2	66.9	251
Chimbu	50.5	49.5	25.7	218	19.1	94	25.2	103	5.3	95	34.9	35.3	41.3	218
Eastern Highlands	16.7	11.8	6.5	186	12.8	148	16.1	155	1.9	157	69.4	69.9	82.8	186
Morobe	24.3	19.3	10.1	296	3.7	216	3.1	224	0.9	231	70.3	73.3	77.4	296
Madang	14.4	13.4	7.5	292	6.5	245	6.9	248	1.2	248	78.4	79.1	83.9	292

Continued...

Table C.7—*Continued*

Background characteristic	Percentage with data missing or incomplete: Height[1]	Weight[2]	Month and/or year[3]	Number of children	Percentage with implausible data for: Height-for-age[4]	Number of children with complete height and age[5]	Weight-for-height[6]	Number of children with complete weight and height	Weight-for-age[7]	Number of children with complete weight and age[5]	Percentage with valid data for[8]: Height-for-age	Weight-for-height	Weight-for-age	Number of children
East Sepik	7.4	7.0	3.5	258	5.1	235	9.7	236	2.5	236	86.4	82.6	89.1	258
West Sepik	12.4	11.1	5.2	307	1.5	264	4.8	269	0.4	268	84.7	83.4	87.0	307
Manus	10.6	10.1	7.5	227	3.6	194	4.5	201	0.0	195	82.4	84.6	85.9	227
New Ireland	8.5	17.4	6.4	235	9.6	208	6.7	193	3.2	189	80.0	76.6	77.9	235
East New Britain	15.1	11.8	1.8	331	6.8	281	5.7	280	1.7	292	79.2	79.8	86.7	331
West New Britain	16.8	17.8	4.1	315	6.2	258	6.9	248	2.7	255	76.8	73.3	78.7	315
Autonomous Region of Bougainville	10.1	9.5	2.5	199	12.4	177	13.1	175	3.9	178	77.9	76.4	85.9	199
Hela	39.8	37.1	24.7	186	16.5	109	16.1	112	1.8	114	48.9	50.5	60.2	186
Jiwaka	23.6	19.8	8.4	237	12.1	174	16.1	180	2.7	183	64.6	63.7	75.1	237
Mother's education														
No education	28.5	26.6	12.7	1,233	13.9	843	15.4	871	3.2	866	58.9	59.8	68.0	1,233
Elementary	15.8	15.1	5.3	2,475	8.8	2,054	10.5	2,044	2.2	2,076	75.7	73.9	82.1	2,475
Primary	13.3	12.3	4.1	1,231	7.2	1,058	7.9	1,050	1.0	1,072	79.8	78.6	86.2	1,231
Secondary	18.9	10.3	5.1	175	6.5	138	7.7	142	2.6	151	73.7	74.9	84.0	175
Higher	100.0	100.0	100.0	2	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	2
Missing	66.7	75.0	58.3	24	12.5	8	16.7	6	0.0	6	29.2	20.8	25.0	24
Wealth quintile														
Lowest	26.8	24.9	13.1	1,026	12.7	718	14.2	742	2.4	738	61.1	62.1	70.2	1,026
Second	21.7	21.2	8.0	930	12.0	709	13.3	712	3.4	714	67.1	66.3	74.2	930
Middle	18.9	16.3	7.8	1,103	9.6	875	11.6	888	2.3	906	71.7	71.2	80.2	1,103
Fourth	14.8	14.3	6.9	1,277	7.9	1,054	8.8	1,061	1.9	1,060	76.0	75.8	81.4	1,277
Highest	14.4	13.3	7.8	1,349	6.3	1,129	7.1	1,137	1.4	1,144	78.4	78.3	83.6	1,349
Total	18.8	17.5	8.6	5,685	9.2	4,485	10.5	4,540	2.2	4,562	71.6	71.5	78.5	5,685

[1] Child's height in centimeters is missing, child was not present, child refused, and "other" result codes
[2] Child's weight in kilograms is missing, child was not present, child refused, and "other" result codes
[3] Incomplete date of birth; a complete date of birth is month/day/year or month/year
[4] Implausible cases for height-for-age are defined as more than 6 standard deviations (SD) above or below the standard population median (Z-scores) based on the WHO Child Growth Standards among children with complete height and month/year of birth data.
[5] Complete age is calculated from month and year of birth.
[6] Implausible cases for weight-for-height are defined as more than 5 SD above or below the standard population median (Z-scores) based on the WHO Child Growth Standards among children with complete weight and height data.
[7] Implausible cases for weight-for-age are defined as more than 6 SD below or 5 SD above the standard population median (Z-scores) based on the WHO Child Growth Standards among children with complete weight and month/year of birth data.
[8] No missing data, incomplete data, or implausible data
[9] Includes children whose mothers are deceased

Table C.8 Sibship size and sex ratio of siblings

Mean sibship size and sex ratio of siblings at birth, Papua New Guinea DHS 2016-18

Age of respondents	Mean sibship size[1]	Sex ratio of siblings at birth[2]
15-19	5.3	108.3
20-24	5.3	107.1
25-29	5.5	113.8
30-34	5.7	105.4
35-39	5.8	110.0
40-44	5.9	103.6
45-49	6.0	123.2
Total	5.6	109.5

[1] Includes the respondent
[2] Excludes the respondent

Table C.9 Pregnancy-related mortality

Direct estimates of pregnancy-related mortality rates for the 7 years preceding the survey, by 5-year age groups; and general fertility rate, pregnancy-related mortality ratio, and lifetime risk of pregnancy-related death for the 7 years preceding the survey, Papua New Guinea DHS 2016-18

Age	Percentage of female deaths that are pregnancy-related	Pregnancy-related deaths[1]	Exposure years	Pregnancy-related mortality rate[2]
15-19	7.6	3	28,889	0.12
20-24	14.9	10	31,773	0.33
25-29	5.3	4	30,786	0.12
30-34	13.3	10	25,755	0.40
35-39	14.5	9	20,903	0.43
40-44	19.3	8	14,448	0.52
45-49	5.4	2	8,445	0.25
Total 15-49	11.5	47	160,999	0.29[a]

Total fertility rate (TFR)	4.5	
General fertility rate (GFR)[3]	0.141[a]	
Pregnancy-related mortality ratio (MMR)[4]	205	(CI: 121 - 290)
Lifetime risk of pregnancy-related death[5]	0.009	

CI: Confidence interval
[1] A pregnancy-related mortality is defined as the death of a woman while pregnant or within 2 months of termination of pregnancy, from any cause including accidents or violence.
[2] Expressed per 1,000 woman-years of exposure
[3] Age-adjusted rate expressed per 1,000 women age 15-49
[4] Expressed per 100,000 live births; calculated as the age-adjusted pregnancy-related mortality rate times 100 divided by the age-adjusted general fertility rate
[5] Calculated as $1-(1-PRMR)^{TFR}$ where TFR represents the total fertility rate for the 7 years preceding the survey
[a] Age-adjusted rate

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Tracy Uba
Vagi Kula
Vanessa Denfop
Vanessa Windu
Velerie Remi
Veronica Irabu
Vincent Kaia
Vincent Kehali
Viola Meakoro
Waison Orapa
Walin Soepol
Wellington Oanta
Wiiliam Raim
William Peruan Jr
Wilma Gino
Winnie Gaso
Yali Kulu
Yamilla Kura
Zawepe Don
Zipporah Gumoro
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QUESTIONNAIRES

Appendix E

REFERENCE YEARS DURING FIELDWORK

As the fieldwork of 2016-18 PNG DHS took place from October 2016 to December 2018, please refer to the reference dates for the specific questions in the questionnaires as listed below.

Question number	Interview in 2016	Interview in 2017	Interview in 2018
Household questionnaire			
Col. (18)	2016	2017	2018
Col. (19)	2015	2016	2017
Q. 160, for all children	2011-2016	2012-2017	2013-2018
Woman's questionnaire			
Q. 224	2011 - 2016	2012 - 2017	2013-2018
Q. 225	2011 - 2016	2012 - 2017	2013-2018
Q. 232 (left filter)	2011 - 2016	2012 - 2017	2013-2018
Q. 232 (right filter)	2011	2012	2013
Q. 232 (right filter)	2011	2012	2013
Q. 236	2011 - 2016	2012 - 2017	2013-2018
Q. 237	2011	2012	2013
Q. 238	2011	2012	2013
Q. 311 (left filter)	2011 - 2016	2012 - 2017	2013-2018
Q. 311 (right filter)	2011	2012	2013
Q. 311 (right filter)	2011	2012	2013
Q. 312	2011	2012	2013
Q. 401 (left filter)	2011 - 2016	2012 - 2017	2013-2018
Q. 401 (right filter)	2011 - 2016	2012 - 2017	2013-2018
Q. 402	2011 - 2016	2012 - 2017	2013-2018
Q. 501a (left filter)	2013 - 2016	2014 - 2017	2015-2018
Q. 501a (right filter)	2013 - 2016	2014 - 2017	2015-2018
Q. 502a	2013 - 2016	2014 - 2017	2015-2018
Q. 501b (left filter)	2013 - 2016	2014 - 2017	2015-2018
Q. 501b (right filter)	2013 - 2016	2014 - 2017	2015-2018
Q. 502b	2013 - 2016	2014 - 2017	2015-2018
Q. 525b (left filter)	2013 - 2016	2014 - 2017	2015-2018
Q. 525b (right filter)	2013 - 2016	2014 - 2017	2015-2018
Q. 601	2011 - 2016	2012 - 2017	2013-2018
Q. 602	2011 - 2016	2012 - 2017	2013-2018
Q. 649	2014 - 2016	2015 - 2017	2013-2018
Q. 1011 (left filter)	2014 - 2016	2015 - 2017	2016-2018
Q. 1011 (right filter)	2013	2014	2015
Calendar	2011 - 2016	2012 - 2017	2013-2018

NATIONAL STATISTICAL OFFICE
2016 PAPUA NEW GUINEA DEMOGRAPHIC AND HEALTH SURVEY
HOUSEHOLD QUESTIONNAIRE

IDENTIFICATION

PLACE NAME _____

NAME OF HOUSEHOLD HEAD _____

CLUSTER NUMBER . . . . . [ ][ ][ ][ ]

HOUSEHOLD NUMBER . . . . . [ ][ ][ ]

PROVINCE . . . . . [ ][ ]

DISTRICT . . . . . [ ][ ]

LLG . . . . . [ ][ ]

WARD . . . . . [ ][ ]

CU . . . . . [ ][ ][ ]

CU TYPE . . . . . [ ][ ]

DWELLING NO. . . . . [ ][ ][ ]

HOUSEHOLD SELECTED FOR MAN'S SURVEY / DOMESTIC VIOLENCE / ANTHROPOMETRY? (1=YES, 2=NO) . . . . . [ ]

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE	_____	_____	_____	DAY [ ][ ]
				MONTH [ ][ ]
				YEAR [ ][ ][ ][ ]
INTERVIEWER'S NAME	_____	_____	_____	INTRVR. NO. [ ][ ][ ][ ]
RESULT*	_____	_____	_____	RESULT* [ ]
NEXT VISIT: DATE	_____	_____		TOTAL NUMBER OF VISITS [ ]
TIME	_____	_____		

*RESULT CODES:

1 COMPLETED
2 NO HOUSEHOLD MEMBER AT HOME OR NO COMPETENT RESPONDENT
3 ENTIRE HOUSEHOLD ABSENT FOR EXTENDED PERIOD OF TIME
4 POSTPONED
5 REFUSED
6 DWELLING VACANT OR ADDRESS NOT A DWELLING
7 DWELLING DESTROYED
8 DWELLING NOT FOUND
9 OTHER _____ (SPECIFY)

TOTAL PERSONS IN HOUSEHOLD [ ][ ]

TOTAL ELIGIBLE WOMEN [ ][ ]

TOTAL ELIGIBLE MEN [ ][ ]

LINE NO. OF RESPONDENT TO HOUSEHOLD QUESTIONNAIRE [ ][ ]

LANGUAGE OF QUESTIONNAIRE** [1] LANGUAGE OF INTERVIEW** [ ] NATIVE LANGUAGE OF RESPONDENT** [ ] TRANSLATOR USED (YES = 1, NO = 2) [ ]

LANGUAGE OF QUESTIONNAIRE** **ENGLISH**

**LANGUAGE CODES:
1 ENGLISH
2 PIDGIN
3 MOTU
4 TOK PLES

SUPERVISOR		QUALITY CONTROLLER/DEO		OFFICE EDITOR	KEYED BY
NAME	NUMBER	NAME	NUMBER	NUMBER	NUMBER
_____	[ ][ ][ ][ ]	_____	[ ][ ][ ][ ]	[ ][ ]	[ ][ ]

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SELECTION OF WOMAN FOR THE DOMESTIC VIOLENCE QUESTIONS

DVH00	CHECK COVER PAGE: HOUSEHOLD SELECTED FOR DV MODULE? YES ☐ ↓ NO ☐ → 100

LOOK AT THE LAST DIGIT OF THE HOUSEHOLD QUESTIONNAIRE SERIAL NUMBER ON THE COVER PAGE. THIS IS THE ROW NUMBER YOU SHOULD GO TO. CHECK THE TOTAL NUMBER OF ELIGIBLE WOMEN (COLUMN 9) IN THE HOUSEHOLD SCHEDULE. THIS IS THE COLUMN NUMBER YOU SHOULD GO TO. FOLLOW THE SELECTED ROW AND COLUMN TO THE CELL WHERE THEY MEET AND CIRCLE THE NUMBER IN THE CELL. THIS IS THE NUMBER OF THE WOMAN SELECTED FOR THE DOMESTIC VIOLENCE QUESTIONS FROM THE LIST OF ELIGIBLE WOMEN IN COLUMN 9 OF THE HOUSEHOLD SCHEDULE. WRITE THE NAME AND LINE NUMBER OF THE SELECTED WOMAN IN THE SPACE BELOW THE TABLE.

EXAMPLE: THE HOUSEHOLD QUESTIONNAIRE SERIAL NUMBER IS '716' AND THE HOUSEHOLD SCHEDULE COLUMN 9 SHOWS THAT THERE ARE THREE ELIGIBLE WOMEN AGE 15-49 IN THE HOUSEHOLD (LINE NUMBERS 02, 04, AND 05). SINCE THE LAST DIGIT OF THE HOUSEHOLD SERIAL NUMBER IS '6' GO TO ROW '6' AND SINCE THERE ARE THREE ELIGIBLE WOMEN IN THE HOUSEHOLD, GO TO COLUMN '3'. FOLLOW THE ROW AND COLUMN AND FIND THE NUMBER IN THE CELL WHERE THEY MEET ('2') AND CIRCLE THE NUMBER. NOW GO TO THE HOUSEHOLD SCHEDULE AND FIND THE SECOND WOMAN WHO IS ELIGIBLE FOR THE WOMAN'S INTERVIEW (LINE NUMBER '04' IN THIS EXAMPLE). WRITE HER NAME AND LINE NUMBER IN THE SPACE BELOW

LAST DIGIT OF THE HOUSE-HOLD QUESTION-NAIRE SERIAL NUMBER	TOTAL NUMBER OF ELIGIBLE WOMEN AGE 15-49 IN HOUSEHOLD SCHEDULE COLUMN 9							
	1	2	3	4	5	6	7	8
0	1	2	2	4	3	6	5	4
1	1	1	3	1	4	1	6	5
2	1	2	1	2	5	2	7	6
3	1	1	2	3	1	3	1	7
4	1	2	3	4	2	4	2	8
5	1	1	1	1	3	5	3	1
6	1	2	2	2	4	6	4	2
7	1	1	3	3	5	1	5	3
8	1	2	1	4	1	2	6	4
9	1	1	2	1	2	3	7	5

DVH01 NAME OF SELECTED WOMAN _____ HH LINE NUMBER OF SELECTED WOMAN ☐☐

100	RECORD THE TIME.	HOURS . . . . . ☐☐ MINUTES . . . . . ☐☐

HOUSEHOLD SCHEDULE

							IF AGE 15 OR OLDER
LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		AGE	MARITAL STATUS
1	2	3	4	5	6	7	8
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household. AFTER LISTING THE NAMES AND RECORDING THE RELATIONSHIP AND SEX FOR EACH PERSON, ASK QUESTIONS 2A-2C TO BE SURE THAT THE LISTING IS COMPLETE. THEN ASK APPROPRIATE QUESTIONS IN COLUMNS 5-20 FOR EACH PERSON.	What is the relationship of (NAME) to the head of the household? SEE CODES BELOW.	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME)? IF LESS THAN 1 RECORD '00'. IF 95 OR MORE, RECORD '95'.	What is (NAME)'s current marital status? 1 = MARRIED OR LIVING TOGETHER 2 = DIVORCED/ SEPARATED 3 = WIDOWED 4 = NEVER-MARRIED AND NEVER LIVED TOGETHER
01			M F 1 2	Y N 1 2	Y N 1 2	IN YEARS	
02			1 2	1 2	1 2		
03			1 2	1 2	1 2		
04			1 2	1 2	1 2		
05			1 2	1 2	1 2		
06			1 2	1 2	1 2		
07			1 2	1 2	1 2		
08			1 2	1 2	1 2		
09			1 2	1 2	1 2		
10			1 2	1 2	1 2		

2A)	Just to make sure that I have a complete listing: are there any other people such as small children or infants that we have not listed?	YES → ADD TO TABLE NO
2B)	Are there any other people who may not be members of your family, such as domestic servants, lodgers, or friends who usually live here?	YES → ADD TO TABLE NO
2C)	Are there any guests or temporary visitors staying here, or anyone else who stayed here last night, who have not been listed?	YES → ADD TO TABLE NO

CODES FOR Q. 3: RELATIONSHIP TO HEAD OF HOUSEHOLD

01 = HEAD
02 = WIFE OR HUSBAND
03 = SON OR DAUGHTER
04 = SON-IN-LAW OR DAUGHTER-IN-LAW
05 = GRANDCHILD
06 = PARENT
07 = PARENT-IN-LAW
08 = BROTHER OR SISTER
09 = OTHER RELATIVE
10 = ADOPTED/FOSTER/ STEPCHILD
11 = NOT RELATED
98 = DON'T KNOW

HOUSEHOLD SCHEDULE

							IF AGE 15 OR OLDER
LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		AGE	MARITAL STATUS
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household. AFTER LISTING THE NAMES AND RECORDING THE RELATIONSHIP AND SEX FOR EACH PERSON, ASK QUESTIONS 2A-2C TO BE SURE THAT THE LISTING IS COMPLETE. THEN ASK APPROPRIATE QUESTIONS IN COLUMNS 5-20 FOR EACH PERSON.	What is the relationship of (NAME) to the head of the household? SEE CODES BELOW.	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME)? IF LESS THAN 1 RECORD '00'. IF 95 OR MORE, RECORD '95'.	What is (NAME)'s current marital status? 1 = MARRIED OR LIVING TOGETHER 2 = DIVORCED/ SEPARATED 3 = WIDOWED 4 = NEVER-MARRIED AND NEVER LIVED TOGETHER
11			M F 1 2	Y N 1 2	Y N 1 2	IN YEARS	
12			1 2	1 2	1 2		
13			1 2	1 2	1 2		
14			1 2	1 2	1 2		
15			1 2	1 2	1 2		
16			1 2	1 2	1 2		
17			1 2	1 2	1 2		
18			1 2	1 2	1 2		
19			1 2	1 2	1 2		
20			1 2	1 2	1 2		

TICK HERE IF CONTINUATION SHEET USED ☐

CODES FOR Q. 3: RELATIONSHIP TO HEAD OF HOUSEHOLD

01 = HEAD
02 = WIFE OR HUSBAND
03 = SON OR DAUGHTER
04 = SON-IN-LAW OR DAUGHTER-IN-LAW
05 = GRANDCHILD
06 = PARENT
07 = PARENT-IN-LAW
08 = BROTHER OR SISTER
09 = OTHER RELATIVE
10 = ADOPTED/FOSTER/ STEPCHILD
11 = NOT RELATED
98 = DON'T KNOW

ELIGIBILITY			SURVIVORSHIP AND RESIDENCE OF BIOLOGICAL PARENTS			
9	**10**	**11**	**12**	**13**	**14**	**15**
CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49	**IF HOUSE-HOLD SELEC-TED FOR MAN'S SURVEY** CIRCLE LINE NUMBER OF ALL MEN AGE 15-49	CIRCLE LINE NUMBER OF ALL CHILDREN AGE 0-5	Is (NAME)'s natural mother alive?	Does (NAME)'s natural mother usually live in this household or was she a guest last night? IF YES: What is her name? RECORD MOTHER'S LINE NUMBER. IF NO, RECORD '00'.	Is (NAME)'s natural father alive?	Does (NAME)'s natural father usually live in this household or was he a guest last night? IF YES: What is his name? RECORD FATHER'S LINE NUMBER. IF NO, RECORD '00'.
01	01	01	Y N DK 1 2 8 GO TO 14		Y N DK 1 2 8 GO TO 16	
02	02	02	1 2 8 GO TO 14		1 2 8 GO TO 16	
03	03	03	1 2 8 GO TO 14		1 2 8 GO TO 16	
04	04	04	1 2 8 GO TO 14		1 2 8 GO TO 16	
05	05	05	1 2 8 GO TO 14		1 2 8 GO TO 16	
06	06	06	1 2 8 GO TO 14		1 2 8 GO TO 16	
07	07	07	1 2 8 GO TO 14		1 2 8 GO TO 16	
08	08	08	1 2 8 GO TO 14		1 2 8 GO TO 16	
09	09	09	1 2 8 GO TO 14		1 2 8 GO TO 16	
10	10	10	1 2 8 GO TO 14		1 2 8 GO TO 16	

ELIGIBILITY			SURVIVORSHIP AND RESIDENCE OF BIOLOGICAL PARENTS			
9	**10**	**11**	**12**	**13**	**14**	**15**
CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49	**IF HOUSE-HOLD SELEC-TED FOR MAN'S SURVEY** CIRCLE LINE NUMBER OF ALL MEN AGE 15-49	CIRCLE LINE NUMBER OF ALL CHILDREN AGE 0-5	Is (NAME)'s natural mother alive?	Does (NAME)'s natural mother usually live in this household or was she a guest last night? IF YES: What is her name? RECORD MOTHER'S LINE NUMBER. IF NO, RECORD '00'.	Is (NAME)'s natural father alive?	Does (NAME)'s natural father usually live in this household or was he a guest last night? IF YES: What is his name? RECORD FATHER'S LINE NUMBER. IF NO, RECORD '00'.
11	11	11	Y N DK 1 2 8 GO TO 14		Y N DK 1 2 8 GO TO 16	
12	12	12	1 2 8 GO TO 14		1 2 8 GO TO 16	
13	13	13	1 2 8 GO TO 14		1 2 8 GO TO 16	
14	14	14	1 2 8 GO TO 14		1 2 8 GO TO 16	
15	15	15	1 2 8 GO TO 14		1 2 8 GO TO 16	
16	16	16	1 2 8 GO TO 14		1 2 8 GO TO 16	
17	17	17	1 2 8 GO TO 14		1 2 8 GO TO 16	
18	18	18	1 2 8 GO TO 14		1 2 8 GO TO 16	
19	19	19	1 2 8 GO TO 14		1 2 8 GO TO 16	
20	20	20	1 2 8 GO TO 14		1 2 8 GO TO 16	

IF AGE 5 YEARS OR OLDER			IF AGE 5-24 YEARS					ALL AGES
EVER ATTENDED SCHOOL			CURRENT/RECENT SCHOOL ATTENDANCE			PAST SCHOOL ATTENDANCE		BIRTH REGISTRATION
16	16A	**17**	**18**	**19**	19A	19B	19C	**20**
Has (NAME) ever attended school?	What is the total number of years of schooling (NAME) has had?	What is the highest level of school (NAME) has attended? What is the highest grade (NAME) completed at that level? SEE CODES BELOW.	Did (NAME) attend school at any time during the 2016 school year?	During [this/that] school year, what level and grade [is/was] (NAME) attending? SEE CODES BELOW.	What is the main reason for not attending school? SEE CODES BELOW.	Did (NAME) attend school at any time during the 2015 school year?	During that school year, what level and grade did (NAME) attend? SEE CODES BELOW.	Does (NAME) have a birth certificate? IF NO, PROBE: Has (NAME)'s birth ever been registered with the civil authority? 1 = HAS CERTIFICATE 2 = REGISTERED 3 = NEITHER 8 = DON'T KNOW
Y N 1 2 NEXT LINE		LEVEL GRADE	Y N 1 2 GO TO 19A	LEVEL GRADE GO TO 19B	NEXT LINE	Y N 1 2 NEXT LINE	LEVEL GRADE	
1 2 NEXT LINE			1 2 GO TO 19A	GO TO 19B	NEXT LINE	1 2 NEXT LINE		
1 2 NEXT LINE			1 2 GO TO 19A	GO TO 19B	NEXT LINE	1 2 NEXT LINE		
1 2 NEXT LINE			1 2 GO TO 19A	GO TO 19B	NEXT LINE	1 2 NEXT LINE		
1 2 NEXT LINE			1 2 GO TO 19A	GO TO 19B	NEXT LINE	1 2 NEXT LINE		
1 2 NEXT LINE			1 2 GO TO 19A	GO TO 19B	NEXT LINE	1 2 NEXT LINE		
1 2 NEXT LINE			1 2 GO TO 19A	GO TO 19B	NEXT LINE	1 2 NEXT LINE		
1 2 NEXT LINE			1 2 GO TO 19A	GO TO 19B	NEXT LINE	1 2 NEXT LINE		
1 2 NEXT LINE			1 2 GO TO 19A	GO TO 19B	NEXT LINE	1 2 NEXT LINE		
1 2 NEXT LINE			1 2 GO TO 19A	GO TO 19B	NEXT LINE	1 2 NEXT LINE		

CODES FOR Qs. 17, 19 AND 19C: EDUCATION

LEVEL
0 = PREPARATORY
1 = ELEMENTARY
2 = PRIMARY
3 = SECONDARY / VOCATIONAL
4 = HIGHER
8 = DON'T KNOW

GRADE
00 = LESS THAN 1 YEAR COMPLETED (USE '00' FOR Q17 ONLY. THIS CODE IS NOT APPLICABLE FOR Q19)
96 = DON'T KNOW

CODES FOR Q 19A
00= COMPLETED
12=SCHOOL TOO FAR
11=HELP PARENTS/EARN LIVING
13=LOST INTEREST/REFUSED
14=BULLYING/VIOLENCE IN SCHOOL
15=NO MONEY FOR FEES, ETC.
16=DISABLED
17=TOO OLD
18=OVERCROWDED CLASS
19=NOT QUALIFIED FOR 2NDARY (GR 9, 11)
20=GETTING MARRIED
21=LACK OF TOILET AND WATER
22=PREGNANCY
96=OTHER

IF AGE 5 YEARS OR OLDER			IF AGE 5-24 YEARS					ALL AGES
EVER ATTENDED SCHOOL			CURRENT/RECENT SCHOOL ATTENDANCE			PAST SCHOOL ATTENDANCE		BIRTH REGISTRATION
16	16A	**17**	**18**	**19**	19A	19B	19C	**20**
Has (NAME) ever attended school?	What is the total number of years of schooling (NAME) has had?	What is the highest level of school (NAME) has attended? What is the highest grade (NAME) completed at that level? SEE CODES BELOW.	Did (NAME) attend school at any time during the 2016 school year?	During [this/that] school year, what level and grade [is/was] (NAME) attending? SEE CODES BELOW.	What is the main reason for not attending school? SEE CODES BELOW.	Did (NAME) attend school at any time during the 2015 school year?	During that school year, what level and grade did (NAME) attend? SEE CODES BELOW.	Does (NAME) have a birth certificate? IF NO, PROBE: Has (NAME)'s birth ever been registered with the civil authority? 1 = HAS CERTIFICATE 2 = REGISTERED 3 = NEITHER 8 = DON'T KNOW
Y N 1 2 NEXT LINE	☐☐	LEVEL GRADE ☐ ☐☐	Y N 1 2 GO TO 19A	LEVEL GRADE ☐ ☐☐ GO TO 19B	☐☐ NEXT LINE	Y N 1 2 NEXT LINE	LEVEL GRADE ☐ ☐☐	☐
1 2 NEXT LINE	☐☐	☐ ☐☐	1 2 GO TO 19A	☐ ☐☐ GO TO 19B	☐☐ NEXT LINE	1 2 NEXT LINE	☐ ☐☐	☐
1 2 NEXT LINE	☐☐	☐ ☐☐	1 2 GO TO 19A	☐ ☐☐ GO TO 19B	☐☐ NEXT LINE	1 2 NEXT LINE	☐ ☐☐	☐
1 2 NEXT LINE	☐☐	☐ ☐☐	1 2 GO TO 19A	☐ ☐☐ GO TO 19B	☐☐ NEXT LINE	1 2 NEXT LINE	☐ ☐☐	☐
1 2 NEXT LINE	☐☐	☐ ☐☐	1 2 GO TO 19A	☐ ☐☐ GO TO 19B	☐☐ NEXT LINE	1 2 NEXT LINE	☐ ☐☐	☐
1 2 NEXT LINE	☐☐	☐ ☐☐	1 2 GO TO 19A	☐ ☐☐ GO TO 19B	☐☐ NEXT LINE	1 2 NEXT LINE	☐ ☐☐	☐
1 2 NEXT LINE	☐☐	☐ ☐☐	1 2 GO TO 19A	☐ ☐☐ GO TO 19B	☐☐ NEXT LINE	1 2 NEXT LINE	☐ ☐☐	☐
1 2 NEXT LINE	☐☐	☐ ☐☐	1 2 GO TO 19A	☐ ☐☐ GO TO 19B	☐☐ NEXT LINE	1 2 NEXT LINE	☐ ☐☐	☐
1 2 NEXT LINE	☐☐	☐ ☐☐	1 2 GO TO 19A	☐ ☐☐ GO TO 19B	☐☐ NEXT LINE	1 2 NEXT LINE	☐ ☐☐	☐
1 2 NEXT LINE	☐☐	☐ ☐☐	1 2 GO TO 19A	☐ ☐☐ GO TO 19B	☐☐ NEXT LINE	1 2 NEXT LINE	☐ ☐☐	☐

CODES FOR Qs. 17, 19 AND 19C: EDUCATION

LEVEL
0 = PREPARATORY
1 = ELEMENTARY
2 = PRIMARY
3 = SECONDARY / VOCATIONAL
4 = HIGHER
8 = DON'T KNOW

GRADE
00 = LESS THAN 1 YEAR COMPLETED (USE '00' FOR Q17 ONLY. THIS CODE IS NOT APPLICABLE FOR Q19)
96 = DON'T KNOW

CODES FOR Q 19A
00= COMPLETED
12=SCHOOL TOO FAR
11=HELP PARENTS/EARN LIVING
13=LOST INTEREST/REFUSED
14=BULLYING/VIOLENCE IN SCHOOL
15=NO MONEY FOR FEES, ETC.
16=DISABLED
17=TOO OLD
18=OVERCROWDED CLASS
19=NOT QUALIFIED FOR 2NDARY (GR 9, 11)
20=GETTING MARRIED
21=LACK OF TOILET AND WATER
22=PREGNANCY
96=OTHER

HOUSEHOLD CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	What is the main source of drinking water for members of your household?	**PIPED WATER** PIPED INTO DWELLING . . . . . 11 PIPED TO YARD/PLOT . . . . . 12 PIPED TO NEIGHBOR . . . . . 13 PUBLIC TAP/STANDPIPE . . . . . 14 TUBE WELL OR BOREHOLE . . . . . 21 **DUG WELL** PROTECTED WELL . . . . . 31 UNPROTECTED WELL . . . . . 32 **WATER FROM SPRING** PROTECTED SPRING . . . . . 41 UNPROTECTED SPRING . . . . . 42 RAINWATER . . . . . 51 TANKER TRUCK . . . . . 61 CART WITH SMALL TANK . . . . . 71 SURFACE WATER (RIVER/DAM/ LAKE/POND/STREAM/CANAL/ IRRIGATION CHANNEL) . . . . . 81 BOTTLED WATER . . . . . 91 OTHER _____ 96 (SPECIFY)	→ 106 → 103 → 103
102	What is the main source of water used by your household for other purposes such as cooking and handwashing?	**PIPED WATER** PIPED INTO DWELLING . . . . . 11 PIPED TO YARD/PLOT . . . . . 12 PIPED TO NEIGHBOR . . . . . 13 PUBLIC TAP/STANDPIPE . . . 14 TUBE WELL OR BOREHOLE . . . . . 21 **DUG WELL** PROTECTED WELL . . . . . 31 UNPROTECTED WELL . . . . . 32 **WATER FROM SPRING** PROTECTED SPRING . . . . . 41 UNPROTECTED SPRING . . . . . 42 RAINWATER . . . . . 51 TANKER TRUCK . . . . . 61 CART WITH SMALL TANK . . . . . 71 SURFACE WATER (RIVER/DAM/ LAKE/POND/STREAM/CANAL/ IRRIGATION CHANNEL) . . . . . 81 OTHER _____ 96 (SPECIFY)	→ 106
103	Where is that water source located?	IN OWN DWELLING . . . . . 1 IN OWN YARD/PLOT . . . . . 2 ELSEWHERE 3	→ 105
104	How long does it take to go there, get water, and come back?	MINUTES . . . . . ☐☐☐ DON'T KNOW 998	
104A	Who usually fetches water?	GIRL UNDER 15 YEARS . . . . . 1 ADULT WOMAN . . . . . 2 BOY UNDER 15 YEARS . . . . . 3 ADULT MAN 4	
105	CHECK 101 AND 102: CODE '14' OR '21' YES ⚑	NO ☐	→ 107

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
106	In the past two weeks, was the water from this source not available for at least one full day?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
107	Do you do anything to the water to make it safer to drink?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 109
108	What do you usually do to make the water safer to drink? Anything else? RECORD ALL MENTIONED.	BOIL A ADD BLEACH/CHLORINE . . . . . B STRAIN THROUGH A CLOTH . . . . . C USE WATER FILTER (CERAMIC/ SAND/COMPOSITE/ETC) . . . . . D SOLAR DISINFECTION . . . . . E LET IT STAND AND SETTLE . . . . . F OTHER _____ (SPECIFY) X DON'T KNOW . . . . . Z	
109	What kind of toilet facility do members of your household usually use? IF NOT POSSIBLE TO DETERMINE, ASK PERMISSION TO OBSERVE THE FACILITY.	**FLUSH OR POUR FLUSH TOILET** FLUSH TO PIPED SEWER SYSTEM 11 FLUSH TO SEPTIC TANK . . . . . 12 FLUSH TO PIT LATRINE . . . . . 13 FLUSH TO SOMEWHERE ELSE . . . . . 14 FLUSH, DON'T KNOW WHERE . . . . . 15 **PIT LATRINE** VENTILATED IMPROVED PIT LATRINE . 21 PIT LATRINE WITH SLAB . . . . . 22 PIT LATRINE WITHOUT SLAB/OPEN PIT . 23 COMPOSTING TOILET . . . . . 31 BUCKET TOILET . . . . . 41 HANGING TOILET/HANGING LATRINE . . . . . 51 NO FACILITY/BUSH/FIELD . . . . . 61 OTHER _____ (SPECIFY) 96	→ 112A
110	Do you share this toilet facility with other households?	YES . . . . . 1 NO 2	→ 112
111	Including your own household, how many households use this toilet facility?	NO. OF HOUSEHOLDS IF LESS THAN 10 . . . . . 0 _ 10 OR MORE HOUSEHOLDS . . . . . 95 DON'T KNOW 98	
112	Where is this toilet facility located?	IN OWN DWELLING . . . . . 1 IN OWN YARD/PLOT . . . . . 2 ELSEWHERE 3	
112A	What is the main source of lighting your household uses?	ELECTRICITY . . . . . 01 PRESSURE LAMP (COLEMAN) . . . . . 02 KEROSENE . . . . . 03 SOLAR LIGHTING . . . . . 04 CANDLES . . . . . 05 OPEN FIRE . . . . . 06 LANTERN (BATTERY OPERATED) . . . . . 07 OTHER _____ (SPECIFY) 96	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
113	What type of fuel does your household mainly use for cooking?	ELECTRICITY . . . . . 01 GAS (LPG) . . . . . 02 KEROSENE . . . . . 03 CHARCOAL . . . . . 04 WOOD . . . . . 05 NO FOOD COOKED IN HOUSEHOLD . . . . 95 OTHER _____ 96 (SPECIFY)	→ 116
114	Is the cooking usually done in the house, in a separate building, or outdoors?	IN THE HOUSE . . . . . 1 IN A SEPARATE BUILDING . . . . . 2 OUTDOORS . . . . . 3 OTHER _____ 6 (SPECIFY)	→ 116
115	Do you have a separate room which is used as a kitchen?	YES . . . . . 1 NO 2	
116	How many rooms in this household are used for sleeping?	ROOMS	
117	Does this household own any livestock, herds, other farm animals, or poultry?	YES . . . . . 1 NO 2	→ 119
118	How many of the following animals does this household own?	IF NONE, RECORD '00'. IF 95 OR MORE, RECORD '95'. IF UNKNOWN, RECORD '98'.	
	a) Pigs?	a) PIGS	
	b) Chickens?	b) CHICKENS	
	c) Sheep?	c) SHEEP	
	d) Goats?	d) GOATS	
	e) Cows or bulls?	e) COWS/BULLS	
	f) Buffalo?	f) BUFFALO	
	g) Cassowary?	g) CASSOWARY	
	h) Ducks	h) DUCKS	
	i) Other?	i) OTHER	
118A	Did your household sell any of these livestock in the past 12 months?	YES NO	
	a) Pigs?	a) PIGS 1 2	
	b) Chickens?	b) CHICKENS 1 2	
	c) Sheep?	c) SHEEP 1 2	
	d) Goats?	d) GOATS 1 2	
	e) Cows or bulls?	e) COWS/BULLS 1 2	
	f) Buffalo?	f) BUFFALO 1 2	
	g) Cassowary?	g) CASSOWARY 1 2	
	h) Ducks?	h) DUCKS 1 2	
	i) Other?	i) OTHER 1 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
118B	FOR ANY CODE '1' IN118A, ASK: How much did your household earn from selling these livestock in the last 12 months? a) Pigs? b) Chickens? c) Sheep? d) Goats? e) Cows or bulls? f) Buffalo? g) Cassowary? h) Ducks i) Other?	RECORD IN KINA. IF 99995 OR MORE, RECORD '99995'. IF UNKNOWN, RECORD '99998'. a) PIGS . . . . . [ ][ ][ ][ ][ ] b) CHICKENS . . . . . [ ][ ][ ][ ][ ] c) SHEEP . . . . . [ ][ ][ ][ ][ ] d) GOATS ... ... [ ][ ][ ][ ][ ] e) COWS/BULLS . ... [ ][ ][ ][ ][ ] f) BUFFALO ... ... [ ][ ][ ][ ][ ] g) CASSOWARY . ... [ ][ ][ ][ ][ ] h) DUCKS . . . . . [ ][ ][ ][ ][ ] i) OTHER . . . . . [ ][ ][ ][ ][ ]	
119	Does any member of this household own any agricultural land?	YES . . . . . 1 NO 2	→ 120A
120	How many hectares of agricultural land do members of this household own? IF 95 OR MORE, CIRCLE '950'.	HECTARES . . . . . [ ][ ] . [ ] 95 OR MORE HECTARES . . . . . 950 DON'T KNOW 998	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
120A	Does this household grow any food crops?	YES . . . . . 1 NO 2	→ 120D

120B	Does this household grow the following crops? IF 'YES', ASK: Is it mainly for sale or for own use?		FOR SALE	OWN USE	NO
	a) Banana?	a) BANANA	1	2	3
	b) Sweet Potato?	b) SWEET POTATO	1	2	3
	c) English Potato?	c) ENGLISH POTATO	1	2	3
	d) Taro?	d) TARO	1	2	3
	e) Yam?	e) YAM	1	2	3
	f) Sago?	f) SAGO	1	2	3
	g) Cassava/tapioca?	g) CASSAVA/TAPIOCA	1	2	3
	h) Corn?	h) CORN	1	2	3
	i) Peanut?	i) PEANUT	1	2	3
	j) Pineapple?	j) PINEAPPLE	1	2	3
	k) Pawpaw?	k) PAWPAW	1	2	3
	l) Aibika?	l) AIBIKA	1	2	3
	m) Ginger?	m) GINGER	1	2	3
	n) Cucumber?	n) CUCUMBER	1	2	3
	o) Bean?	o) BEAN	1	2	3
	p) Cabbage?	p) CABBAGE	1	2	3
	q) Other	q) OTHER	1	2	3

120C	FOR ANY CODE '1' IN120B, ASK: How much did your household earn in the last two weeks?	RECORD IN KINA. IF NONE, RECORD '00000'. IF 99995 OR MORE, RECORD '99995'. IF UNKNOWN, RECORD '99998'.	
	a) Banana?	a) BANANA	
	b) Sweet Potato?	b) SWEET POTATO	
	c) English Potato?	c) ENGLISH POTATO	
	d) Taro?	d) TARO	
	e) Yam?	e) YAM	
	f) Sago?	f) SAGO	
	g) Cassava/Tapioca?	g) CASSAVA	
	h) Corn?	h) CORN	
	i) Peanut?	i) PEANUT	
	j) Pineapple?	j) PINEAPPLE	
	k) Pawpaw?	k) PAWPAW	
	l) Aibika?	l) AIBIKA	
	m) Ginger?	m) GINGER	
	n) Cucumber?	n) CUCUMBER	
	o) Bean?	o) BEAN	
	p) Cabbage?	p) CABBAGE	
	q) Other	q) OTHER	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
120D	Does this household grow any cash crops?	YES . . . . . 1 NO 2	→ 120G
120E	Does your household grow any of the following cash crops?	YES NO a) COCOA . . . . . 1 2 b) COFFEE . . . . . 1 2 c) RUBBER . . . . . 1 2 d) OIL PALM . . . . . 1 2 e) VANILLA . . . . . 1 2 f) RICE . . . . . 1 2 g) COCONUT . . . . . 1 2 h) BETEL NUT . . . . . 1 2 i) OTHER 1 2	
120F	FOR ANY CODE '1' IN 120E, ASK: How much did your household earn in the last 12 months?	RECORD IN KINA. IF NONE, RECORD '00000'. IF 99995 OR MORE, RECORD '99995'. IF UNKNOWN, RECORD '99998'. a) COCOA . . . . . [ ][ ][ ][ ][ ] b) COFFEE . . . . . [ ][ ][ ][ ][ ] c) RUBBER . . . . . [ ][ ][ ][ ][ ] d) OIL PALM . . . . . [ ][ ][ ][ ][ ] e) VANILLA . . . . . [ ][ ][ ][ ][ ] f) RICE . . . . . [ ][ ][ ][ ][ ] g) COCONUT . . . . [ ][ ][ ][ ][ ] h) BETEL NUT . . . . [ ][ ][ ][ ][ ] i) OTHER . . . . . [ ][ ][ ][ ][ ]	
120G	Is this household engaged in fish farming? IF 'YES', ASK: Is it for sale or for own use? OTHERWISE CIRCLE '3'.	MAINLY FOR SALE . . . . . 1 MAINLY FOR OWN USE . . . . . 2 NO 3	→ 121
120H	How much did your household earn from fish farming in the last 2 weeks?	RECORD IN KINA. IF NONE, RECORD '00000' IF 99995 OR MORE, RECORD '99995'. IF UNKNOWN, RECORD '99998'. [ ][ ][ ][ ][ ]	

HOUSEHOLD CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
121	Does your household have:	YES NO	
	a) Electricity from a grid?	a) ELECTRICITY 1 2	
	b) Watch	b) WATCH 1 2	
	c) A radio?	c) RADIO 1 2	
	d) A television?	d) TELEVISION 1 2	
	e) A mobile phone?	e) MOBILE PHONE 1 2	
	f) A non-mobile telephone (landline)?	f) NON-MOBILE TELEPHONE 1 2	
	g) A computer/laptop?	g) COMPUTER/LAPTOP 1 2	
	h) A refrigerator?	h) REFRIGERATOR 1 2	
122	Does any member of this household own:	LIST OF ITEMS YES NO	
	a) A bicycle?	a) BICYCLE 1 2	
	b) A mobile phone?	b) MOBILE PHONE 1 2	
	c) A motorcycle or motor scooter?	c) MOTORCYCLE/SCOOTER 1 2	
	d) An animal-drawn cart?	d) ANIMAL-DRAWN CART 1 2	
	e) A car or truck?	e) CAR/TRUCK 1 2	
	f) A boat with a motor?	f) BOAT WITH MOTOR 1 2	
123	Does any member of this household have a bank account?	YES . . . . . 1 NO 2	
124	How often does anyone smoke inside your house? Would you say daily, weekly, monthly, less often than once a month, or never?	DAILY . . . . . 1 WEEKLY . . . . . 2 MONTHLY . . . . . 3 LESS OFTEN THAN ONCE A MONTH . . . . . 4 NEVER 5	
127	Does your household have any mosquito nets?	YES . . . . . 1 NO 2	→ 139
128	How many mosquito nets does your household have? IF 7 OR MORE NETS, RECORD '7'.	NUMBER OF NETS . . . . . ☐	

MOSQUITO NETS

		NET #1	NET #2	NET #3
129	ASK THE RESPONDENT TO SHOW YOU ALL THE NETS IN THE HOUSEHOLD. IF MORE THAN 3 NETS, USE NEXT PAGE	OBSERVED . . . . . 1 NOT OBSERVED . . 2	OBSERVED . . . . . 1 NOT OBSERVED. . . . 2	OBSERVED . . . . . 1 NOT OBSERVED . . 2
130	How many months ago did your household get the mosquito net? IF LESS THAN ONE MONTH AGO, RECORD '00'.	MONTHS AGO . . . . [ ][ ] MORE THAN 36 MONTHS AGO . . 95 NOT SURE 98	MONTHS AGO . . . . [ ][ ] MORE THAN 36 MONTHS AGO . . 95 NOT SURE 98	MONTHS AGO . . . . [ ][ ] MORE THAN 36 MONTHS AGO . . 95 NOT SURE 98
131	OBSERVE OR ASK TYPE OF MOSQUITO NET. IF TYPE IS UNKNOWN AND YOU CANNOT OBSERVE THE NET, SHOW PICTURES OF TYPICAL NET TYPES TO RESPONDENT.	**LONG-LASTING INSECTICIDE-TREATED NET (LLIN)** 01 (SKIP TO 134) OTHER TYPE . . . . . 96 DON'T KNOW TYPE . .98	**LONG-LASTING INSECTICIDE-TREATED NET (LLIN)** 01 (SKIP TO 134) OTHER TYPE . . . . . 96 DON'T KNOW TYPE . 98	**LONG-LASTING INSECTICIDE-TREATED NET (LLIN)** 01 (SKIP TO 134) OTHER TYPE . . . . . 96 DON'T KNOW TYPE . 98
132	Since you got the net, was it ever soaked or dipped in a liquid to kill or repel mosquitoes?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 134) NOT SURE 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 134) NOT SURE 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 134) NOT SURE 8
133	How many months ago was the net last soaked or dipped? IF LESS THAN ONE MONTH AGO, RECORD '00'.	MONTHS AGO . . . . [ ][ ] MORE THAN 24 MONTHS AGO . . 95 NOT SURE 98	MONTHS AGO . . . . [ ][ ] MORE THAN 24 MONTHS AGO . . 95 NOT SURE 98	MONTHS AGO . . . . [ ][ ] MORE THAN 24 MONTHS AGO . . 95 NOT SURE 98
134	Did you get the net through R*otary Against Malaria (RAM)* , during an antenatal care visit, or during an immunization visit?	YES, RAM . . . . . 1 YES, ANC . . . . . 2 YES, IMMUNIZATION VISIT . . . . . 3 (SKIP TO 135A) NO 4	YES, RAM . . . . . 1 YES, ANC . . . . . 2 YES, IMMUNIZATION VISIT . . . . . 3 (SKIP TO 135A) NO 4	YES, RAM . . . . . 1 YES, ANC . . . . . 2 YES, IMMUNIZATION VISIT . . . . . 3 (SKIP TO 135A) NO 4

MOSQUITO NETS

		NET #1	NET #2	NET #3
135	Where did you get the net?	GOVT. HEALTH FACILITY .... 01 PRIVATE HEALTH FACILITY .... 02 PHARMACY .... 03 SHOP/MARKET .... 04 VHW .... 05 RELIGIOUS INSTITUTION ...06 OTHER .... 07 DON'T KNOW 08	GOVT. HEALTH FACILITY ...... 01 PRIVATE HEALTH FACILITY ...... 02 PHARMACY ...... 03 SHOP/MARKET .... 04 VHW .... 05 RELIGIOUS INSTITUTION .. 06 OTHER .... 07 DON'T KNOW 08	GOVT. HEALTH FACILITY ...... 01 PRIVATE HEALTH FACILITY ...... 02 PHARMACY ...... 03 SHOP/MARKET .... 04 VHW .... 05 RELIGIOUS INSTITUTION ...06 OTHER .... 07 DON'T KNOW 08
135A	Did you pay for the net?	YES .... 1 NO 2	YES .... 1 NO 2	YES .... 1 NO 2
136	Did anyone sleep under this mosquito net last night?	YES .... 1 NO .... 2 (SKIP TO 138) NOT SURE 8	YES .... 1 NO .... 2 (SKIP TO 138) NOT SURE 8	YES .... 1 NO .... 2 (SKIP TO 138) NOT SURE 8
137	Who slept under this mosquito net last night? RECORD THE PERSON'S NAME AND LINE NUMBER FROM HOUSEHOLD SCHEDULE.	NAME ______ LINE NO. .... [ ][ ] NAME ______ LINE NO. .... [ ][ ] NAME ______ LINE NO. .... [ ][ ] NAME ______ LINE NO. .... [ ][ ]	NAME ______ LINE NO. .... [ ][ ] NAME ______ LINE NO. .... [ ][ ] NAME ______ LINE NO. .... [ ][ ] NAME ______ LINE NO. .... [ ][ ]	NAME ______ LINE NO. .... [ ][ ] NAME ______ LINE NO. .... [ ][ ] NAME ______ LINE NO. .... [ ][ ] NAME ______ LINE NO. .... [ ][ ]
138		GO BACK TO 129 FOR NEXT NET; OR, IF NO MORE NETS, GO TO 139.	GO BACK TO 129 FOR NEXT NET; OR, IF NO MORE NETS, GO TO139.	GO TO NEXT PAGE FIRST COLUMN IF MORE NETS, IF NO MORE NETS GO TO 139.

MOSQUITO NETS

		NET #4	NET #5	NET #6
129	ASK THE RESPONDENT TO SHOW YOU ALL THE NETS IN THE HOUSEHOLD. IF MORE THAN 3 NETS, USE NEXT PAGE (Continuation)	OBSERVED . . . . . 1 NOT OBSERVED . . 2	OBSERVED . . . . . 1 NOT OBSERVED. . . 2	OBSERVED . . . . . 1 NOT OBSERVED . . 2
130	How many months ago did your household get the mosquito net? IF LESS THAN ONE MONTH AGO, RECORD '00'.	MONTHS AGO . . . . ☐☐ MORE THAN 36 MONTHS AGO . . 95 NOT SURE 98	MONTHS AGO . . . . ☐☐ MORE THAN 36 MONTHS AGO . . 95 NOT SURE 98	MONTHS AGO . . . . ☐☐ MORE THAN 36 MONTHS AGO . . 95 NOT SURE 98
131	OBSERVE OR ASK TYPE OF MOSQUITO NET. IF TYPE IS UNKNOWN AND YOU CANNOT OBSERVE THE NET, SHOW PICTURES OF TYPICAL NET TYPES TO RESPONDENT.	**LONG-LASTING INSECTICIDE-TREATED NET (LLIN)** 01 (SKIP TO 134) OTHER TYPE . . . . . 96 DON'T KNOW TYPE . 98	**LONG-LASTING INSECTICIDE-TREATED NET (LLIN)** 01 (SKIP TO 134) OTHER TYPE . . . . . 96 DON'T KNOW TYPE . 98	**LONG-LASTING INSECTICIDE-TREATED NET (LLIN)** 01 (SKIP TO 134) OTHER TYPE . . . . . 96 DON'T KNOW TYPE . 98
132	Since you got the net, was it ever soaked or dipped in a liquid to kill or repel mosquitoes?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 134) NOT SURE 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 134) NOT SURE 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 134) NOT SURE 8
133	How many months ago was the net last soaked or dipped? IF LESS THAN ONE MONTH AGO, RECORD '00'.	MONTHS AGO . . . . ☐☐ MORE THAN 24 MONTHS AGO . . 95 NOT SURE 98	MONTHS AGO . . . . ☐☐ MORE THAN 24 MONTHS AGO . . 95 NOT SURE 98	MONTHS AGO . . . . ☐☐ MORE THAN 24 MONTHS AGO . . 95 NOT SURE 98
134	Did you get the net through R*otary Against Malaria (RAM)* , during an antenatal care visit, or during an immunization visit?	YES, RAM . . . . . 1 YES, ANC . . . . . 2 YES, IMMUNIZATION VISIT . . . . . 3 (SKIP TO 135A) NO 4	YES, RAM . . . . . 1 YES, ANC . . . . . 2 YES, IMMUNIZATION VISIT . . . . . 3 (SKIP TO 135A) NO 4	YES, RAM . . . . . 1 YES, ANC . . . . . 2 YES, IMMUNIZATION VISIT . . . . . 3 (SKIP TO 135A) NO 4

MOSQUITO NETS

		NET #4	NET #5	NET #6
135	Where did you get the net?	GOVT. HEALTH FACILITY . . . . . . 01 PRIVATE HEALTH FACILITY . . . . . . 02 PHARMACY . . . . . . 03 SHOP/MARKET . . . . 04 VHW . . . . 05 RELIGIOUS INSTITUTION . . .06 OTHER . . . . 07 DON'T KNOW 08	GOVT. HEALTH FACILITY . . . . . . 01 PRIVATE HEALTH FACILITY . . . . . . 02 PHARMACY . . . . . . 03 SHOP/MARKET . . . . 04 VHW . . . . 05 RELIGIOUS INSTITUTION . . 06 OTHER . . . . 07 DON'T KNOW 08	GOVT. HEALTH FACILITY . . . . . . 01 PRIVATE HEALTH FACILITY . . . . . . 02 PHARMACY . . . . . . 03 SHOP/MARKET . . . . 04 VHW . . . . 05 RELIGIOUS INSTITUTION . . 06 OTHER . . . . 07 DON'T KNOW 08
135A	Did you pay for the net?	YES . . . . 1 NO 2	YES . . . . 1 NO 2	YES . . . . 1 NO 2
136	Did anyone sleep under this mosquito net last night?	YES . . . . 1 NO . . . . 2 (SKIP TO 138) NOT SURE 8	YES . . . . 1 NO . . . . 2 (SKIP TO 138) NOT SURE 8	YES . . . . 1 NO . . . . 2 (SKIP TO 138) NOT SURE 8
137	Who slept under this mosquito net last night? RECORD THE PERSON'S NAME AND LINE NUMBER FROM HOUSEHOLD SCHEDULE.	NAME ______ LINE NO. . . . . [ ][ ] NAME ______ LINE NO. . . . . [ ][ ] NAME ______ LINE NO. . . . . [ ][ ] NAME ______ LINE NO. . . . . [ ][ ]	NAME ______ LINE NO. . . . . [ ][ ] NAME ______ LINE NO. . . . . [ ][ ] NAME ______ LINE NO. . . . . [ ][ ] NAME ______ LINE NO. . . . . [ ][ ]	NAME ______ LINE NO. . . . . [ ][ ] NAME ______ LINE NO. . . . . [ ][ ] NAME ______ LINE NO. . . . . [ ][ ] NAME ______ LINE NO. . . . . [ ][ ]
138		GO BACK TO 129 FOR NEXT NET; OR, IF NO MORE NETS, GO TO 139.	GO BACK TO 129 FOR NEXT NET; OR, IF NO MORE NETS, GO TO139.	GO TO **LEAFLET** IF MORE NETS, IF NO MORE NETS GO TO 139.

ADDITIONAL HOUSEHOLD CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
139	We would like to learn about the places that households use to wash their hands. Can you please show me where members of your household most often wash their hands?	OBSERVED, FIXED PLACE . . . . . 1 OBSERVED, MOBILE . . . . . 2 NOT OBSERVED, NOT IN DWELLING/YARD/PLOT . . . . 3 NOT OBSERVED, NO PERMISSION TO SEE . . . . . 4 NOT OBSERVED, OTHER REASON . . 5	→ 142
140	OBSERVE PRESENCE OF WATER AT THE PLACE FOR HANDWASHING. RECORD OBSERVATION.	WATER IS AVAILABLE . . . . . 1 WATER IS NOT AVAILABLE 2	
141	OBSERVE PRESENCE OF SOAP, DETERGENT, OR OTHER CLEANSING AGENT AT THE PLACE FOR HANDWASHING. RECORD OBSERVATION.	SOAP OR DETERGENT (BAR, LIQUID, POWDER, PASTE) . . A ASH, MUD, SAND . . . . . B NONE C	
142	OBSERVE MAIN MATERIAL OF THE FLOOR OF THE DWELLING. RECORD OBSERVATION.	**NATURAL FLOOR** EARTH/SAND . . . . . 11 **RUDIMENTARY FLOOR** WOOD PLANKS . . . . . 21 PALM/BAMBOO . . . . . 22 **FINISHED FLOOR** POLISHED WOOD . . . . . 31 VINYL OR ASPHALT STRIPS . . . . . 32 CERAMIC TILES . . . . . 33 CEMENT . . . . . 34 CARPET . . . . . 35 UNPOLISHED FLOOR . . . . . 36 OTHER _____ 96 (SPECIFY)	
143	OBSERVE MAIN MATERIAL OF THE ROOF OF THE DWELLING. RECORD OBSERVATION.	**NATURAL ROOFING** NO ROOF . . . . . 11 THATCH/PALM LEAF . . . . . 12 **RUDIMENTARY ROOFING** PALM/BAMBOO . . . . . 22 WOOD PLANKS . . . . . 23 **FINISHED ROOFING** METAL . . . . . 31 WOOD . . . . . 32 CERAMIC TILES . . . . . 34 CEMENT . . . . . 35 OTHER _____ 96 (SPECIFY)	

ADDITIONAL HOUSEHOLD CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
144	OBSERVE MAIN MATERIAL OF THE EXTERIOR WALLS OF THE DWELLING. RECORD OBSERVATION.	**NATURAL WALLS** NO WALLS . . . . . 11 CANE/PALM/TRUNKS . . . . . 12 **RUDIMENTARY WALLS** BAMBOO/PALM . . . . . 21 PLYWOOD . . . . . 24 CARDBOARD . . . . . 25 REUSED WOOD . . . . . 26 **FINISHED WALLS** CEMENT . . . . . 31 STONE WITH LIME/CEMENT . . . . . 32 BRICKS . . . . . 33 CEMENT BLOCKS . . . . . 34 WOOD PLANKS/SHINGLES . . . . . 36 FIBRO . . . . . 37 METAL/TIN SHEET. . . . . 38 OTHER _____ 96 (SPECIFY)	
144A	Some households prepare rice for their meals. Do you have any rice in your household in the last seven days?	YES . . . . . 1 NO 2	→ 144D
144B	Is it white rice or brown rice?	WHITE . . . . . 1 BROWN 2	→ 144D
144C	What brand is the rice? RECORD THE BRAND THAT THEY MAINLY USE	TRUKAI . . . . . 1 ROOTS RICE . . . . . 2 JASMINE . . . . . 3 STAR RICE . . . . . 4 EASY COOK . . . . . 5 KING RICE . . . . . 6 HOME GROWN . . . . . 7 OTHER _____ SPECIFY 96 DON'T KNOW / NO LABEL 98	
144D	Some households use flour or flour food products such as bread, buns, noodles, flour balls, doughnuts or biscuits for their meals. Did your household have or consume any flour or flour products in your household in the last seven days?	YES . . . . . 1 NO 2	

ADDITIONAL HOUSEHOLD CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
145A	Some households use salt to cook meals. I would like to know if your household have any salt that you bought or was given to you in the last seven days? SALT IS COMMERCIALIZED SALT (MANUFACTURED AND SOLD) AND DOES NOT INCLUDE TRADITIONAL SALT.	YES . . . . . 1 NO 2	→ 146
145B	We would like to know if the salt used in your household is iodized. May I take away a sample of this salt? This salt is going to be tested in a laboratory in Port Moresby. COLLECT THE SALT SAMPLE. TAKE 2 TEASPOONS OF SALT. PLACE IN POUCH AND LABEL THE INDICATIVES AND THE SALT BRAND.	YES, SALT SAMPLE TAKEN . . . . . 1 NO, SALT SAMPLE NOT TAKEN . . . . . 2 NO SALT IN HOUSEHOLD. 3	

FOOD INSECURITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
146	Now I would like to ask a few questions about situations that can cause you and people in your household not to have food to eat in a regular basis. I would like you to think about the situation in the past 12 months, whether or not you face food shortages.		
147	Were you or any member of your household worried about not having enough to eat?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
148	Still thinking about the last 12 months, was there a time when you or other member of your household were unable to eat healthy and nutritious food?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
149	Was there a time when you or other member of your household ate only a few kinds of food?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
150	Was there a time when you or other member of your household had to skip a meal?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
151	Still thinking about the 12 months, was there a time when you or other member of your household ate less than you thought you should?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
152	Was there a time when your household ran out of food?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
153	Was there a time when you or member of your household were hungry but did not eat?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
154	Was there a time when you or member of your household went without eating for a whole day?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
156	RECORD THE TIME.	HOURS . . . . . [ ][ ] MINUTES . . . . . [ ][ ]	

MUAC, WEIGHT AND HEIGHT MEASUREMENT FOR CHILDREN AGE 0-5

157	CHECK COLUMN 11 IN HOUSEHOLD QUESTIONNAIRE. RECORD THE LINE NUMBER AND NAME FOR ALL ELIGIBLE CHILDREN 0-5 YEARS IN QUESTION 158; IF MORE THAN SIX CHILDREN, USE ADDITIONAL QUESTIONNAIRE(S).			
		CHILD 1	CHILD 2	CHILD 3
158	CHECK HOUSEHOLD QUESTIONNAIRE: LINE NUMBER FROM COLUMN 11. NAME FROM COLUMN 2	LINE NUMBER . . . ☐☐ NAME _____	LINE NUMBER . . . ☐☐ NAME _____	LINE NUMBER . . . ☐☐ NAME _____
159	IF MOTHER INTERVIEWED: COPY CHILD'S DATE OF BIRTH (DAY, MONTH, AND YEAR) FROM BIRTH HISTORY. IF MOTHER NOT INTERVIEWED ASK: What is (NAME)'s date of birth?	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR . ☐☐☐☐	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR . ☐☐☐☐	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR . ☐☐☐☐
160	CHECK 159: CHILD BORN IN 2011-2016?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 166)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 166)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 166)
161	MID-UPPER ARM CIRCUMFERENCE (MUAC)	CM. . . ☐☐☐.☐ NOT PRESENT . 9994 REFUSED . . . . 9995 OTHER 9996	CM. . . ☐☐☐.☐ NOT PRESENT . 9994 REFUSED . . . . 9995 OTHER 9996	CM. . . ☐☐☐.☐ NOT PRESENT . 9994 REFUSED . . . . 9995 OTHER 9996
162	WEIGHT IN KILOGRAMS.	KG . . ☐☐.☐☐ NOT PRESENT . 9994 REFUSED . . . . 9995 OTHER 9996	KG . . ☐☐.☐☐ NOT PRESENT . 9994 REFUSED . . . . 9995 OTHER 9996	KG . . ☐☐.☐☐ NOT PRESENT . 9994 REFUSED . . . . 9995 OTHER 9996
163	HEIGHT IN CENTIMETERS.	CM. . . ☐☐☐.☐ NOT PRESENT . 9994 REFUSED . . . . 9995 OTHER . . . . . 9996 (SKIP TO 165)	CM. . . ☐☐☐.☐ NOT PRESENT . 9994 REFUSED . . . . 9995 OTHER . . . . . 9996 (SKIP TO 165)	CM. . . ☐☐☐.☐ NOT PRESENT . 9994 REFUSED . . . . 9995 OTHER . . . . . 9996 (SKIP TO 165)
164	MEASURED LYING DOWN OR STANDING UP?	LYING DOWN . . . 1 STANDING UP . . . 2	LYING DOWN . . . . 1 STANDING UP . . . 2	LYING DOWN . . . . 1 STANDING UP . . . 2
165	MEASURER: ENTER YOUR INTERVIEWER'S NUMBER.	☐☐☐☐ INTERVIEWER	☐☐☐☐ INTERVIEWER	☐☐☐☐ INTERVIEWER
166	GO BACK TO 158 IN NEXT COLUMN OF THIS QUESTIONNAIRE OR IN THE FIRST COLUMN OF THE NEXT PAGE;			

MUAC, WEIGHT AND HEIGHT MEASUREMENT FOR CHILDREN AGE 0-5

157	CHECK COLUMN 11 IN HOUSEHOLD QUESTIONNAIRE. RECORD THE LINE NUMBER AND NAME FOR ALL ELIGIBLE CHILDREN 0-5 YEARS IN QUESTION 158; IF MORE THAN SIX CHILDREN, USE ADDITIONAL QUESTIONNAIRE(S).			
		CHILD 4	CHILD 5	CHILD 6
158	CHECK HOUSEHOLD QUESTIONNAIRE: LINE NUMBER FROM COLUMN 11.	LINE NUMBER . . . ☐☐ NAME _____	LINE NUMBER . . . ☐☐ NAME _____	LINE NUMBER . . . ☐☐ NAME _____
159	IF MOTHER INTERVIEWED: COPY CHILD'S DATE OF BIRTH (DAY, MONTH, AND YEAR) FROM BIRTH HISTORY. IF MOTHER NOT INTERVIEWED ASK: What is (NAME)'s date of birth?	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR . ☐☐☐☐	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR . ☐☐☐☐	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR . ☐☐☐☐
160	CHECK 103: CHILD BORN IN 2011-2016?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 166)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 166)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 166)
161	MID-UPPER ARM CIRCUMFERENCE (MUAC)	CM . . ☐☐☐.☐ NOT PRESENT . 9994 REFUSED . . . . 9995 OTHER 9996	CM . . ☐☐☐.☐ NOT PRESENT . 9994 REFUSED . . . . 9995 OTHER 9996	CM . . ☐☐☐.☐ NOT PRESENT . 9994 REFUSED . . . . 9995 OTHER 9996
162	WEIGHT IN KILOGRAMS.	KG . . ☐☐.☐☐ NOT PRESENT . 9994 REFUSED . . . . 9995 OTHER 9996	KG . . ☐☐.☐☐ NOT PRESENT . 9994 REFUSED . . . . 9995 OTHER 9996	KG . . ☐☐.☐☐ NOT PRESENT . 9994 REFUSED . . . . 9995 OTHER 9996
163	HEIGHT IN CENTIMETERS.	CM . . ☐☐☐.☐ NOT PRESENT . 9994 REFUSED . . . . 9995 OTHER . . . . . 9996 (SKIP TO 165)	CM . . ☐☐☐.☐ NOT PRESENT . 9994 REFUSED . . . . 9995 OTHER . . . . . 9996 (SKIP TO 165)	CM . . ☐☐☐.☐ NOT PRESENT . 9994 REFUSED . . . . 9995 OTHER . . . . . 9996 (SKIP TO 165)
164	MEASURED LYING DOWN OR STANDING UP?	LYING DOWN . . . . . 1 STANDING UP . . . 2	LYING DOWN . . . . . 1 STANDING UP . . . 2	LYING DOWN . . . . . 1 STANDING UP . . . 2
165	MEASURER: ENTER YOUR INTERVIEWER'S NUMBER.	☐☐☐☐ INTERVIEWER	☐☐☐☐ INTERVIEWER	☐☐☐☐ INTERVIEWER
166	GO BACK TO 158 IN NEXT COLUMN OF THIS QUESTIONNAIRE OR IN THE FIRST COLUMN OF THE NEXT PAGE;			

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT INTERVIEW:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

SUPERVISOR'S OBSERVATIONS

QUALITY CONTROLLER/DEO'S OBSERVATIONS

STRICTLY CONFIDENTIAL

FORMATTING DATE: 06 Oct 2016

Mark [X] if selected for DV

NATIONAL STATISTICAL OFFICE
2016 DEMOGRAPHIC AND HEALTH SURVEY
FEMALE INDIVIDUAL QUESTIONNAIRE

IDENTIFICATION

PLACE NAME _____

NAME OF HOUSEHOLD HEAD _____

CLUSTER NUMBER

HOUSEHOLD NUMBER

PROVINCE

DISTRICT

LLG

WARD

CU

CU TYPE

DWELLING NO.

NAME AND LINE NUMBER OF WOMAN

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE				DAY / MONTH / YEAR
INTERVIEWER'S NAME				INTVR. NO.
RESULT*				RESULT*
NEXT VISIT: DATE				TOTAL NUMBER OF VISITS
TIME				

*RESULT CODES: 1 COMPLETED; 2 NOT AT HOME; 3 POSTPONED; 4 REFUSED; 5 PARTLY COMPLETED; 6 INCAPACITATED; 7 OTHER _____ SPECIFY

LANGUAGE OF QUESTIONNAIRE** **1** | LANGUAGE OF INTERVIEW** | NATIVE LANGUAGE OF RESPONDENT** | TRANSLATOR USED (YES = 1, NO = 2)

LANGUAGE OF QUESTIONNAIRE** **ENGLISH**

**LANGUAGE CODES:
1 ENGLISH; 2 PIDGIN; 3 MOTU; 4 TOK PLES

SUPERVISOR		QUALITY COTROLLER/DEO		OFFICE EDITOR	KEYED BY
NAME	NUMBER	NAME	NUMBER	NUMBER	NUMBER

SECTION 1. RESPONDENT'S BACKGROUND

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME.	HOURS . . . . . [ ][ ] MINUTES . . . . . [ ][ ]	
102	How long have you been living continuously in (NAME OF CURRENT CITY, TOWN OR VILLAGE OF RESIDENCE)? IF LESS THAN ONE YEAR, RECORD '00' YEARS.	YEARS . . . . . [ ][ ] ALWAYS . . . . . 95 VISITOR 96	→ 105
103	Just before you moved here, did you live in a city, in a town, or in a rural area?	CITY . . . . . 1 TOWN . . . . . 2 RURAL AREA 3	
104	Before you moved here, which province did you live in?	WESTERN . . . . . 01 GULF . . . . . 02 CENTRAL . . . . . 03 NATIONAL CAPITAL . . . . . 04 MILNE BAY . . . . . 05 NORTHERN (ORO) . . . . . 06 SOUTHERN HIGHLANDS . . . . . 07 ENGA . . . . . 08 WESTERN HIGHLANDS . . . . . 09 CHIMBU (SIMBU) . . . . . 10 EASTERN HIGHLANDS . . . . . 11 MOROBE . . . . . 12 MADANG . . . . . 13 EAST SEPIK . . . . . 14 WEST SEPIK (SANDAUN) . . . . . 15 MANUS . . . . . 16 NEW IRELAND . . . . . 17 EAST NEW BRITAIN . . . . . 18 WEST NEW BRITAIN . . . . . 19 A. R OF BOUGAINVILLE . . . . . 20 HELA . . . . . 21 JIWAKA . . . . . 22 OUTSIDE OF PNG 96	
105	In what month and year were you born?	MONTH . . . . . [ ][ ] DON'T KNOW MONTH . . . . . 98 YEAR . . . . . [ ][ ][ ][ ] DON'T KNOW YEAR 9998	
106	How old were you at your last birthday? COMPARE AND CORRECT 105 AND/OR 106 IF INCONSISTENT.	AGE IN COMPLETED YEARS . . . . . [ ][ ]	
107	Have you ever attended school?	YES . . . . . 1 NO 2	→ 111
108	What is the highest level of school you attended: elementary, primary, secondary, or higher?	ELEMENTARY . . . . . 1 PRIMARY . . . . . 2 SECONDARY - REGULAR . . . . . 3 SECONDARY -VOCATIONAL . . . . . 4 HIGHER 5	

SECTION 1. RESPONDENT'S BACKGROUND

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
109	What is the highest grade you completed at that IF COMPLETED LESS THAN ONE YEAR AT THAT LEVEL, RECORD '00'.	GRADE . . . . . ☐☐ DON'T KNOW 98	
110	CHECK 108: ELEMENTARY OR PRIMARY CODE '1' OR '2' CIRCLED ☐ → SECONDARY OR HIGHER CODE '3', '4' OR '5' CIRCLED ☐ → 113		
111	Now I would like you to read this sentence to me. SHOW CARD TO RESPONDENT. IF RESPONDENT CANNOT READ WHOLE SENTENCE, PROBE: Can you read any part of the sentence to me?	CANNOT READ AT ALL . . . . . 1 ABLE TO READ ONLY PART OF THE SENTENCE . . . . . 2 ABLE TO READ WHOLE SENTENCE . . . . . 3 NO CARD WITH REQUIRED LANGUAGE _____ 4 (SPECIFY LANGUAGE) BLIND/VISUALLY IMPAIRED 5	
112	CHECK 111: CODE '2', '3' OR '4' CIRCLED ☐ → CODE '1' OR '5' CIRCLED ☐ → 114		
113	Do you read a newspaper or magazine at least once a week, less than once a week or not at all?	AT LEAST ONCE A WEEK . . . . . 1 LESS THAN ONCE A WEEK . . . . . 2 NOT AT ALL 3	
114	Do you listen to the radio at least once a week, less than once a week or not at all?	AT LEAST ONCE A WEEK . . . . . 1 LESS THAN ONCE A WEEK . . . . . 2 NOT AT ALL 3	
115	Do you watch television at least once a week, less than once a week or not at all?	AT LEAST ONCE A WEEK . . . . . 1 LESS THAN ONCE A WEEK . . . . . 2 NOT AT ALL 3	
116	Do you own a mobile phone?	YES . . . . . 1 NO 2	→ 118
117	Do you use your mobile phone for any financial transactions?	YES . . . . . 1 NO 2	
118	Do you have an account in a bank or other financial institution that you yourself use?	YES . . . . . 1 NO 2	
119	Have you ever used the internet?	YES . . . . . 1 NO 2	→ 122
120	In the last 12 months, have you used the internet? IF NECESSARY, PROBE FOR USE FROM ANY LOCATION, WITH ANY DEVICE.	YES . . . . . 1 NO 2	→ 122
121	During the last one month, how often did you use the internet: almost every day, at least once a week, less than once a week, or not at all?	ALMOST EVERY DAY . . . . . 1 AT LEAST ONCE A WEEK . . . . . 2 LESS THAN ONCE A WEEK . . . . . 3 NOT AT ALL 4	

SECTION 1. RESPONDENT'S BACKGROUND

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
122	What is your religion and denomination, if any?	ANGLICAN . . . . . 01 EVANGELICAL ALLIANCE . . . . . 02 PENTECOSTAL . . . . . 03 EVANGELICAL LUTHERAN . . . . . 04 ROMAN CATHOLIC . . . . . 05 SALVATION ARMY . . . . . 06 SEVENTH DAY ADVENTIST . . . . . 07 UNITED CHURCH . . . . . 08 OTHER CHRISTIAN CHURCH . . . . . 09 NON-CHRISTIAN . . . . . 10 NO RELIGION 11	

SECTION 2. REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	Now I would like to ask about all the births you have had during your life. Have you ever given birth?	YES . . . . . 1 NO 2	→ 206
202	Do you have any sons or daughters to whom you have given birth who are now living with you?	YES . . . . . 1 NO 2	→ 204
203	a) How many sons live with you? b) And how many daughters live with you? IF NONE, RECORD '00'.	a) SONS AT HOME . . . . . [ ][ ] b) DAUGHTERS AT HOME . . . . . [ ][ ]	
204	Do you have any sons or daughters to whom you have given birth who are alive but do not live with	YES . . . . . 1 NO 2	→ 206
205	a) How many sons are alive but do not live with you? b) And how many daughters are alive but do not live with you? IF NONE, RECORD '00'.	a) SONS ELSEWHERE . . . . . [ ][ ] b) DAUGHTERS ELSEWHERE . . . . [ ][ ]	
206	Have you ever given birth to a boy or girl who was born alive but later died? IF NO, PROBE: Any baby who cried, who made any movement, sound, or effort to breathe, or who showed any other signs of life even if for a very short time?	YES . . . . . 1 NO 2	→ 208
207	a) How many boys have died? b) And how many girls have died? IF NONE, RECORD '00'.	a) BOYS DEAD . . . . . [ ][ ] b) GIRLS DEAD . . . . . [ ][ ]	
208	SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, RECORD '00'.	TOTAL BIRTHS . . . . . [ ][ ]	
209	CHECK 208: Just to make sure that I have this right: you have had in TOTAL _____ births during your life. Is that correct? YES NO PROBE AND CORRECT 201-208 AS NECESSARY.		
210	CHECK 208: ONE OR MORE BIRTHS NO BIRTHS		→ 226

SECTION 2. REPRODUCTION

211 Now I would like to record the names of all your births, whether still alive or not, starting with the first one you had.
RECORD NAMES OF ALL THE BIRTHS IN 212. RECORD TWINS AND TRIPLETS ON SEPARATE ROWS. IF THERE ARE MORE THAN 10 BIRTHS, USE AN ADDITIONAL QUESTIONNAIRE, STARTING WITH THE SECOND ROW.

212 What name was given to your (first/ next) baby? RECORD NAME. BIRTH HISTORY NUMBER	213 Is (NAME) a boy or a girl?	214 Were any of these births twins?	215 On what day, month, and year was (NAME) born?	216 Is (NAME) still alive?	217 IF ALIVE: How old was (NAME) at (NAME)'s last birthday IF LESS THAN 1 YEAR, RECORD "00" RECORD AGE IN COMPLETED YEARS.	218 IF ALIVE: Is (NAME) living with you?	219 IF ALIVE: RECORD HOUSEHOLD LINE NUMBER OF CHILD. RECORD '00' IF CHILD NOT LISTED IN HOUSEHOLD.	220 IF DEAD: How old was (NAME) when (he/she) died? IF '12 MONTHS' OR '1 YR', ASK: Did (NAME) have (his/her) first birthday? THEN ASK: Exactly how many months old was (NAME) RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR	221 Were there any other live births between (NAME OF PREVIOUS BIRTH) and (NAME), including any children who died after birth?
01	BOY 1 GIRL 2	SING 1 MULT 2	DAY ☐☐ MONTH ☐☐ ☐☐☐☐ YEAR	YES 1 NO 2 → (SKIP TO	AGE IN YEARS ☐☐	YES 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ → (NEXT BIRTH)	DAYS 1 ☐☐ MONTHS 2 ☐☐ YEARS 3 ☐☐	
02	BOY 1 GIRL 2	SING 1 MULT 2	DAY ☐☐ MONTH ☐☐ ☐☐☐☐ YEAR	YES 1 NO 2 → (SKIP TO	AGE IN YEARS ☐☐	YES 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ → (SKIP TO 221)	DAYS 1 ☐☐ MONTHS 2 ☐☐ YEARS 3 ☐☐	YES 1 (ADD BIRTH) ← NO 2 (NEXT BIRTH) ←
03	BOY 1 GIRL 2	SING 1 MULT 2	DAY ☐☐ MONTH ☐☐ ☐☐☐☐ YEAR	YES 1 NO 2 → (SKIP TO	AGE IN YEARS ☐☐	YES 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ → (SKIP TO 221)	DAYS 1 ☐☐ MONTHS 2 ☐☐ YEARS 3 ☐☐	YES 1 (ADD BIRTH) ← NO 2 (NEXT BIRTH) ←
04	BOY 1 GIRL 2	SING 1 MULT 2	DAY ☐☐ MONTH ☐☐ ☐☐☐☐ YEAR	YES 1 NO 2 → (SKIP TO	AGE IN YEARS ☐☐	YES 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ → (SKIP TO 221)	DAYS 1 ☐☐ MONTHS 2 ☐☐ YEARS 3 ☐☐	YES 1 (ADD BIRTH) ← NO 2 (NEXT BIRTH) ←
05	BOY 1 GIRL 2	SING 1 MULT 2	DAY ☐☐ MONTH ☐☐ ☐☐☐☐ YEAR	YES 1 NO 2 → (SKIP TO	AGE IN YEARS ☐☐	YES 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ → (SKIP TO 221)	DAYS 1 ☐☐ MONTHS 2 ☐☐ YEARS 3 ☐☐	YES 1 (ADD BIRTH) ← NO 2 (NEXT BIRTH) ←

212 What name was given to your (first/ next) baby? RECORD NAME. BIRTH HISTOR Y NUMBER	213 Is (NAME) a boy or a girl?	214 Were any of these births twins?	215 On what day, month, and year was (NAME) born?	216 Is (NAME) still alive?	217 IF ALIVE: How old was (NAME) at (NAME)' s last birthday ^ IF LESS THAN 1 YEAR, RECOR D "00" RECORD AGE IN COMP- LETED YEARS.	218 IF ALIVE: Is (NAME) living with you?	219 IF ALIVE: RECORD HOUSEHOLD LINE NUMBER OF CHILD. RECORD '00' IF CHILD NOT LISTED IN HOUSEHOLD .	220 IF DEAD: How old was (NAME) when (he/she) died? IF '12 MONTHS' OR '1 YR', ASK: Did (NAME) have (his/her) first birthday? THEN ASK: Exactly how many months old was (NAME) RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR	221 Were there any other live births between (NAME OF PREVIOUS BIRTH) and (NAME), including any children who died after birth?
06	BOY 1 GIRL 2	SING 1 MULT 2	DAY MONTH YEAR	YES 1 NO 2 (SKIP TO	AGE IN YEARS	YES 1 NO 2	HOUSEHOLD LINE NUMBER (SKIP TO 221)	DAYS 1 MONTHS 2 YEARS 3	YES 1 (ADD BIRTH) NO 2 (NEXT BIRTH)
07	BOY 1 GIRL 2	SING 1 MULT 2	DAY MONTH YEAR	YES 1 NO 2 (SKIP TO	AGE IN YEARS	YES 1 NO 2	HOUSEHOLD LINE NUMBER (SKIP TO 221)	DAYS 1 MONTHS 2 YEARS 3	YES 1 (ADD BIRTH) NO 2 (NEXT BIRTH)
08	BOY 1 GIRL 2	SING 1 MULT 2	DAY MONTH YEAR	YES 1 NO 2 (SKIP TO	AGE IN YEARS	YES 1 NO 2	HOUSEHOLD LINE NUMBER (SKIP TO 221)	DAYS 1 MONTHS 2 YEARS 3	YES 1 (ADD BIRTH) NO 2 (NEXT BIRTH)
09	BOY 1 GIRL 2	SING 1 MULT 2	DAY MONTH YEAR	YES 1 NO 2 (SKIP TO	AGE IN YEARS	YES 1 NO 2	HOUSEHOLD LINE NUMBER (SKIP TO 221)	DAYS 1 MONTHS 2 YEARS 3	YES 1 (ADD BIRTH) NO 2 (NEXT BIRTH)
10	BOY 1 GIRL 2	SING 1 MULT 2	DAY MONTH YEAR	YES 1 NO 2 (SKIP TO	AGE IN YEARS	YES 1 NO 2	HOUSEHOLD LINE NUMBER (SKIP TO 221)	DAYS 1 MONTHS 2 YEARS 3	YES 1 (ADD BIRTH) NO 2 (NEXT BIRTH)

SECTION 2. REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
222	Have you had any live births since the birth of (NAME OF LAST BIRTH)?	YES . . . . . 1 (RECORD BIRTH(S) IN TABLE) NO 2	
223	COMPARE 208 WITH NUMBER OF BIRTHS IN BIRTH HISTORY NUMBERS ARE SAME ☐ NUMBERS ARE DIFFERENT ☐ (PROBE AND RECONCILE)		
224	CHECK 215: ENTER THE NUMBER OF BIRTHS IN 2011-2016	NUMBER OF BIRTHS . . . . . ☐☐ NONE 0	→ 226
225	**C** FOR EACH BIRTH IN 2011-2016, ENTER 'B' IN THE MONTH OF BIRTH IN THE CALENDAR. WRITE THE NAME OF THE CHILD TO THE LEFT OF THE 'B' CODE. FOR EACH BIRTH, ASK THE NUMBER OF COMPLETED MONTHS THE PREGNANCY LASTED AND RECORD 'P' IN EACH OF THE PRECEDING MONTHS ACCORDING TO THE DURATION OF PREGNANCY. (NOTE: THE NUMBER OF 'P's MUST BE ONE LESS THAN THE NUMBER OF MONTHS THAT THE PREGNANCY LASTED.)		
226	Are you pregnant now?	YES . . . . . 1 NO . . . . . 2 UNSURE 8	→ 230
227	How many months pregnant are you? RECORD NUMBER OF COMPLETED MONTHS. **C** ENTER 'P's IN THE CALENDAR, BEGINNING WITH THE MONTH OF INTERVIEW AND FOR THE TOTAL NUMBER OF COMPLETED MONTHS.	MONTHS . . . . . ☐☐	
228	When you got pregnant, did you want to get pregnant at that time?	YES . . . . . 1 NO 2	→ 230
229	CHECK 208: TOTAL NUMBER OF BIRTHS ONE OR MORE ☐: a) Did you want to have a baby later on or did you not want any more children? NONE ☐: b) Did you want to have a baby later on or did you not want any children?	LATER . . . . . 1 NO MORE/NONE 2	
230	Have you ever had a pregnancy that miscarried, was aborted, or ended in a stillbirth?	YES . . . . . 1 NO 2	→ 239
231	When did the last such pregnancy end?	MONTH . . . . . ☐☐ YEAR . . . . . ☐☐☐☐	

SECTION 2. REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
232	CHECK 231: LAST PREGNANCY ENDED IN 2011-2016 ☐ → 234 LAST PREGNANCY ENDED IN 2011 OR EARLIER ☐ → 239		

LINE NO.	233 In what month and year did the preceding such pregnancy end?	234 How many months pregnant were you when that pregnancy ended?	235 Since January 2012, have you had any other pregnancies that did not result in a live birth?	
01		☐☐ NUMBER OF MONTHS	YES . . . . . 1 NO 2	→ NEXT LINE → 236
02	☐☐ MONTH ☐☐☐☐ YEAR	☐☐ NUMBER OF MONTHS	YES . . . . . 1 NO 2	→ NEXT LINE → 236
03	☐☐ MONTH ☐☐☐☐ YEAR	☐☐ NUMBER OF MONTHS	YES . . . . . 1 NO 2	→ NEXT LINE → 236
04	☐☐ MONTH ☐☐☐☐ YEAR	☐☐ NUMBER OF MONTHS	YES . . . . . 1 NO 2	→ 236

236	**C** FOR EACH PREGNANCY THAT DID NOT END IN A LIVE BIRTH IN 2011-2016 OR LATER, ENTER 'T' IN THE CALENDAR IN THE MONTH THAT THE PREGNANCY TERMINATED AND 'P' FOR THE REMAINING NUMBER OF COMPLETED MONTHS OF PREGNANCY. IF THERE ARE MORE THAN FOUR PREGNANCIES THAT DID NOT END IN A LIVE BIRTH, USE AN ADDITIONAL QUESTIONNAIRE STARTING ON THE SECOND LINE.		
237	Did you have any miscarriages, abortions or stillbirths that ended before 2011?	YES . . . . . 1 NO 2	→ 239
238	When did the last such pregnancy that terminated before 2011 end?	MONTH . . . . . ☐☐ YEAR . . . . . ☐☐☐☐	

SECTION 2. REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
239	When did your last menstrual period start? _____ (DATE, IF GIVEN)	DAYS AGO . . . . . 1 [ ][ ] WEEKS AGO . . . . . 2 [ ][ ] MONTHS AGO . . . . . 3 [ ][ ] YEARS AGO . . . . . 4 [ ][ ] IN MENOPAUSE/ HAS HAD HYSTERECTOMY . . . . . 994 BEFORE LAST BIRTH . . . . . 995 NEVER MENSTRUATED 996	
240	From one menstrual period to the next, are there certain days when a woman is more likely to become pregnant?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 242
241	Is this time just before her period begins, during her period, right after her period has ended, or halfway between two periods?	JUST BEFORE HER PERIOD BEGI . . . . . 1 DURING HER PERIOD . . . . . 2 RIGHT AFTER HER PERIOD HAS END . . . . . 3 HALFWAY BETWEEN TWO PERIODS . . . . . 4 OTHER _____ 6 (SPECIFY) DON'T KNOW 8	
242	After the birth of a child, can a woman become pregnant before her menstrual period has returned?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

SECTION 3. CONTRACEPTION

301	Now I would like to talk about family planning - the various ways or methods that a couple can use to delay or avoid a pregnancy. Have you ever heard of (METHOD)?	
01	Female Sterilisation. PROBE: Women can have an operation to avoid having any more children.	YES . . . . . 1 NO 2
02	Male Sterilisation. PROBE: Men can have an operation to avoid having any more children.	YES . . . . . 1 NO 2
03	IUD/LOOP. PROBE: Women can have a loop or coil placed inside them by a doctor or a nurse which can prevent pregnancy for one or more	YES . . . . . 1 NO 2
04	Injectables. PROBE: Women can have an injection by a health provider that stops them from becoming pregnant for one or more months.	YES . . . . . 1 NO 2
05	Implants. PROBE: Women can have one or more small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for one or more years.	YES . . . . . 1 NO 2
06	Pill. PROBE: Women can take a pill every day to avoid becoming pregnant.	YES . . . . . 1 NO 2
07	Condom. PROBE: Men can put a rubber sheath on their penis before sexual intercourse.	YES . . . . . 1 NO 2
08	Female Condom. PROBE: Women can place a sheath in their vagina before sexual intercourse.	YES . . . . . 1 NO 2
09	Ovulation/Periodic Abstinence/Natural Family Planning. PROBE: To avoid pregnancy, women do not have sexual intercourse on the days of the month they think they can get	YES . . . . . 1 NO 2
10	Withdrawal. PROBE: Men can be careful and pull out before climax.	YES . . . . . 1 NO 2
11	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	YES, MODERN METHOD _____ 1 (SPECIFY) YES, TRADITIONAL METHOD _____ 2 (SPECIFY) NO 3

SECTION 3. CONTRACEPTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
302	CHECK 226: NOT PREGNANT OR UNSURE ☐ PREGNANT ☐		→ 312
303	Are you or your partner currently doing something or using any method to delay or avoid getting pregnant?	YES . . . . . 1 NO 2	→ 312
304	Which method are you using? RECORD ALL MENTIONED. IF MORE THAN ONE METHOD MENTIONED, FOLLOW SKIP INSTRUCTION FOR HIGHEST METHOD IN LIST.	FEMALE STERILISATION . . . . . A MALE STERILISATION . . . . . B IUD/LOOP . . . . . C INJECTABLES . . . . . D IMPLANTS . . . . . E PILL . . . . . F MALE CONDOM . . . . . G FEMALE CONDOM . . . . . H OVULATION/PERIODIC ABSTINEN(. . . . . I WITHDRAWAL . . . . . J OTHER MODERN METHOD . . . . . X OTHER TRADITIONAL METHOD . . . . . Y	→ 307 → 309
307	In what facility did the sterilisation take place? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**PUBLIC SECTOR** GOVERNMENT HOSPITA . . . . . 11 GOVERNMENT HEALTH CENTE . . . . . 12 FAMILY PLANNING CLINIC . . . . . 13 MOBILE CLINIC . . . . . 14 OTHER PUBLIC SECTOR _____ 16 (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/CLINIC . . . . . 21 PRIVATE DOCTOR'S OFFICE . . . . . 22 MOBILE CLINIC . . . . . 23 OTHER PRIVATE MEDICAL SECTOR _____ 26 (SPECIFY) OTHER _____ 96 (SPECIFY) DON'T KNOW 98	
308	In what month and year was the sterilization performed?	MONTH . . . . . ☐☐ YEAR . . . . . ☐☐☐☐	→ 310
309	Since what month and year have you been using (CURRENT METHOD) without stopping? PROBE: For how long have you been using (CURRENT METHOD) now without stopping?	MONTH . . . . . ☐☐ YEAR . . . . . ☐☐☐☐	
310	CHECK 308 AND 309, 215 AND 231: ANY BIRTH OR PREGNANCY TERMINATION AFTER MONTH AND YEAR OF START OF USE OF CONTRACEPTION IN 308 OR 309 NO ☐ YES ☐ GO BACK TO 308 OR 309, PROBE AND RECORD MONTH AND YEAR AT START OF CONTINUOUS USE OF CURRENT METHOD (MUST BE AFTER LAST BIRTH OR PREGNANCY		

SECTION 3. CONTRACEPTION

311 CHECK 308 AND 309:

YEAR IS 2011-2016

C ENTER CODE FOR METHOD USED IN MONTH OF INTERVIEW IN THE CALENDAR AND IN EACH MONTH BACK TO THE DATE STARTED USING.

THEN CONTINUE

YEAR IS 2011 OR EARLIER

C ENTER CODE FOR METHOD USED IN MONTH OF INTERVIEW IN THE CALENDAR AND EACH MONTH BACK TO JANUARY 2011 .

THEN

(SKIP TO 324)

312 I would like to ask you some questions about the times you or your partner may have used a method to avoid getting pregnant during the last few years.

USE CALENDAR TO PROBE FOR EARLIER PERIODS OF USE AND NONUSE, STARTING WITH MOST RECENT USE, BACK TO JANUARY 2011. USE NAMES OF CHILDREN, DATES OF BIRTH, AND PERIODS OF PREGNANCY AS REFERENCE POINTS.

C IN **COLUMN 1**, ENTER METHOD USE CODE OR '0' FOR NONUSE IN EACH BLANK MONTH.

ILLUSTRATIVE QUESTIONS:

a) When was the last time you used a method? Which method was that?
b) When did you start using that method? How long after the birth of (NAME)?
c) How long did you use the method then?

C IN **COLUMN 2**, ENTER CODES FOR DISCONTINUATION NEXT TO THE LAST MONTH OF USE. NUMBER OF CODES IN COLUMN 2 MUST BE SAME AS NUMBER OF INTERRUPTIONS OF METHOD USE IN COLUMN 1.

ASK WHY SHE STOPPED USING THE METHOD. IF A PREGNANCY FOLLOWED, ASK WHETHER SHE BECAME PREGNANT UNINTENTIONALLY WHILE USING THE METHOD OR DELIBERATELY STOPPED TO

ILLUSTRATIVE QUESTIONS:

d) Why did you stop using the (METHOD)? Did you become pregnant while using (METHOD), or did you stop to get pregnant, or did you stop for some other reason?
e) IF DELIBERATELY STOPPED TO BECOME PREGNANT, ASK: How many months did it take you to get pregnant after you stopped using (METHOD)? AND ENTER '0' IN EACH SUCH MONTH IN COLUMN 1.

SECTION 3. CONTRACEPTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
313	CHECK THE CALENDAR FOR USE OF ANY CONTRACEPTIVE METHOD IN ANY MONTH NO METHOD USED ☐ ↓ ANY METHOD USED ☐ →		315
314	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	YES . . . . . 1 NO 2	326
315	CHECK 304: CIRCLE METHOD CODE: IF MORE THAN ONE METHOD CODE CIRCLED IN 304, CIRCLE CODE FOR HIGHEST METHOD IN LIST.	NO CODE CIRCLED . . . . . 00 FEMALE STERILISATION . . . . . 01 MALE STERILISATION . . . . . 02 IUD/LOOP . . . . . 03 INJECTABLES . . . . . 04 IMPLANTS . . . . . 05 PILL . . . . . 06 CONDOM . . . . . 07 FEMALE CONDOM . . . . . 08 RHYTHM METHOD/PERIODIC ABSTINENCE NATURAL FAMILY PLANNING . . . . . 09 WITHDRAWAL . . . . . 10 OTHER MODERN METHOD . . . . . 95 OTHER TRADITIONAL METHOD 96	326 319 326A 323
316	You first started using (CURRENT METHOD) in (DATE FROM 309). Where did you get it at that time? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**PUBLIC SECTOR** GOVERNMENT HOSPITAL . . . . . 11 GOVERNMENT HEALTH CENTER . . . . . 12 GOVERNMENT HEALTH SUB CENTER . . . . 13 COMMUNITY AID/HEALTH POST . . . . . 14 FAMILY PLANNING CLINIC . . . . . 15 MOBILE CLINIC . . . . . 16 PATROL CLINIC . . . . . 17 COMMUNITY BASED DISTRIBUTOR . . . . . 18 OTHER PUBLIC SECTOR _____ 19 (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/CLINIC . . . . . 21 PHARMACY . . . . . 22 PRIVATE DOCTOR . . . . . 23 OTHER PRIVATE MEDICAL SECTOR _____ 26 (SPECIFY) **OTHER SOURCE** SHOP . . . . . 31 TRADITIONAL PRACTITIONER . . . . . 32 FRIEND/RELATIVE . . . . . 33 OTHER _____ 36 (SPECIFY)	
317	CHECK 304: CIRCLE METHOD CODE: IF MORE THAN ONE METHOD CODE CIRCLED IN 304, CIRCLE CODE FOR HIGHEST METHOD IN LIST.	IUD/LOOP . . . . . 03 INJECTABLES . . . . . 04 IMPLANTS . . . . . 05 PILL . . . . . 06 CONDOM . . . . . 07 FEMALE CONDOM . . . . . 08 OTHER MODERN METHOD . . . . . 95 OTHER TRADITIONAL METHOD 96	323 322 323
318	At that time, were you told about side effects or problems you might have with the method?	YES . . . . . 1 NO 2	321 320
319	When you got sterilized, were you told about side effects or problems you might have with the method?	YES . . . . . 1 NO 2	321
320	Were you ever told by a health or family planning worker about side effects or problems you might have with the method?	YES . . . . . 1 NO 2	322

SECTION 3. CONTRACEPTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
321	Were you told what to do if you experienced side effects or problems?	YES . . . . . 1 NO 2	
322	CHECK 318 AND 319: ANY 'YES' → a) At that time, were you told about other methods of family planning that you could use? OTHER → b) When you obtained (CURRENT METHOD FROM 315) from (SOURCE OF METHOD FROM 307 OR 316), were you told about other methods of family planning that you	YES . . . . . 1 NO 2	→ 324
323	Were you ever told by a health or family planning worker about other methods of family planning that you could use?	YES . . . . . 1 NO 2	
324	CHECK 304: CIRCLE METHOD CODE: IF MORE THAN ONE METHOD CODE CIRCLED IN 304, CIRCLE CODE FOR HIGHEST METHOD IN LIST.	FEMALE STERILISATION . . . . . 01 MALE STERILISATION . . . . . 02 IUD/LOOP . . . . . 03 INJECTABLES . . . . . 04 IMPLANTS . . . . . 05 PILL . . . . . 06 CONDOM . . . . . 07 FEMALE CONDOM . . . . . 08 OVULATION/PERIODIC ABSTINENCE/ NATURAL FAMILY PLANNIN(. . . . . 09 WITHDRAWAL . . . . . 10 OTHER MODERN METHOD . . . . . 95 OTHER TRADITIONAL METHOD 96	→ 326A → 326A → 326A
325	Where did you obtain (CURRENT METHOD) the last time? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**PUBLIC SECTOR** GOVERNMENT HOSPITA . . . . . 11 GOVERNMENT HEALTH CENTE . . . . . 12 GOVERNMENT HEALTH SUB CENTER . . . . 13 COMMUNITY AID/HEALTH POS . . . . . 14 FAMILY PLANNING CLINIC . . . . . 15 MOBILE CLINIC . . . . . 16 PATROL CLINIC . . . . . 17 COMMUNITY BASED DISTRIBUTOI . . . . . 18 OTHER PUBLIC SECTOR _____ 19 (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/CLINIC . . . . . 21 PHARMACY . . . . . 22 PRIVATE DOCTOR . . . . . 23 OTHER PRIVATE MEDICAL SECTOR _____ 26 (SPECIFY) **OTHER SOURCE** SHOP . . . . . 31 TRADITIONAL PRACTITIONER . . . . . 32 FRIEND/RELATIVE . . . . . 33 OTHER _____ 36 (SPECIFY)	 → 326A

SECTION 3. CONTRACEPTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
326	Do you know of a place where you can obtain a method of family planning?	YES . . . . . 1 NO 2	
326A	Are you aware that your government encourages men and women to plan their families?	YES . . . . . 1 NO 2	
326B	Are you aware that men and women do not require consent from their partner to use family planning?	YES . . . . . 1 NO 2	
327	In the last 12 months, were you visited by a health fieldworker?	YES . . . . . 1 NO 2	→ 329
328	Did the health fieldworker talk to you about family planning?	YES . . . . . 1 NO 2	
329	CHECK 202: LIVING CHILDREN YES → a) In the last 12 months, have you visited a health facility for care for yourself or your children? NO → b) In the last 12 months, have you visited a health facility for care for yourself?	YES . . . . . 1 NO 2	→ 401
330	Did any staff member at the health facility speak to you about family planning methods?	YES . . . . . 1 NO 2	

SECTION 4. PREGNANCY AND POSTNATAL CARE

401	CHECK 224: ONE OR MORE BIRTHS IN 2011-2016 ☐ ↓ NO BIRTHS IN 2011-2016 ☐ → 648		
402	CHECK 215. RECORD THE BIRTH HISTORY NUMBER IN 403 AND THE NAME AND SURVIVAL STATUS IN 404 FOR EACH BIRTH IN 2011-2016. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. IF THERE ARE MORE THAN 2 BIRTHS, USE LAST COLUMN OF ADDITIONAL QUESTIONNAIRE(S). Now I would like to ask some questions about your children born in the last five years. (We will talk about each separately.)		
403	BIRTH HISTORY NUMBER FROM 212 IN BIRTH HISTORY.	LAST BIRTH BIRTH HISTORY NUMBER . . . . . ☐☐	NEXT-TO-LAST BIRTH BIRTH HISTORY NUMBER . . . . . ☐☐
404	FROM 212 AND 216:	NAME _____ LIVING ☐ ↓ DEAD ☐ ↓	NAME _____ LIVING ☐ ↓ DEAD ☐ ↓
405	When you got pregnant with (NAME), did you want to get pregnant at that time?	YES . . . . . 1 (SKIP TO 408) ← NO 2	YES . . . . . 1 (SKIP TO 426) ← NO 2
406	CHECK 208: ONLY ONE BIRTH ☐ ↓ / MORE THAN ONE BIRTH ☐ ↓ a) Did you want to have a baby later on, or did you not want any children? b) Did you want to have a baby later on, or did you not want any more children?	LATER . . . . . 1 NO MORE/NONE . . . . . 2 (SKIP TO 408) ←	LATER . . . . . 1 NO MORE/NONE . . . . . 2 (SKIP TO 426) ←
407	How much longer did you want to wait?	MONTHS . . . . . 1 ☐☐ YEARS . . . . . 2 ☐☐ DON'T KNOW 998	MONTHS . . . . . 1 ☐☐ YEARS . . . . . 2 ☐☐ DON'T KNOW 998
408	Did you see anyone for antenatal care for this pregnancy?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 414) ←	
409	Whom did you see? Anyone else? PROBE TO IDENTIFY EACH TYPE OF PERSON AND RECORD ALL MENTIONED.	**HEALTH PERSONNEL** DOCTOR . . . . . A MIDWIFE . . . . . B NURSE . . . . . C TRAINED VILLAGE HEALTH VOLUNTEER (VHV . . . . D **OTHER PERSON** VILLAGE BIRTH ATTENDANT . . . . . E FEMALE RELATIVE . . . . . F OTHER _____ X (SPECIFY)	

SECTION 4. PREGNANCY AND POSTNATAL CARE

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
410	Where did you receive antenatal care for this pregnancy? Anywhere else? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**HOME** HER HOME . . . . . A OTHER HOME . . . . . B **PUBLIC SECTOR** GOVERNMENT HOSPITA . . C GOVERNMENT HEALTH CENTER . . . . . D GOVERNMENT SUB HEALTH CENTER . . . . E COMMUNITY AID/HEALTH POST . . . . . F CHURCH HOSPITA . . . . . G CHURCH HEALTH CENTER H CHURCH SUB HEALTH CENTER . . . . . I CHURCH AID POS . . . . . J OTHER GOVERNMENT . . K _____ (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/ CLINIC . . . . . L OTHER PRIVATE MEDICAL SECTOR _____ M (SPECIFY) OTHER _____ X (SPECIFY)	
411	How many months pregnant were you when you first received antenatal care for this pregnancy?	MONTHS . . . . . ☐☐ DON'T KNOW 98	
412	How many times did you receive antenatal care during this pregnancy?	NUMBER OF TIMES . . . . ☐☐ DON'T KNOW 98	
413	As part of your antenatal care during this pregnancy, were any of the following done at least once: a) Was your blood pressure b) Did you give a urine sample? c) Did you give a blood sample?	YES NO a) BP . . . . . 1 2 b) URINE . . . . . 1 2 c) BLOOD 1 2	
414	During this pregnancy, were you given an injection in the arm to prevent the baby from getting tetanus, that is, convulsions after birth?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 417) DON'T KNOW 8	
415	During this pregnancy, how many times did you get a tetanus injection?	TIMES . . . . . ☐ DON'T KNOW 8	
416	CHECK 415:	2 OR MORE TIMES ☐ OTHER ☐ (SKIP TO 420)	

SECTION 4. PREGNANCY AND POSTNATAL CARE

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
417	At any time before this pregnancy, did you receive any tetanus injections?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 420) ← DON'T KNOW 8	
418	Before this pregnancy, how many times did you receive a tetanus injection? IF 7 OR MORE TIMES, RECORD '7'.	TIMES . . . . . ☐ DON'T KNOW 8	
419	How many years ago did you receive the last tetanus injection before this pregnancy?	YEARS AGO . . . . ☐☐	
420	During this pregnancy, were you given or did you buy any iron tablets or iron syrup? SHOW TABLETS/SYRUP.	YES . . . . . 1 NO . . . . . 2 (SKIP TO 422) ← DON'T KNOW 8	
421	During the whole pregnancy, for how many days did you take the tablets or syrup? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER OF DAYS.	DAYS . . . . ☐☐☐ DON'T KNOW 998	
422	During this pregnancy, did you take any drug for intestinal worms?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
423	During this pregnancy, did you take SP/Fansidar to keep you from getting malaria?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 426) ← DON'T KNOW 8	
424	How many times did you take SP/Fansidar during this pregnancy?	TIMES . . . . . ☐☐	
425	Did you get the SP/Fansidar during any antenatal care visit, during another visit to a health facility or from another source? IF MORE THAN ONE SOURCE, RECORD THE HIGHEST SOURCE ON THE LIST.	ANTENATAL VISIT . . . . . 1 ANOTHER FACILITY VISI . . . . 2 OTHER SOURCE 6	
426	When (NAME) was born, was (NAME) very large, larger than average, average, smaller than average, or very small?	VERY LARGE . . . . . 1 LARGER THAN AVERAGE . . . . . 2 AVERAGE . . . . . 3 SMALLER THAN AVERAGE . . . . . 4 VERY SMALL . . . . . 5 DON'T KNOW 8	VERY LARGE . . . . . 1 LARGER THAN AVERAGE . . . . . 2 AVERAGE . . . . . 3 SMALLER THAN AVERAGE . . . . . 4 VERY SMALL . . . . . 5 DON'T KNOW 8
427	Was (NAME) weighed at birth?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 429) ← DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 429) ← DON'T KNOW 8

SECTION 4. PREGNANCY AND POSTNATAL CARE

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
428	How much did (NAME) weigh? RECORD WEIGHT IN KILOGRAMS FROM HEALTH CARD, IF AVAILABLE.	KG FROM CARD 1 ☐☐.☐☐ KG FROM RECALL 2 ☐☐.☐☐ DON'T KNOW 99998	KG FROM CARD 1 ☐☐.☐☐ KG FROM RECALL 2 ☐☐.☐☐ DON'T KNOW 99998
429	Who assisted with the delivery of (NAME)? Anyone else? PROBE FOR THE TYPE(S) OF PERSON(S) AND RECORD ALL MENTIONED. IF RESPONDENT SAYS NO ONE ASSISTED, PROBE TO DETERMINE WHETHER ANY ADULTS WERE PRESENT AT THE DELIVERY.	**HEALTH PERSONNEL** DOCTOR . . . . . A MIDWIFE . . . . . B NURSE . . . . . C TRAINED VILLAGE HEALTH VOLUNTEER (VHV . . . . D **OTHER PERSON** VILLAGE BIRTH ATTENDANT . . . . . E RELATIVE/FRIEND . . . . . F OTHER _____ X (SPECIFY) NO ONE ASSISTED . . . . . Y	**HEALTH PERSONNEL** DOCTOR . . . . . A MIDWIFE . . . . . B NURSE . . . . . C TRAINED VILLAGE HEALTH VOLUNTEER (VHV . . . . D **OTHER PERSON** VILLAGE BIRTH ATTENDANT . . . . . E RELATIVE/FRIEND . . . . . F OTHER _____ X (SPECIFY) NO ONE ASSISTED . . . . . Y
430	Where did you give birth to (NAME)? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**HOME** HER HOME . . . . . 11 (SKIP TO 433A) ← OTHER HOME . . . . . 12 **PUBLIC SECTOR** GOVERNMENT HOSPITAL . . 21 GOVERNMENT HEALTH CENTER . . . . . 22 GOVERNMENT SUB HEALTH CENTER . . . . 23 COMMUNITY AID/HEALTH POST . . . . . 24 CHURCH HOSPITAL . . . . . 25 CHURCH HEALTH CENTER 26 CHURCH SUB HEALTH CENTER . . . . . 27 CHURCH AID POST . . . . . 28 OTHER GOVERNMENT . . 29 _____ (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/ CLINIC . . . . . 31 OTHER PRIVATE MEDICAL SECTOR _____ 36 **OTHER** _____ 96 (SPECIFY) (SKIP TO 433A) ←	**HOME** HER HOME . . . . . 11 (SKIP TO 433A) ← OTHER HOME . . . . . 12 **PUBLIC SECTOR** GOVERNMENT HOSPITAL . . 21 GOVERNMENT HEALTH CENTER . . . . . 22 GOVERNMENT SUB HEALTH CENTER . . . . 23 COMMUNITY AID/HEALTH POST . . . . . 24 CHURCH HOSPITAL . . . . . 25 CHURCH HEALTH CENTER 26 CHURCH SUB HEALTH CENTER . . . . . 27 CHURCH AID POST . . . . . 28 OTHER GOVERNMENT . . 29 _____ (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/ CLINIC . . . . . 31 OTHER PRIVATE MEDICAL SECTOR _____ 36 **OTHER** _____ 96 (SPECIFY) (SKIP TO 433A) ←

SECTION 4. PREGNANCY AND POSTNATAL CARE

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
431	How long after (NAME) was delivered did you stay there? IF LESS THAN ONE DAY, RECORD HOURS; IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS ..... 1 ☐☐ DAYS ..... 2 ☐☐ WEEKS ..... 3 ☐☐ DON'T KNOW 998	
432	Was (NAME) delivered by caesarean, that is, did they cut your belly open to take the baby out?	YES ..... 1 NO ..... 2 → (SKIP TO 433B)	YES ..... 1 NO ..... 2 → (SKIP TO 433B)
433	When was the decision made to have the caesarean section? Was it before or after your labor pains started?	BEFORE ..... 1 → (SKIP TO 433B) AFTER 2	BEFORE ..... 1 → (SKIP TO 433B) AFTER 2
433A	Why did you not go to a health facility for the delivery of (NAME)? RECORD ALL MENTIONED	OWN WISH ..... A HUSBAND INSISTS ..... B PARENTS INSIST ..... C IN-LAWS INSIST ..... D NO TRANSPORT ..... E NO ROAD ..... F NO MONEY ..... G HEALTH FACILITY TOO FAR .. H ONLY MALE HEALTH WORKERS I OTHER _____ X (SPECIFY)	OWN WISH ..... A HUSBAND INSISTS ..... B PARENTS INSIST ..... C IN-LAWS INSIST ..... D NO TRANSPORT ..... E NO ROAD ..... F NO MONEY ..... G HEALTH FACILITY TOO FAR .. H ONLY MALE HEALTH WORKERS I OTHER _____ X (SPECIFY)
433B	At the time of the birth of (NAME), did you have:	YES NO DON'T KNOW	YES NO DON'T KNOW
	- Labour, that is, the strong and regular contractions lasting more than one day and one night?	PROLONGED LABOR 1 2 8	PROLONGED LABOR 1 2 8
	- A lot more vaginal bleeding than normal following childbirth (SOAKED BED SHEETS)	VAGINAL BLEEDING 1 2 8	VAGINAL BLEEDING 1 2 8
	- A high fever and foul smelling vaginal discharge?	FEVER/ DISCHARGE 1 2 8	FEVER/ DISCHARGE 1 2 8
	- Convulsions/fits with loss of consciousness?	CONVULSIONS 1 2 8	CONVULVSIONS 1 2 8
	- Water breaks more than 6 hours before the baby was born?	WATER BREAKS 1 2 8	WATER BREAKS 1 2 8
	- Any other complications?	OTHER 1 2 8 _____ SPECIFY	OTHER 1 2 8 _____ SPECIFY
434	Immediately after the birth, was (NAME) put directly on the bare skin of your chest?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8

SECTION 4. PREGNANCY AND POSTNATAL CARE

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
NB1	Was (NAME) wiped dry within a few minutes after birth?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
NB2	How long after the birth was (NAME) bathed for the first time? IF LESS THAN 1 HOUR, RECORD '00' HOURS; IF LESS THAN 24 HOURS, RECORD HOURS; OTHERWISE, RECORD DAYS.	IMMEDIATELY . . . . . .000 HOURS . . . . . 1 ☐☐ DAYS . . . . . 2 ☐☐ DON'T KNOW 998	
NB3	CHECK 430: PLACE OF DELIVERY	CODE 11, 12, OR 96 CIRCLED → ☐ CODE 21 - 36 → ☐ (SKIP TO NB6)	
NB4	What was used to cut the cord?	RAZOR BLADE . . . . . 1 KNIFE . . . . . 2 SCISSORS . . . . . 3 OTHER _____ 6 (SPECIFY) DON'T KNOW 8	
NB5	Was it new or had it ever been used before?	NEW . . . . . 1 USED BEFORE . . . . . 2 DON'T KNOW 8	
NB5A	Was it boiled before it was used to cut the cord?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
NB6	Was anything applied to the stump of the cord at any time?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 434A) DON'T KNOW 8	
NB7	What was applied? Anything else?	CHLORHEXIDINE . . . . . A OTHER ANTISEPTIC (ALCOHOL, SPIRIT, GENTIAN VIOLET . . B MUSTARD OIL . . . . . C ASH . . . . . D COCONUT OIL . . . . . E OTHER _____ X (SPECIFY)	
CH1	CHECK NB7: SUBSTANCE APPLIED TO CORD	CODE 'A' NOT CIRCLED → ☐ CODE 'A' CIRCLED → ☐ (SKIP TO CH3)	
CH2	Was chlorhexidine applied to the stump at any time? SHOW SAMPLE OF	YES . . . . . 1 NO . . . . . 2 (SKIP TO 434A) DON'T KNOW 8	

SECTION 4. PREGNANCY AND POSTNATAL CARE

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
CH3	How long after the cord was chlorhexidine first applied? IF LESS THAN 1 HOUR, RECORD '00' HOURS; IF LESS THAN 24 HOURS, RECORD HOURS; OTHERWISE, RECORD DAYS.	HOURS . . . . . 1 ☐☐ DAYS . . . . . 2 ☐☐ DON'T KNOW 998	
CH4	For how many days was chlorhexidine applied to the stump?	1 DAY . . . . . 1 2-7 DAYS . . . . . 2 MORE THAN 7 DAYS . . . . . 3 DON'T KNOW 8	
CH5	How many times per day was chlorhexidine applied to the stump: once a day, twice a day, three times a day, or four or more times a day?	ONCE A DAY . . . . . 1 TWICE A DAY . . . . . 2 THREE TIMES A DAY . . . . . 3 FOUR OR MORE TIMES A DAY . . . . . 4 DON'T KNOW 8	
434A	CHECK 430: PLACE OF DELIVERY	CODE 11, 12, OR 96 CIRCLED ☐ → (SKIP TO 449) OTHER ☐ ↓	CODE 11, 12, OR 96 CIRCLED ☐ → (SKIP TO 459) OTHER ☐ ↓
435	I would like to talk to you about checks on your health after delivery, for example, someone asking you questions about your health or examining you. Did anyone check on your health while you were still in the	YES . . . . . 1 NO . . . . . 2 → (SKIP TO 438)	
436	How long after delivery did the first check take place? IF LESS THAN ONE DAY, RECORD HOURS; IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS . . . . . 1 ☐☐ DAYS . . . . . 2 ☐☐ WEEKS . . . . . 3 ☐☐ DON'T KNOW 998	
437	Who checked on your health at that time? PROBE FOR MOST QUALIFIED PERSON.	**HEALTH PERSONNEL** DOCTOR . . . . . 11 MIDWIFE . . . . . 12 NURSE . . . . . 13 TRAINED VILLAGE HEALTH VOLUNTEER (VHV . . . . 14 **OTHER PERSON** VILLAGE BIRTH ATTENDANT . . . . . 21 FEMALE RELATIVE . . . . . 22 OTHER _____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
438	Now I would like to talk to you about checks on (NAME)'s health after delivery – for example, someone examining (NAME), checking the cord, or seeing if (NAME) is OK. Did anyone check on (NAME)'s health while you were still in the facility?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 441) DON'T KNOW 8	
439	How long after delivery was (NAME)'s health first checked? IF LESS THAN ONE DAY, RECORD HOURS; IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS . . . . . 1 [ ][ ] DAYS . . . . . 2 [ ][ ] WEEKS . . . . . 3 [ ][ ] DON'T KNOW 998	
440	Who checked on (NAME)'s health at that time? PROBE FOR MOST QUALIFIED PERSON.	**HEALTH PERSONNEL** DOCTOR . . . . . 11 MIDWIFE . . . . . 12 NURSE . . . . . 13 TRAINED VILLAGE HEALTH VOLUNTEER (VHV . . . . 14 **OTHER PERSON** TRADITIONAL BIRTH ATTENDANT . . . . . 21 FEMALE RELATIVE . . . . . 22 OTHER _____ 96 (SPECIFY)	
441	Now I want to talk to you about what happened after you left the facility. Did anyone check on your health after you left the facility?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 445)	
442	How long after delivery did that check take place? IF LESS THAN ONE DAY, RECORD HOURS; IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS . . . . . 1 [ ][ ] DAYS . . . . . 2 [ ][ ] WEEKS . . . . . 3 [ ][ ] DON'T KNOW 998	
443	Who checked on your health at that time? PROBE FOR MOST QUALIFIED PERSON.	**HEALTH PERSONNEL** DOCTOR . . . . . 11 MIDWIFE . . . . . 12 NURSE . . . . . 13 TRAINED VILLAGE HEALTH VOLUNTEER (VHV . . . . 14 **OTHER PERSON** TRADITIONAL BIRTH ATTENDANT . . . . . 21 FEMALE RELATIVE . . . . . 22 OTHER _____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
444	Where did the check take place? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**HOME** HER HOME . . . . . 11 OTHER HOME . . . . . 12 **PUBLIC SECTOR** GOVERNMENT HOSPITA . . 21 GOVERNMENT HEALTH CENTER . . . . . 22 GOVERNMENT SUB HEALTH CENTER . . . . 23 COMMUNITY AID/HEALTH POST . . . . . 24 CHURCH HOSPITA . . . . . 25 CHURCH HEALTH CENTER 26 CHURCH SUB HEALTH CENTER . . . . . 27 CHURCH AID POS . . . . . 28 OTHER GOVERNMENT . . 29 _____ (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/ CLINIC . . . . . 31 OTHER PRIVATE MEDICAL SECTOR _____ 36 **OTHER** _____ 96 (SPECIFY)	
445	I would like to talk to you about checks on (NAME)'s health after you left (FACILITY IN 430). Did any health care provider or a traditional birth attendant check on (NAME)'s health in the **two months** after you left (FACILITY IN 430)?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 457) ← DON'T KNOW 8	
446	How many hours, days or weeks after the birth of (NAME) did that check take place? IF LESS THAN ONE DAY, RECORD HOURS; IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS . . . . . 1 ☐☐ DAYS . . . . . 2 ☐☐ WEEKS . . . . . 3 ☐☐ DON'T KNOW 998	
447	Who checked on (NAME)'s health at that time? PROBE FOR MOST QUALIFIED PERSON.	**HEALTH PERSONNEL** DOCTOR . . . . . 11 MIDWIFE . . . . . 12 NURSE . . . . . 13 TRAINED VILLAGE HEALTH VOLUNTEER (VHV . . . . 14 **OTHER PERSON** TRADITIONAL BIRTH ATTENDANT . . . . . 21 FEMALE RELATIVE . . . . . 22 OTHER _____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
448	Where did this check of (NAME) take place? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**HOME** HER HOME . . . . . 11 OTHER HOME . . . . . 12 **PUBLIC SECTOR** GOVERNMENT HOSPITA . . 21 GOVERNMENT HEALTH CENTER . . . . . 22 GOVERNMENT SUB HEALTH CENTER . . . . 23 COMMUNITY AID/HEALTH POST . . . . . 24 CHURCH HOSPITAL . . . . 25 CHURCH HEALTH CENTER 26 CHURCH SUB HEALTH CENTER . . . . . 27 CHURCH AID POS' . . . . . 28 OTHER GOVERNMENT . . _____ 29 (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/ CLINIC . . . . . 31 OTHER PRIVATE MEDICAL SECTOR _____ 36 (SPECIFY) **OTHER** _____ (SPECIFY) (SKIP TO 457)	
449	I would like to talk to you about checks on your health after delivery, for example, someone asking you questions about your health or examining you. Did anyone check on your health after you gave birth to	YES . . . . . 1 NO . . . . . 2 (SKIP TO 453)	
450	How long after delivery did the first check take place? IF LESS THAN ONE DAY, RECORD HOURS; IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS . . . . . 1 ☐☐ DAYS . . . . . 2 ☐☐ WEEKS . . . . . 3 ☐☐ DON'T KNOW 998	
451	Who checked on your health at that time? PROBE FOR MOST QUALIFIED PERSON.	**HEALTH PERSONNEL** DOCTOR . . . . . 11 MIDWIFE . . . . . 12 NURSE . . . . . 13 TRAINED VILLAGE HEALTH VOLUNTEER (VHV . . . . 14 **OTHER PERSON** TRADITIONAL BIRTH ATTENDANT . . . . . 21 FEMALE RELATIVE . . . . . 22 OTHER _____ 96 (SPECIFY)	

SECTION 4. PREGNANCY AND POSTNATAL CARE

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
452	Where did this first check take place? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**HOME** HER HOME . . . . . 11 OTHER HOME . . . . . 12 **PUBLIC SECTOR** GOVERNMENT HOSPITA . . 21 GOVERNMENT HEALTH CENTER . . . . . 22 GOVERNMENT SUB HEALTH CENTER . . . . 23 COMMUNITY AID/HEALTH POST . . . . . 24 CHURCH HOSPITAL . . . . . 25 CHURCH HEALTH CENTER 26 CHURCH SUB HEALTH CENTER . . . . . 27 CHURCH AID POS . . . . . 28 OTHER GOVERNMENT . . _____ 29 (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/ CLINIC . . . . . 31 OTHER PRIVATE MEDICAL SECTOR _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY)	
453	I would like to talk to you about checks on (NAME)'s health after delivery – for example, someone examining (NAME), checking the cord, or seeing if (NAME) is OK. In the two months after (NAME) was born, did any health care provider or a traditional birth attendant check on (NAME)'s health?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 457) ← DON'T KNOW 8	
454	How many hours, days or weeks after the birth of (NAME) did the first check take place? IF LESS THAN ONE DAY, RECORD HOURS; IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS AFTER BIRTH . . . . 1 ☐☐ DAYS AFTER BIRTH . . . . 2 ☐☐ WEEKS AFTER BIRTH . . . . 3 ☐☐ DON'T KNOW 998	
455	Who checked on (NAME)'s health at that time? PROBE FOR MOST QUALIFIED PERSON.	**HEALTH PERSONNEL** DOCTOR . . . . . 11 MIDWIFE . . . . . 12 NURSE . . . . . 13 TRAINED VILLAGE HEALTH VOLUNTEER (VHV . . . . 14 **OTHER PERSON** TRADITIONAL BIRTH ATTENDANT . . . . . 21 FEMALE RELATIVE . . . . . 22 OTHER _____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
456	Where did this first check of (NAME) take place? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**HOME** HER HOME . . . . . 11 OTHER HOME . . . . . 12 **PUBLIC SECTOR** GOVERNMENT HOSPITA . . 21 GOVERNMENT HEALTH CENTER . . . . . 22 GOVERNMENT SUB HEALTH CENTER . . . . 23 COMMUNITY AID/HEALTH POST . . . . . 24 CHURCH HOSPITA . . . . . 25 CHURCH HEALTH CENTER 26 CHURCH SUB HEALTH CENTER . . . . . 27 CHURCH AID POS . . . . . 28 OTHER GOVERNMENT . . _____ 29 (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/ CLINIC . . . . . 31 OTHER PRIVATE MEDICAL SECTOR _____ 36 (SPECIFY) **OTHER** _____ 96 (SPECIFY)	
457	During the first two days after (NAME)'s birth, did any health care provider do the following: a) Examine the cord? b) Measure (NAME)'s temperature? c) Counsel you on danger signs for newborns? d) Counsel you on breastfeeding? e) Observe (NAME) breastfeeding?	YES NO DK a) CORD . . . . . 1 2 8 b) TEMP. . . . . 1 2 8 c) SIGNS . . . . 1 2 8 d) COUNSEL BREAST-FEED 1 2 8 e) OBSERVE BREAST-FEED 1 2 8	
458	Has your menstrual period returned since the birth of (NAME)?	YES . . . . . 1 (SKIP TO 460) NO . . . . . 2 (SKIP TO 461)	
459	Did your period return between the birth of (NAME) and your next pregnancy?		YES . . . . . 1 NO . . . . . 2 (SKIP TO 463)
460	For how many months after the birth of (NAME) did you not have a period?	MONTHS . . . . . ☐☐ DON'T KNOW 98	MONTHS . . . . . ☐☐ DON'T KNOW 98
461	CHECK 226: IS RESPONDENT PREGNANT?	NOT PREGNANT ☐ PREGNANT OR UNSURE ☐ (SKIP TO 463)	
462	Have you had sexual intercourse since the birth of (NAME)?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 464)	

SECTION 4. PREGNANCY AND POSTNATAL CARE

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
463	For how many months after the birth of (NAME) did you not have sexual intercourse?	MONTHS . . . . . ☐☐ DON'T KNOW 98	MONTHS . . . . . ☐☐ DON'T KNOW 98
464	Did you ever breastfeed (NAME)?	YES . . . . . 1 → (SKIP TO 466) NO 2	YES . . . . . 1 NO 2
465	CHECK 404: IS CHILD LIVING?	LIVING ☐ → (SKIP TO 470) DEAD ☐ → (GO TO 471)	
466	How long after birth did you first put (NAME) to the breast? IF LESS THAN 1 HOUR, RECORD '00' HOURS; IF LESS THAN 24 HOURS, RECORD HOURS; OTHERWISE, RECORD DAYS.	IMMEDIATELY . . . . . 000 HOURS . . . . . 1 ☐☐ DAYS . . . . . 2 ☐☐	
467	In the first three days after delivery, was (NAME) given anything to drink other than breast milk?	YES . . . . . 1 NO 2	
468	CHECK 404: IS CHILD LIVING?	LIVING ☐ ↓ DEAD ☐ → (GO TO 471)	LIVING ☐ ↓ DEAD ☐ → (GO TO 471)
469	Are you still breastfeeding (NAME)?	YES . . . . . 1 → (SKIP TO 470) NO 2	
469A	How long did you breastfeed (Name)? IF LESS THAN 1 MONTH, RECORD '00'	MONTHS . . . . . ☐☐	
469B	Why did you stop breastfeeding?	MOTHER ILL/WEAK . . . . . 01 CHILD ILL/WEAK . . . . . 02 CHILD DIED . . . . . 03 NIPPLE/BREAST PROBLEM . 04 NO MILK . . . . . 05 MOTHER WORKING . . . . . 06 MOTHER DOES NOT KNOW HOW TO BREASTFEED . . . . 07 CHILD REFUSED . . . . . 08 WEANING AGE . . . . . 09 BECAME PREGNANT . . . . . 10 STARTED CONTRACEPTION . . 11 OTHER _____ 96 SPECIFY	
470	Did (NAME) drink anything from a bottle with a nipple yesterday or last night?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
471		GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 501A.	GO BACK TO 405 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 501A.

SECTION 5A. CHILD IMMUNIZATION (LAST BIRTH)

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
501A	CHECK 215 IN THE BIRTH HISTORY: ANY BIRTHS IN 2013-2016? ONE OR MORE BIRTHS IN 2013-2016 ☐ NO BIRTHS IN 2013-2016 ☐		→ 601
502A	RECORD THE NAME AND BIRTH HISTORY NUMBER FROM 212 OF THE LAST CHILD BORN IN 2013-2016. NAME OF LAST BIRTH _____ BIRTH HISTORY NUMBER		
503A	CHECK 216 FOR CHILD: LIVING ☐ DEAD ☐		→ 501B
504A	Do you have a baby BOOK, vaccination card or other document where (NAME)'s vaccines are written down?	YES, HAS ONLY A BABY BOOK . . . . . 1 YES, HAS ONLY AN OTHER DOCUMENT . . . . . 2 YES, HAS BABY BOOK AND OTHER DOCUMENT. 3 NO, NO BABY BOOK AND NO OTHER DOCUMENT 4	→ 507A → 507A
505A	Did you ever have a baby book or vaccine card for (NAME)?	YES . . . . . 1 NO 2	→ 511A
506A	CHECK 504A: CODE '2' CIRCLED ☐ CODE '4' CIRCLED ☐		→ 511A
507A	May I see the card or other document where (NAME)'s vaccines are written down?	YES, HAS ONLY A BABY BOOK . . . . . 1 YES, HAS ONLY AN OTHER DOCUMENT . . . . . 2 YES, HAS BABY BOOK AND OTHER DOCUMENT. 3 NO, NO BABY BOOK AND NO OTHER DOCUMENT 4	 → 511A
508A	COPY DATES FROM THE BABY BOOK. WRITE '44' IN 'DAY' COLUMN IF CARD SHOWS THAT A DOSE WAS GIVEN, BUT NO DATE IS RECORDED.		

	DAY		MONTH		YEAR			
BCG								
HEPATITIS B AT BIRTH								
SABIN/ORAL POLIO VACCINE (OPV) 1								
SABIN/ORAL POLIO VACCINE (OPV) 2								
SABIN/ORAL POLIO VACCINE (OPV) 3								
INJECTABLE POLIO VACCINE (IPV)								
DPT-HEP.B-HIB (PENTAVALENT) 1								
DPT-HEP.B-HIB (PENTAVALENT) 2								
DPT-HEP.B-HIB (PENTAVALENT) 3								
PCV-13/PNEUMOCOCCAL 1								
PCV-13/PNEUMOCOCCAL 2								
PCV-13/PNEUMOCOCCAL 3								
MEASLES RUBELLA (MR) 1								
MEASLES RUBELLA (MR) 2								
VITAMIN A (MOST RECENT)								

SECTION 5A. CHILD IMMUNIZATION (LAST BIRTH)

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
509A	CHECK 508A: 'BCG' TO VITAMIN A (MOST RECENT)' ALL RECORDED? NO ☐ YES ☐ → 525A		
510A	In addition to what is recorded on (this document/these documents), did (NAME) receive any other vaccinations, including vaccinations received in campaigns or immunization days or child health days? RECORD 'YES' ONLY IF THE RESPONDENT MENTIONS AT LEAST ONE OF THE VACCINATIONS IN 508A THAT ARE NOT RECORDED AS HAVING BEEN GIVEN.	YES . . . . . 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 508A) (THEN SKIP TO 525A) NO . . . . . 2 DON'T KNOW 8	→ 525A
511A	Did (NAME) ever receive any vaccinations to prevent (NAME) from getting diseases, including vaccinations received in campaigns or immunization days or child health days?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 525A
512A	Has (NAME) ever received a BCG vaccination against tuberculosis, that is, an injection in the arm or shoulder that usually causes a scar?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
513A	Within 24 hours after birth, did (NAME) receive a Hepatitis B vaccination, that is, an injection in the thigh to prevent Hepatitis B?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
514A	Has (NAME) ever received oral polio vaccine, that is, about two drops in the mouth to prevent polio?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 517A
516A	How many times did (NAME) receive the oral polio vaccine?	NUMBER OF TIMES . . . . . ☐	
517A	Has (NAME) ever received an injectable polio vaccine, that is an injection given in the right thigh sometimes at the same time as polio drops?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
518A	Has (NAME) ever received a pentavalent vaccination, that is, an injection given in the thigh sometimes at the same time as polio drops?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 520A
519A	How many times did (NAME) receive the pentavalent vaccine?	NUMBER OF TIMES . . . . . ☐	
520A	Has (NAME) ever received a pneumococcal vaccination, that is, an injection in the thigh to prevent pneumonia?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 523A
521A	How many times did (NAME) receive the pneumococcal vaccine?	NUMBER OF TIMES . . . . . ☐	
523A	Has (NAME) ever received a measles vaccination, that is, an injection in the arm to prevent measles?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 525A
524A	How many times did (NAME) receive the measles vaccine?	NUMBER OF TIMES . . . . . ☐	
525A	CONTINUE WITH 501B.		

SECTION 5B. CHILD IMMUNIZATION (NEXT-TO-LAST BIRTH)

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
501B	CHECK 215 IN THE BIRTH HISTORY: ANY MORE BIRTHS IN 2013-2016? MORE BIRTHS IN 2013-2016 ☐ NO MORE BIRTHS IN 2013-2016 ☐		→ 601
502B	RECORD THE NAME AND BIRTH HISTORY NUMBER FROM 212 OF THE LAST CHILD BORN IN 2013-2016. NAME OF NEXT-TO-LAST BIRTH _____ BIRTH HISTORY NUMBE . . . . . ☐☐		
503B	CHECK 216 FOR CHILD: LIVING ☐ DEAD ☐		→ 525B
504B	Do you have a baby book or vaccination card or other document where (NAME)'s vaccinations are written down?	YES, HAS ONLY A BABY BOOK . . . . . 1 YES, HAS ONLY AN OTHER DOCUMENT . . . . . 2 YES, HAS BABY BOOK AND OTHER DOCUMENT. 3 NO, NO BABY BOOK AND NO OTHER DOCUMEN 4	→ 507B → 507B
505B	Did you ever have a baby book or vaccination card for (NAME)?	YES . . . . . 1 NO 2	
506B	CHECK 504B: CODE '2' CIRCLED ☐ CODE '4' CIRCLED ☐		→ 511B
507B	May I see the card or other document where (NAME)'s vaccinations are written down?	YES, HAS ONLY A BABY BOOK . . . . . 1 YES, HAS ONLY AN OTHER DOCUMENT . . . . . 2 YES, HAS BABY BOOK AND OTHER DOCUMENT. 3 NO, NO BABY BOOK AND NO OTHER DOCUMEN 4	→ 511B
508B	COPY DATES FROM THE CARD. WRITE '44' IN 'DAY' COLUMN IF CARD SHOWS THAT A DOSE WAS GIVEN, BUT NO DATE IS RECORDED.		

	DAY	MONTH	YEAR
BCG	☐☐	☐☐	☐☐☐☐
HEPATITIS B AT BIRTH	☐☐	☐☐	☐☐☐☐
SABIN/ORAL POLIO VACCINE (OPV) 1	☐☐	☐☐	☐☐☐☐
SABIN/ORAL POLIO VACCINE (OPV) 2	☐☐	☐☐	☐☐☐☐
SABIN/ORAL POLIO VACCINE (OPV) 3	☐☐	☐☐	☐☐☐☐
INJECTABLE POLIO VACCINE (IPV)	☐☐	☐☐	☐☐☐☐
DPT-HEP.B-HIB (PENTAVALENT) 1	☐☐	☐☐	☐☐☐☐
DPT-HEP.B-HIB (PENTAVALENT) 2	☐☐	☐☐	☐☐☐☐
DPT-HEP.B-HIB (PENTAVALENT) 3	☐☐	☐☐	☐☐☐☐
PCV-13/PNEUMOCOCCAL 1	☐☐	☐☐	☐☐☐☐
PCV-13/PNEUMOCOCCAL 2	☐☐	☐☐	☐☐☐☐
PCV-13/PNEUMOCOCCAL 3	☐☐	☐☐	☐☐☐☐
MEASLES RUBELLA (MR) 1	☐☐	☐☐	☐☐☐☐
MEASLES RUBELLA (MR) 2	☐☐	☐☐	☐☐☐☐
VITAMIN A (MOST RECENT)	☐☐	☐☐	☐☐☐☐

SECTION 5B. CHILD IMMUNIZATION (NEXT-TO-LAST BIRTH)

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
509B	CHECK 508B: 'BCG' TO 'VITAMIN A' ALL RECORDED? NO ☐ YES ☐ → 525B		
510B	In addition to what is recorded on (this document/these documents), did (NAME) receive any other vaccinations, including vaccinations received in campaigns or immunization days or child health days? RECORD 'YES' ONLY IF THE RESPONDENT MENTIONS AT LEAST ONE OF THE VACCINATIONS IN 508B THAT ARE NOT RECORDED AS HAVING BEEN GIVEN.	YES . . . . . 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN (THEN SKIP TO 525B) NO . . . . . 2 DON'T KNOW 8	→ 525B
511B	Did (NAME) ever receive any vaccinations to prevent (NAME) from getting diseases, including vaccinations received in campaigns or immunization days or child health days?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 525B
512B	Has (NAME) ever received a BCG vaccination against tuberculosis, that is, an injection in the arm or shoulder that usually causes a scar?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
513B	Within 24 hours after birth, did (NAME) receive a Hepatitis B vaccination, that is, an injection in the thigh to prevent Hepatitis B?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
514B	Has (NAME) ever received oral polio vaccine, that is, about two drops in the mouth to prevent polio?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 517B
516B	How many times did (NAME) receive the oral polio vaccine?	NUMBER OF TIMES . . . . . ☐☐	
517B	Has (NAME) ever received an injectable polio vaccine, that is an injection given in the right thigh sometimes at the same time as polio drops?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
518B	Has (NAME) ever received a pentavalent vaccination, that is, an injection given in the thigh sometimes at the same time as polio drops?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 520B
519B	How many times did (NAME) receive the pentavalent vaccine?	NUMBER OF TIMES . . . . . ☐☐	
520B	Has (NAME) ever received a pneumococcal vaccination, that is, an injection in the thigh to prevent pneumonia?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 523B
521B	How many times did (NAME) receive the pneumococcal vaccine?	NUMBER OF TIMES . . . . . ☐☐	
523B	Has (NAME) ever received a measles vaccination, that is, an injection in the arm to prevent measles?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 525B
524B	How many times did (NAME) receive the measles vaccine?	NUMBER OF TIMES . . . . . ☐☐	
525B	CHECK 215 IN BIRTH HISTORY: ANY MORE BIRTHS IN 2013-2016? MORE BIRTHS IN 2013-2016 ☐ (GO TO 502B IN AN ADDITIONAL QUESTIONNAIRE) NO MORE BIRTHS IN 2013-2016 ☐ → 601		

601	CHECK 224: ONE OR MORE BIRTHS IN 2011-2016 ☐ ↓ NO BIRTHS IN 2011-2016 ☐ → 648		
602	CHECK 215: RECORD THE BIRTH HISTORY NUMBER IN 603 AND THE NAME AND SURVIVAL STATUS IN 604 FOR EACH BIRTH IN 2011-2016. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. IF THERE ARE MORE THAN 2 BIRTHS, USE LAST COLUMN OF ADDITIONAL QUESTIONNAIRE(S). Now I would like to ask some questions about your children born in the last five years. (We will talk about each separately.)		
603	BIRTH HISTORY NUMBER FROM 212 IN BIRTH HISTORY.	LAST BIRTH BIRTH HISTORY NUMBER . . . . . ☐☐	NEXT-TO-LAST BIRTH BIRTH HISTORY NUMBER . . . . . ☐☐
604	FROM 212 AND 216:	NAME _____ LIVING ↓ DEAD ☐ → (SKIP TO 646)	NAME _____ LIVING ↓ DEAD ☐ → (SKIP TO 646)
605	In the last six months, was (NAME) given a vitamin A dose like [this/any of these]? SHOW COMMON TYPES OF AMPULES/CAPSULES/SYRUPS.	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
606	In the last seven days, was (NAME) given iron pills or iron syrup like [this/any of these]? SHOW COMMON TYPES OF PILLS/SYRUPS.	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
607	Was (NAME) given any drug for intestinal worms in the last six months?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
608	Has (NAME) had diarrhoea in the last 2 weeks?	YES . . . . . 1 NO . . . . . 2 → (SKIP TO 618) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 → (SKIP TO 618) DON'T KNOW 8

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
609	CHECK 469: CURRENTLY BREASTFEEDING? YES → a) Now I would like to know how much (NAME) was given to drink during the diarrhoea including breastmilk. Was (NAME) given less than usual to drink, about the same amount, or more than usual to drink? IF LESS, PROBE: Was (NAME) given much less than usual to drink or somewhat less? NO/NOT → b) Now I would like to know how much (NAME) was given to drink during the diarrhoea. Was (NAME) given less than usual to drink, about the same amount, or more than usual to drink? IF LESS, PROBE: Was (NAME) given much less than usual to drink or somewhat less?	MUCH LESS . . . . . 1 SOMEWHAT LESS . . . . . 2 ABOUT THE SAME . . . . . 3 MORE . . . . . 4 NOTHING TO DRINK . . . . . 5 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . . . . . 2 ABOUT THE SAME . . . . . 3 MORE . . . . . 4 NOTHING TO DRINK . . . . . 5 DON'T KNOW 8
610	When (NAME) had diarrhoea, was (NAME) given less than usual to eat, about the same amount, more than usual, or nothing to eat? IF LESS, PROBE: Was (NAME) given much less than usual to eat or somewhat less?	MUCH LESS . . . . . 1 SOMEWHAT LESS . . . . . 2 ABOUT THE SAME . . . . . 3 MORE . . . . . 4 STOPPED FOOD . . . . . 5 NEVER GAVE FOOD . . . . . 6 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . . . . . 2 ABOUT THE SAME . . . . . 3 MORE . . . . . 4 STOPPED FOOD . . . . . 5 NEVER GAVE FOOD . . . . . 6 DON'T KNOW 8
611	Did you seek advice or treatment for the diarrhoea from any source?	YES . . . . . 1 NO . . . . . 2 → (SKIP TO 615)	YES . . . . . 1 NO . . . . . 2 → (SKIP TO 615)

SECTION 6. CHILD HEALTH AND NUTRITION

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
612	Where did you seek advice or treatment? Anywhere else? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE(S). _____ (NAME OF PLACE(S))	**PUBLIC SECTOR** GOVERNMENT HOSPITA . . A GOVERNMENT HEALTH CENTER . . . . . B GOVERNMENT SUB HEALTH CENTER . . . . C COMMUNITY AID/HEALTH POST . . . . . D CHURCH HOSPITAL . . . . E CHURCH HEALTH CENTER F CHURCH SUB HEALTH CENTER . . . . . G CHURCH AID POST . . . . . H TRAINED VHV . . . . . I OTHER GOVERNMENT _____ J (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/ CLINIC . . . . . K PHARMACY . . . . . L OTHER PRIVATE MEDICAL SECTOR _____ M (SPECIFY) **OTHER SOURCE** SHOP . . . . . N TRADITIONAL PRACTITIONER . . . . . O MARKET . . . . . P OTHER _____ X (SPECIFY)	**PUBLIC SECTOR** GOVERNMENT HOSPITA . . A GOVERNMENT HEALTH CENTER . . . . . B GOVERNMENT SUB HEALTH CENTER . . . . C COMMUNITY AID/HEALTH POST . . . . . D CHURCH HOSPITAL . . . . E CHURCH HEALTH CENTER F CHURCH SUB HEALTH CENTER . . . . . G CHURCH AID POST . . . . . H TRAINED VHV . . . . . I OTHER GOVERNMENT _____ J (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/ CLINIC . . . . . K PHARMACY . . . . . L OTHER PRIVATE MEDICAL SECTOR _____ M (SPECIFY) **OTHER SOURCE** SHOP . . . . . N TRADITIONAL PRACTITIONER . . . . . O MARKET . . . . . P OTHER _____ X (SPECIFY)
613	CHECK 612:	TWO OR MORE CODES CIRCLED ☐ ONLY ONE CODE CIRCLED ☐ → (SKIP TO 615)	TWO OR MORE CODES CIRCLED ☐ ONLY ONE CODE CIRCLED ☐ → (SKIP TO 615)
614	Where did you first seek advice or treatment? USE LETTER CODE FROM 612.	FIRST PLACE . . . . . ☐	FIRST PLACE . . . . . ☐
615	Was (NAME) given any of the following at any time since (NAME) started having the diarrhoea: a) A fluid made from a special packet called ORS? c) A government-recommended homemade fluid? d) Zinc tablets or syrup?	YES NO DK a) FLUID FROM ORS PACKET . . 1 2 8 c) HOMEMADE FLUID . . . . 1 2 8 d) ZINC 1 2 8	YES NO DK a) FLUID FROM ORS PACKET . . 1 2 8 c) HOMEMADE FLUID . . . . 1 2 8 d) ZINC 1 2 8

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
616	CHECK 615: ANY 'YES' ☐ → a) Was anything else given to treat the diarrhoea? ALL 'NO' OR 'DK' ☐ → b) Was anything given to treat the diarrhoea?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 618) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 618) DON'T KNOW 8
617	CHECK 615: ANY 'YES' ☐ → a) What else was given to treat the diarrhoea? Anything else? ALL 'NO' OR 'DK' ☐ → b) What was given to treat the diarrhoea? Anything else? RECORD ALL TREATMENTS GIVEN.	**PILL OR SYRUP** ANTIBIOTIC . . . . . A ANTIMOTILITY . . . . . B OTHER (NOT ANTIBIOTIC OR ANTIMOTILITY) . . . . C UNKNOWN PILL OR SYRUP . . . . . D **INJECTION** ANTIBIOTIC . . . . . E NON-ANTIBIOTIC . . . . . F UNKNOWN INJECTION . . . . . G INTRAVENOUS (IV . . . . . H HOME REMEDY/ HERBAL MEDICINE . . . . . I OTHER _____ X (SPECIFY)	**PILL OR SYRUP** ANTIBIOTIC . . . . . A ANTIMOTILITY . . . . . B OTHER (NOT ANTIBIOTIC OR ANTIMOTILITY) . . . . C UNKNOWN PILL OR SYRUP . . . . . D **INJECTION** ANTIBIOTIC . . . . . E NON-ANTIBIOTIC . . . . . F UNKNOWN INJECTION . . . . . G INTRAVENOUS (IV . . . . . H HOME REMEDY/ HERBAL MEDICINE . . . . . I OTHER _____ X (SPECIFY)
618	Has (NAME) been ill with a fever at any time in the last 2 weeks?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 620) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 620) DON'T KNOW 8
619	At any time during the illness, did (NAME) have blood taken from (NAME)'s finger or heel for testing?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
620	Has (NAME) had an illness with a cough at any time in the last 2 weeks?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
621	Has (NAME) had fast, short, rapid breaths or difficulty breathing at any time in the last 2 weeks?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 623) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 623) DON'T KNOW 8
622	Was the fast or difficult breathing due to a problem in the chest or to a blocked or runny nose?	CHEST ONLY . . . . . 1 NOSE ONLY . . . . . 2 BOTH . . . . . 3 OTHER _____ 6 (SPECIFY) DON'T KNOW . . . . . 8 (SKIP TO 624)	CHEST ONLY . . . . . 1 NOSE ONLY . . . . . 2 BOTH . . . . . 3 OTHER _____ 6 (SPECIFY) DON'T KNOW . . . . . 8 (SKIP TO 624)

SECTION 6. CHILD HEALTH AND NUTRITION

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
623	CHECK 618: HAD FEVER?	YES ↓ / NO OR DK → (SKIP TO 646)	YES ↓ / NO OR DK → (SKIP TO 646)
624	Did you seek advice or treatment for the illness from any source?	YES . . . . . 1 NO . . . . . 2 → (SKIP TO 629)	YES . . . . . 1 NO . . . . . 2 → (SKIP TO 629)
625	Where did you seek advice or treatment? Anywhere else? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE(S). _____ (NAME OF PLACE(S))	**PUBLIC SECTOR** GOVERNMENT HOSPITA . . A GOVERNMENT HEALTH CENTER . . . . . B GOVERNMENT SUB HEALTH CENTER . . . . C COMMUNITY AID/HEALTH POST . . . . . D CHURCH HOSPITAL . . . . E CHURCH HEALTH CENTER F CHURCH SUB HEALTH CENTER . . . . . G CHURCH AID POST . . . . . H TRAINED VHV . . . . . I OTHER GOVERNMENT _____ J (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/ CLINIC . . . . . K PHARMACY . . . . . L OTHER PRIVATE MEDICAL SECTOR _____ M (SPECIFY) **OTHER SOURCE** SHOP . . . . . N TRADITIONAL PRACTITIONER . . . . . O MARKET . . . . . P OTHER _____ X (SPECIFY)	**PUBLIC SECTOR** GOVERNMENT HOSPITA . . A GOVERNMENT HEALTH CENTER . . . . . B GOVERNMENT SUB HEALTH CENTER . . . . C COMMUNITY AID/HEALTH POST . . . . . D CHURCH HOSPITAL . . . . E CHURCH HEALTH CENTER F CHURCH SUB HEALTH CENTER . . . . . G CHURCH AID POST . . . . . H TRAINED VHV . . . . . I OTHER GOVERNMENT _____ J (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/ CLINIC . . . . . K PHARMACY . . . . . L OTHER PRIVATE MEDICAL SECTOR _____ M (SPECIFY) **OTHER SOURCE** SHOP . . . . . N TRADITIONAL PRACTITIONER . . . . . O MARKET . . . . . P OTHER _____ X (SPECIFY)
626	CHECK 625:	TWO OR MORE CODES CIRCLED ↓ / ONLY ONE CODE CIRCLED → (SKIP TO 628)	TWO OR MORE CODES CIRCLED ↓ / ONLY ONE CODE CIRCLED → (SKIP TO 628)
627	Where did you first seek advice or treatment? USE LETTER CODE FROM 625.	FIRST PLACE . . . . . ☐	FIRST PLACE . . . . . ☐
628	How many days after the illness began did you first seek advice or treatment for (NAME)? IF THE SAME DAY RECORD '00'.	DAYS . . . . . ☐☐	DAYS . . . . . ☐☐

SECTION 6. CHILD HEALTH AND NUTRITION

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
629	At any time during the illness, did (NAME) take any drugs for the illness?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 646) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 646) DON'T KNOW 8
630	What drugs did (NAME) take? Any other drugs? RECORD ALL MENTIONED.	**ANTIMALARIAL DRUGS** MALAWAN PILLS/TABLETS . . . . . A INJECTION/IV . . . . . B ARTHEMETER PILLS/TABLETS . . . . . C INJECTION/I . . . . . D DIHYDROARTEMISININ (PIPERQUINE,DP, DHP) PILLS/TABLETS . . . . . E INJECTION/IV . . . . . F SP/FANSIDAR . . . . . G CHLOROQUINE . . . . . H AMODIAQUINE . . . . . I QUININE PILLS . . . . . J INJECTION/IV . . . . . K ARTESUNATE RECTAL . . . . . L INJECTION/IV . . . . . M OTHER ANTIMALARIAL N _____ (SPECIFY) **ANTIBIOTIC DRUGS** PILL/SYRUP . . . . . O INJECTION/IV . . . . . P **OTHER DRUGS** ASPIRIN . . . . . Q ACETAMINOPHEN . . . . . R IBUPROFEN . . . . . S OTHER _____ (SPECIFY) X DON'T KNOW . . . . . Z	**ANTIMALARIAL DRUGS** MALAWAN PILLS/TABLETS . . . . . A INJECTION/IV . . . . . B ARTHEMETER PILLS/TABLETS . . . . . C INJECTION/I . . . . . D DIHYDROARTEMISININ (PIPERQUINE,DP, DHP) PILLS/TABLETS . . . . . E INJECTION/IV . . . . . F SP/FANSIDAR . . . . . G CHLOROQUINE . . . . . H AMODIAQUINE . . . . . I QUININE PILLS . . . . . J INJECTION/IV . . . . . K ARTESUNATE RECTAL . . . . . L INJECTION/IV . . . . . M OTHER ANTIMALARIAL N _____ (SPECIFY) **ANTIBIOTIC DRUGS** PILL/SYRUP . . . . . O INJECTION/IV . . . . . P **OTHER DRUGS** ASPIRIN . . . . . Q ACETAMINOPHEN . . . . . R IBUPROFEN . . . . . S OTHER _____ (SPECIFY) X DON'T KNOW . . . . . Z
631	CHECK 630: ANY CODE A-N CIRCLED?	YES → NO → (SKIP TO 646)	YES → NO → (SKIP TO 646)
632A	CHECK 630: MALAWAN ('A') OR ('B') GIVEN	CODE 'A' or 'B' CIRCLED → CODE 'A' or 'B' NOT CIRCLED → (SKIP TO 633B)	CODE 'A' or 'B' CIRCLED → CODE 'A' or 'B' NOT CIRCLED → (SKIP TO 633B)
633A	How long after the fever started did (NAME) first take Malawan?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW 8

SECTION 6. CHILD HEALTH AND NUTRITION

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
633B	CHECK 630:	CODE 'C' or 'D' CODE 'C' or 'D'	CODE 'C' or 'D' CODE 'C' or 'D'

	ARTHEMETER ('C') OR ('D') GIVEN	CIRCLED → NOT CIRCLED → (SKIP TO 633D)	CIRCLED → NOT CIRCLED → (SKIP TO 633D)
633C	How long after the fever started did (NAME) first take Arthemeter?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW 8
633D	CHECK 630: DIHYDROARTEMISININ (PIPERQUIN) ('E') OR ('F') GIVEN	CODE 'E' or 'F' CIRCLED → CODE 'E' or 'F' NOT CIRCLED → (SKIP TO 634)	CODE 'E' or 'F' CIRCLED → CODE 'E' or 'F' NOT CIRCLED → (SKIP TO 634)
633E	How long after the fever started did (NAME) first take Dihydroartemisinin (Piperquine)?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW 8
634	CHECK 630: SP/FANSIDAR ('G') GIVEN	CODE 'G' CIRCLED → CODE 'G' NOT CIRCLED → (SKIP TO 636)	CODE 'G' CIRCLED → CODE 'G' NOT CIRCLED → (SKIP TO 636)
635	How long after the fever started did (NAME) first take SP/Fansidar?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW 8
636	CHECK 630: CHLOROQUINE ('H') GIVEN	CODE 'H' CIRCLED → CODE 'H' NOT CIRCLED → (SKIP TO 638)	CODE 'H' CIRCLED → CODE 'H' NOT CIRCLED → (SKIP TO 638)
637	How long after the fever started did (NAME) first take chloroquine?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW 8
638	CHECK 630: AMODIAQUINE ('I') GIVEN	CODE 'I' CIRCLED → CODE 'I' NOT CIRCLED → (SKIP TO 640)	CODE 'I' CIRCLED → CODE 'I' NOT CIRCLED → (SKIP TO 640)

SECTION 6. CHILD HEALTH AND NUTRITION

NO.	QUESTIONS AND FILTERS	NAME _____	NAME _____
639	How long after the fever started did (NAME) first take amodiaquine?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW 8

640	CHECK 630: QUININE ('J' OR 'K') GIVEN	CODE 'J' OR 'K' CIRCLED CODE 'J' OR 'K' NOT CIRCLED (SKIP TO 642)	CODE J' OR 'K' CIRCLED CODE J' OR 'K' NOT CIRCLED (SKIP TO 642)
641	How long after the fever started did (NAME) first take quinine?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW 8
642	CHECK 630: ARTESUNATE ('L' OR 'M') GIVEN	CODE 'L' OR 'M' CIRCLED CODE L' OR 'M' NOT CIRCLED (SKIP TO 644)	CODE L' OR 'M' CIRCLED CODE L' OR 'M' NOT CIRCLED (SKIP TO 644)
643	How long after the fever started did (NAME) first take artesunate?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW 8
644	CHECK 630: OTHER ANTIMALARIAL ('N') GIVEN	CODE 'N' CIRCLED CODE 'N' NOT CIRCLED (SKIP TO 646)	CODE 'N' CIRCLED CODE 'N' NOT CIRCLED (SKIP TO 646)
645	How long after the fever started did (NAME) first take (OTHER ANTIMALARIAL)?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW 8
646		GO BACK TO 604 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 647.	GO TO 604 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 647.

SECTION 6. CHILD HEALTH AND NUTRITION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
647	CHECK 615(a) ALL COLUMNS: NO CHILD RECEIVED FLUID FROM ORS PACKET ☐ ↓ ANY CHILD RECEIVED FLUID FROM ORS PACKET ☐ →		649
648	Have you ever heard of a special product called **ORS** you can get for the treatment of diarrhea?	YES . . . . . 1 NO 2	
649	CHECK 215 AND 218, ALL ROWS: NUMBER OF CHILDREN BORN IN 2014-2016 LIVING WITH THE RESPONDENT ONE OR MORE ☐ ↓ NONE ☐ →		701
	_____ (NAME OF YOUNGEST CHILD LIVING WITH HER) ↓		

SECTION 6. CHILD HEALTH AND NUTRITION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
650	Now I would like to ask you about liquids or foods that (NAME FROM 649) had yesterday during the day or at night. I am interested in whether your child had the item I mention even if it was combined with other foods.	YES NO DK	
	a) Plain water?	a) 1 2 8	
	b) Juice or juice drinks?	b) 1 2 8	
	c) Clear soup?	c) 1 2 8	
	d) Milk such as tinned, powdered, or fresh animal milk? IF YES: How many times did (NAME) drink milk? IF 7 OR MORE TIMES, RECORD '7'.	d) . . . . . 1 2 8 NUMBER OF TIMES DRANK ☐	
	e) Infant formula? IF YES: How many times did (NAME) drink infant formula? IF 7 OR MORE TIMES, RECORD '7'.	e) . . . . . 1 2 8 NUMBER OF TIMES DRANK ☐	
	f) Any other liquids?	f) 1 2 8	
	i) Bread, rice, noodles, or other foods made from grains?	i) 1 2 8	
	j) Pumpkin, carrots, ripe or cooked banana, squash, or sweet potatoes that are yellow or orange	j) 1 2 8	
	k) White potatoes, white yams, cassava, or any other foods made from roots?	k) 1 2 8	
	l) Any dark green, leafy vegetables such as aupa, kumu, and aibika.	l) 1 2 8	
	m) Ripe mangoes or pawpaw?	m) 1 2 8	
	n) Any other fruits or vegetables?	n) 1 2 8	
	o) Liver, kidney, heart, or other organ meats?	o) 1 2 8	
	p) Any meat, such as beef, pork, lamb, goat, chicken, or duck?	p) 1 2 8	
	q) Eggs?	q) 1 2 8	
	r) Fresh or dried fish or shellfish?	r) 1 2 8	
	s) Any foods made from beans, peas, lentils, or	s) 1 2 8	
	t) Cheese or other food made from milk?	t) 1 2 8	
	u) Any other solid, semi-solid, or soft food?	u) 1 2 8	
651	CHECK 650 (CATEGORIES 'i' THROUGH 'u'): NOT A SINGLE 'YES' ☐ ↓ AT LEAST ONE 'YES' ☐ →		653

SECTION 6. CHILD HEALTH AND NUTRITION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
652	Did (NAME FROM 649) eat any solid, semi-solid, or soft foods yesterday during the day or at night? IF 'YES' PROBE: What kind of solid, semi-solid or soft foods did (NAME) eat?	YES . . . . . 1 (GO BACK TO 650 TO RECORD FOOD EATEN YESTERDAY) (THEN CONTINUE TO 653) NO 2	→ 654
653	How many times did (NAME FROM 649) eat solid, semi-solid, or soft foods yesterday during the day or at night? IF 7 OR MORE TIMES, RECORD '7'.	NUMBER OF TIMES . . . . . ☐ DON'T KNOW 8	
654	The last time (NAME FROM 649) passed stools, what was done to dispose of the stools?	CHILD USED TOILET OR LATRINE . . . . . 01 PUT/RINSED INTO TOILET OR LATRIN . . . . . 02 PUT/RINSED INTO DRAIN OR DITCH . . . . . 03 THROWN INTO GARBAG . . . . . 04 BURIED . . . . . 05 LEFT IN THE OPEN . . . . . 06 OTHER _____ 96 (SPECIFY)	

SECTION 7. MARRIAGE AND SEXUAL ACTIVITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701	Are you currently married or living together with a man as if married?	YES, CURRENTLY MARRIED . . . . . 1 YES, LIVING WITH A MAN . . . . . 2 NO, NOT IN UNION 3	→ 704
702	Have you ever been married or lived together with a man as if married?	YES, FORMERLY MARRIED . . . . . 1 YES, LIVED WITH A MAN . . . . . 2 NO 3	→ 712
703	What is your marital status now: are you widowed, divorced, or separated?	WIDOWED . . . . . 1 DIVORCED . . . . . 2 SEPARATED 3	→ 709
704	Is your (husband/partner) living with you now or is he staying elsewhere?	LIVING WITH HER . . . . . 1 STAYING ELSEWHERE 2	
705	RECORD THE HUSBAND'S/PARTNER'S NAME AND LINE NUMBER FROM THE HOUSEHOLD QUESTIONNAIRE. IF HE IS NOT LISTED IN THE HOUSEHOLD, RECORD '00'.	NAME _____ LINE NO.	
706	Does your (husband/partner) have other wives or does he live with other women as if married?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 709
707	Including yourself, in total, how many wives or live-in partners does he have?	TOTAL NUMBER OF WIVES AND LIVE-IN PARTNERS . . . . . DON'T KNOW 98	
708	Are you the first, second, ... wife?	RANK	
709	Have you been married or lived with a man only once or more than once?	ONLY ONCE . . . . . 1 MORE THAN ONCE 2	
710	CHECK 709: MARRIED/ LIVED WITH A MAN ONLY ONCE → a) In what month and year did you start living with your (husband/partner)? MARRIED/ LIVED WITH A MAN MORE THAN ONCE → b) Now I would like to ask about your first (husband/partner). In what month and year did you start living with him?	MONTH . . . . . DON'T KNOW MONTH . . . . . 98 YEAR . . . . . DON'T KNOW YEAR 9998	→ 712
711	How old were you when you first started living with him?	AGE	
712	**CHECK FOR PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE**		

SECTION 7. MARRIAGE AND SEXUAL ACTIVITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
713	Now I would like to ask some questions about sexual activity in order to gain a better understanding of some important life issues. Let me assure you again that your answers are completely confidential and will not be told to anyone. If we should come to any question that you don't want to answer, just let me know and we will go to the next question. How old were you when you had sexual intercourse for the very first time?	NEVER HAD SEXUAL INTERCOURSE . . . . . 00 AGE IN YEARS	→ 731
714	I would like to ask you about your recent sexual activity. When was the last time you had sexual intercourse? IF LESS THAN 12 MONTHS, ANSWER MUST BE RECORDED IN DAYS, WEEKS OR MONTHS. IF 12 MONTHS (ONE YEAR) OR MORE, ANSWER MUST BE RECORDED IN YEARS.	DAYS AGO . . . . . 1 WEEKS AGO . . . . . 2 MONTHS AGO . . . . . 3 YEARS AGO 4	→ 716 → 727

		LAST SEXUAL PARTNER	SECOND-TO-LAST SEXUAL PARTNER	THIRD-TO-LAST SEXUAL PARTNER
715	When was the last time you had sexual intercourse with this person?		DAYS AGO . . 1 WEEKS AGO . . 2 MONTHS AGO . . 3	DAYS AGO . . 1 WEEKS AGO . . 2 MONTHS AGO . . 3
716	The last time you had sexual intercourse with this person, was a condom used?	YES . . . . 1 NO . . . . 2 (SKIP TO 718)	YES . . . . 1 NO . . . . 2 (SKIP TO 718)	YES . . . . 1 NO . . . . 2 (SKIP TO 718)
717	Was a condom used every time you had sexual intercourse with this person in the last 12 months?	YES . . . . 1 NO 2	YES . . . . 1 NO 2	YES . . . . 1 NO 2
718	What was your relationship to this person with whom you had sexual intercourse? IF BOYFRIEND: Were you living together as if married? IF YES, RECORD '2'. IF NO, RECORD '3'.	HUSBAND . . . . 1 LIVE-IN PARTNER . . . . 2 BOYFRIEND NOT LIVING WITH RESPONDENT . . . . 3 CASUAL ACQUAINTANCE . . 4 CLIENT/SEX WORKER . . 5 OTHER ______ 6 (SPECIFY)	HUSBAND . . . . 1 LIVE-IN PARTNER . . . . 2 BOYFRIEND NOT LIVING WITH RESPONDENT . . . . 3 CASUAL ACQUAINTANCE . . 4 CLIENT/SEX WORKER . . 5 OTHER ______ 6 (SPECIFY)	HUSBAND . . . . 1 LIVE-IN PARTNER . . . . 2 BOYFRIEND NOT LIVING WITH RESPONDENT . . . . 3 CASUAL ACQUAINTANCE . . 4 CLIENT/SEX WORKER . . 5 OTHER ______ 6 (SPECIFY)
719	How long ago did you first have sexual intercourse with this person?	DAYS AGO . . 1 WEEKS AGO . . 2 MONTHS AGO . . 3 YEARS AGO . . 4	DAYS AGO . . 1 WEEKS AGO . . 2 MONTHS AGO . . 3 YEARS AGO . . 4	DAYS AGO . . 1 WEEKS AGO . . 2 MONTHS AGO . . 3 YEARS AGO . . 4
720	How many times during the last 12 months did you have sexual intercourse with this person? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF TIMES IS 95 OR MORE, RECORD '95'.	NUMBER OF TIMES	NUMBER OF TIMES	NUMBER OF TIMES . . . .
721	How old is this person?	AGE OF PARTNER DON'T KNOW 98	AGE OF PARTNER DON'T KNOW 98	AGE OF PARTNER DON'T KNOW 98
722	Apart from this person, have you had sexual intercourse with any other person in the last 12 months?	YES . . . . 1 (GO BACK TO 715 IN NEXT NO . . . . 2 (SKIP TO 724)	YES . . . . 1 (GO BACK TO 715 IN NEXT NO . . . . 2 (SKIP TO 724)	
723	In total, with how many different people have you had sexual intercourse in the last 12 months? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS 95 OR MORE, RECORD '95'.			NUMBER OF PARTNERS LAST 12 MONTHS . . DON'T KNOW 98

SECTION 7. MARRIAGE AND SEXUAL ACTIVITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
724	CHECK 106: AGE 15-24 ☐ (↓) AGE 25-49 ☐ → 727		
725	CHECK 701: NOT IN A UNION ☐ (↓) CURRENTLY MARRIED/ LIVING WITH A MAN ☐ → 727		
726	In the past 12 months have you had sex or been sexually involved with anyone because he gave you or told you he would give you gifts, cash, or anything	YES . . . . . 1 NO 2	
727	In total, with how many different people have you had sexual intercourse in your lifetime? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS 95 OR MORE, RECORD '95'.	NUMBER OF PARTNERS IN LIFETIME . . . . . ☐☐ DON'T KNOW 98	
728	CHECK 716, MOST RECENT PARTNER (FIRST COLUMN): YES, CONDOM USED ☐ (↓) NO, CONDOM NOT USED ☐ → 731 NOT ASKED ☐ → 731		
730	From where did you obtain the condom the last time? PROBE TO IDENTIFY TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**PUBLIC SECTOR** GOVERNMENT HOSPITA . . . . . 11 GOVERNMENT HEALTH CENTE. . . . . 12 GOVERNMENT HEALTH SUB CENTER. . . . 13 COMMUNITY AID/HEALTH POS' . . . . . 14 FAMILY PLANNING CLINIC . . . . . 15 MOBILE CLINIC . . . . . 16 PATROL CLINIC . . . . . 17 COMMUNITY BASED DISTRIBUTOI . . . . . 18 OTHER PUBLIC SECTOR _____ 19 (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/CLINIC . . . . . 21 PHARMACY . . . . . 22 PRIVATE DOCTOR . . . . . 23 OTHER PRIVATE MEDICAL SECTOR _____ 26 (SPECIFY) **OTHER SOURCE** SHOP . . . . . 31 TRADITIONAL PRACTITIONER . . . . . 32 FRIEND/RELATIVE . . . . . 33 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	
731	PRESENCE OF OTHERS DURING THIS SECTION.	YES NO CHILDREN <10 . . . . . 1 2 MALE ADULTS . . . . . 1 2 FEMALE ADULTS 1 2	

SECTION 8. FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801	CHECK 304: NEITHER STERILIZED ☐ HE OR SHE STERILIZED ☐		→ 813
802	CHECK 226: PREGNANT ☐ NOT PREGNANT OR UNSURE ☐		→ 804
803	Now I have some questions about the future. After the child you are expecting now, would you like to have another child, or would you prefer not to have any more children?	HAVE ANOTHER CHILD . . . . . 1 NO MORE . . . . . 2 UNDECIDED/DON'T KNOW 8	→ 805 → 812
804	Now I have some questions about the future. Would you like to have (a/another) child, or would you prefer not to have any (more) children?	HAVE (A/ANOTHER) CHILD . . . . . 1 NO MORE/NONE . . . . . 2 SAYS SHE CAN'T GET PREGNANT . . . . . 3 UNDECIDED/DON'T KNOW 8	→ 807 → 813 → 811
805	CHECK 226: NOT PREGNANT OR UNSURE ☐ a) How long would you like to wait from now before the birth of (a/another) child? PREGNANT ☐ b) After the birth of the child you are expecting now, how long would you like to wait before the birth of another child?	MONTHS . . . . . 1 ☐☐ YEARS . . . . . 2 ☐☐ SOON/NOW . . . . . 993 SAYS SHE CAN'T GET PREGNANT . . . . . 994 AFTER MARRIAGE . . . . . 995 OTHER _____ (SPECIFY) 996 DON'T KNOW 998	→ 811 → 813 → 811
806	CHECK 226: NOT PREGNANT OR UNSURE ☐ PREGNANT ☐		→ 812
807	CHECK 303: USING A CONTRACEPTIVE NOT CURRENTLY USING ☐ CURRENTLY USING ☐		→ 813
808	CHECK 805: '24' OR MORE MONTHS OR '02' OR MORE YEARS ☐ NOT ASKED ☐ '00-23' MONTHS OR '00-01' YEAR ☐		→ 812
809	CHECK 714: DAYS, WEEKS OR MONTHS AGO ☐ YEARS AGO ☐ NOT ASKED ☐		→ 811 → 811

SECTION 8. FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
810	CHECK 804: WANTS TO HAVE A/ANOTHER CHILD ☐ → a) You have said that you do not want (a/another) child soon. Can you tell me why you are not using a method to prevent pregnancy? Any other reason? WANTS NO MORE/NONE ☐ → b) You have said that you do not want any (more) children. Can you tell me why you are not using a method to prevent pregnancy? Any other reason? RECORD ALL REASONS MENTIONED.	NOT MARRIED . . . . . A **FERTILITY-RELATED REASONS** NOT HAVING SEX . . . . . B INFREQUENT SEX . . . . . C MENOPAUSAL/HYSTERECTOM . . . . . D CAN'T GET PREGNANT . . . . . E NOT MENSTRUATED SINCE LAST BIRTH . . . . . F BREASTFEEDING . . . . . G UP TO GOD/FATALISTIC . . . . . H **OPPOSITION TO USE** RESPONDENT OPPOSED . . . . . I HUSBAND/PARTNER OPPOSED . . . . . J OTHERS OPPOSED . . . . . K RELIGIOUS PROHIBITION . . . . . L **LACK OF KNOWLEDGE** KNOWS NO METHOD . . . . . M KNOWS NO SOURCE . . . . . N **METHOD-RELATED REASONS** SIDE EFFECTS/HEALTH CONCERNS . . . . . O LACK OF ACCESS/TOO FAR . . . . . P COSTS TOO MUCH . . . . . Q PREFERRED METHOD NOT AVAILABLE . . . . . R NO METHOD AVAILABLE . . . . . S INCONVENIENT TO USE . . . . . T INTERFERES WITH BODY'S NORMAL PROCESSES . . . . . U OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
811	CHECK 303: USING A CONTRACEPTIVE NOT ASKED ☐ → NO, NOT CURRENTLY USING ☐ → YES, CURRENTLY USING ☐		→ 813
812	Do you think you will use a contraceptive method to delay or avoid pregnancy at any time in the future?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
813	CHECK 216: HAS LIVING CHILDREN ☐ → a) If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be? NO LIVING CHILDREN ☐ → b) If you could choose exactly the number of children to have in your whole life, how many would that be? PROBE FOR A NUMERIC RESPONSE.	NONE . . . . . 00 → 815 NUMBER . . . . . ☐☐ OTHER _____ 96 → 815 (SPECIFY)	

SECTION 8. FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
814	How many of these children would you like to be boys, how many would you like to be girls and for how many would it not matter if it's a boy or a girl?	BOYS GIRLS EITHER NUMBER . . [ ][ ][ ][ ][ ][ ] OTHER _____ 96 (SPECIFY)	
815	In the last few months have you: a) Heard about family planning on the radio? b) Seen anything about family planning on the television? c) Read about family planning in a newspaper or magazine?	YES NO a) RADIO . . . . . 1 2 b) TELEVISION . . . . . 1 2 c) NEWSPAPER OR MAGAZINE 1 2	
817	CHECK 701: YES, CURRENTLY MARRIED ☐ ↓ YES, LIVING WITH A MAN ☐ ↓ NO, NOT IN A UNION ☐ →		901
818	CHECK 303: USING A CONTRACEPTIVE CURRENTLY USING ☐ ↓ NOT CURRENTLY USING ☐ →		820
	NOT ASKED ☐ →		822
819	Would you say that using contraception is mainly your decision, mainly your (husband's/partner's) decision, or did you both decide together?	MAINLY RESPONDENT . . . . . 1 MAINLY HUSBAND/PARTNER . . . . . 2 JOINT DECISION . . . . . 3 OTHER _____ 6 (SPECIFY)	821
820	Would you say that not using contraception is mainly your decision, mainly your (husband's/partner's) decision, or did you both decide together?	MAINLY RESPONDENT . . . . . 1 MAINLY HUSBAND/PARTNER . . . . . 2 JOINT DECISION . . . . . 3 OTHER _____ 6 (SPECIFY)	
821	CHECK 304: NEITHER ARE STERILIZED ☐ ↓ HE OR SHE ARE STERILIZED ☐ →		901
822	Does your (husband/partner) want the same number of children that you want, or does he want more or fewer than you want?	SAME NUMBER . . . . . 1 MORE CHILDREN . . . . . 2 FEWER CHILDREN . . . . . 3 DON'T KNOW 8	

SECTION 9. HUSBAND'S BACKGROUND AND WOMAN'S WORK

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
901	CHECK 701: CURRENTLY MARRIED/ LIVING WITH A MAN ☐ ↓ NOT IN UNION ☐ →		909
902	How old was your (husband/partner) on his last birthday?	AGE IN COMPLETED YEARS ..... ☐☐	
903	Did your (husband/partner) ever attend school?	YES ..... 1 NO 2	906
904	What was the highest level of school he attended: elementary, primary, secondary, or higher?	ELEMENTARY ..... 1 PRIMARY ..... 2 SECONDARY - REGULAR ..... 3 SECONDARY - VOCATIONAL ..... 4 HIGHER ..... 5 DON'T KNOW 8	906
905	What was the highest grade he completed at that level? IF COMPLETED LESS THAN ONE YEAR AT THAT LEVEL, RECORD '00'.	GRADE ..... ☐☐	
906	Has your (husband/partner) done any work in the last 7 days?	YES ..... 1 NO ..... 2 DON'T KNOW 8	908
907	Has your (husband/partner) done any work in the last 12 months?	YES ..... 1 NO ..... 2 DON'T KNOW 8	909
908	What is your (husband's/partner's) occupation? That is, what kind of work does he mainly do?	_____ _____ ☐☐ _____	
909	Aside from your own housework, have you done any work in the last seven days?	YES ..... 1 NO 2	913
910	As you know, some women take up jobs for which they are paid in cash or kind. Others sell things, have a small business or work on the family farm or in the family business. In the last seven days, have you done any of these things or any other work?	YES ..... 1 NO 2	913
910A	What did you do most of the time last week?	FULL TIME STUDENT ..... 1 HOME DUTIES ..... 2 LOOKING FOR WORK ..... 3 NO WORK AVAILABLE ..... 4 WAITING TO START WORK ..... 5 TOO OLD/SICK/HANDICAPPED ..... 6 OTHER ..... 7 DON'T KNOW 8	

SECTION 9. HUSBAND'S BACKGROUND AND WOMAN'S WORK

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
911	Although you did not work in the last seven days, do you have any job or business from which you were absent for leave, illness, vacation, maternity leave, or any other such reason?	YES . . . . . 1 NO 2	→ 913
912	Have you done any work in the last 12 months?	YES . . . . . 1 NO 2	→ 917
913	What is your occupation? That is, what kind of work do you mainly do?	_____ _____ _____ ☐☐	
914	Do you do this work for a member of your family, for someone else, or are you self-employed?	FOR FAMILY MEMBER . . . . . 1 FOR SOMEONE ELSE . . . . . 2 SELF-EMPLOYED 3	
915	Do you usually work throughout the year, or do you work seasonally, or only once in a while?	THROUGHOUT THE YEAR . . . . . 1 SEASONALLY/PART OF THE YEAR . . . . . 2 ONCE IN A WHILE 3	
916	Are you paid in cash or kind for this work or are you not paid at all?	CASH ONLY . . . . . 1 CASH AND KIND . . . . . 2 IN KIND ONLY . . . . . 3 NOT PAID 4	
917	CHECK 701: CURRENTLY MARRIED/LIVING WITH A MAN ☐	NOT IN UNION ☐	→ 925
918	CHECK 916: CODE '1' OR '2' CIRCLED ☐	OTHER ☐	→ 921
919	Who usually decides how the money you earn will be used: you, your (husband/partner), or you and your (husband/partner) jointly?	RESPONDENT . . . . . 1 HUSBAND/PARTNER . . . . . 2 RESPONDENT AND HUSBAND/PARTNER JOINTLY . . . . . 3 OTHER _____ 6 (SPECIFY)	
920	Would you say that the money that you earn is more than what your (husband/partner) earns, less than what he earns, or about the same?	MORE THAN HIM . . . . . 1 LESS THAN HIM . . . . . 2 ABOUT THE SAME . . . . . 3 HUSBAND/PARTNER HAS NO EARNINGS . . . . . 4 DON'T KNOW 8	→ 922
921	Who usually decides how your (husband's/partner's) earnings will be used: you, your (husband/partner), or you and your (husband/partner) jointly?	RESPONDENT . . . . . 1 HUSBAND/PARTNER . . . . . 2 RESPONDENT AND HUSBAND/PARTNER JOINTLY . . . . . 3 HUSBAND/PARTNER HAS NO EARNINGS . . . . . 4 OTHER _____ 6 (SPECIFY)	

SECTION 9. HUSBAND'S BACKGROUND AND WOMAN'S WORK

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
922	Who usually makes decisions about health care for yourself: you, your (husband/partner), you and your (husband/partner) jointly, or someone else?	RESPONDENT . . . . . 1 HUSBAND/PARTNER . . . . . 2 RESPONDENT AND HUSBAND/PARTNER JOINTLY . . . . . 3 SOMEONE ELSE . . . . . 4 OTHER 6	
923	Who usually makes decisions about making major household purchases?	RESPONDENT . . . . . 1 HUSBAND/PARTNER . . . . . 2 RESPONDENT AND HUSBAND/PARTNER JOINTLY . . . . . 3 SOMEONE ELSE . . . . . 4 OTHER 6	
924	Who usually makes decisions about visits to your family or relatives?	RESPONDENT . . . . . 1 HUSBAND/PARTNER . . . . . 2 RESPONDENT AND HUSBAND/PARTNER JOINTLY . . . . . 3 SOMEONE ELSE . . . . . 4 OTHER 6	
925	Do you own this or any other house either alone or jointly with someone else?	ALONE ONLY . . . . . 1 JOINTLY ONLY . . . . . 2 BOTH ALONE AND JOINTLY . . . . . 3 DOES NOT OWN 4	→ 928
926	Do you have a title deed for any house you own?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 928
927	Is your name on the title deed?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
928	Do you own any agricultural or non-agricultural land either alone or jointly with someone else?	ALONE ONLY . . . . . 1 JOINTLY ONLY . . . . . 2 BOTH ALONE AND JOINTLY . . . . . 3 DOES NOT OWN 4	→ 931
929	Do you have a title deed for any land you own?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 931
930	Is your name on the title deed?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
931	PRESENCE OF OTHERS AT THIS POINT (PRESENT AND LISTENING, PRESENT BUT NOT LISTENING, OR NOT PRESENT)	PRES./ LISTEN. / PRES./ NOT LISTEN. / NOT PRES. CHILDREN < 10 . . . . . 1 2 3 HUSBAND . . . . . 1 2 3 OTHER MALES . . . . . 1 2 3 OTHER FEMALES 1 2 3	
932	In your opinion, is a husband/partner justified in hitting or beating his wife in the following situations: a) If she goes out without telling him? b) If she neglects the children? c) If she argues with him? d) If she refuses to have sex with him? e) If she burns the food?	YES / NO / DK a) GOES OUT . . . . . 1 2 8 b) NEGLECTS CHILDREN . . 1 2 8 c) ARGUES . . . . . 1 2 8 d) REFUSES SEX . . . . . 1 2 8 e) BURNS FOOD 1 2 8	

SECTION 10. HIV/AIDS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1001	Now I would like to talk about something else. Have you ever heard of HIV or AIDS?	YES . . . . . 1 NO 2	→ 1042
1002	HIV is the virus that can lead to AIDS. Can people reduce their chance of getting HIV by having just one uninfected sex partner who has no other sex partners?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
1003	Can people get HIV from mosquito bites?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
1004	Can people reduce their chance of getting HIV by using a condom every time they have sex?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
1005	Can people get HIV by sharing food with a person who has HIV?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
1006	Can people get HIV because of witchcraft or other supernatural means?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
1007	Is it possible for a healthy-looking person to have HIV?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
1008	Can HIV be transmitted from a mother to her baby: a) During pregnancy? b) During delivery? c) By breastfeeding?	YES NO DK a) DURING PREGNANCY . . 1 2 8 b) DURING DELIVERY . . . . 1 2 8 c) BREASTFEEDING 1 2 8	
1009	CHECK 1008: AT LEAST ONE 'YES' ↓ ☐ OTHER ☐ →		1011
1010	Are there any special drugs that a doctor or a nurse can give to a woman infected with HIV to reduce the risk of transmission to the baby?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
1011	CHECK 208 AND 215: LAST BIRTH IN 2014-2016 ↓ ☐ NO BIRTHS ☐ →		1027
	LAST BIRTH IN 2013 OR EARLIER ☐ →		1027
1012	CHECK 408 FOR LAST BIRTH: HAD ANTENATAL CARE ↓ ☐ NO ANTENATAL CARE ☐ →		1020
1013	**CHECK FOR PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE PRIVACY.**		

SECTION 10. HIV/AIDS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1014	During any of the antenatal visits for your last birth were you given any information about: a) Babies getting HIV from their mother? b) Things that you can do to prevent getting HIV? c) Getting tested for HIV?	YES NO DK a) HIV FROM MOTHER . . 1 2 8 b) THINGS TO DO . . . . . 1 2 8 c) TESTED FOR HIV 1 2 8	
1015	Were you offered a test for HIV as part of your antenatal care?	YES . . . . . 1 NO 2	
1016	I don't want to know the results, but were you tested for HIV as part of your antenatal care?	YES . . . . . 1 NO 2	→ 1020
1017	Where was the test done? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**PUBLIC SECTOR** GOVERNMENT HOSPITA . . . . . 11 GOVERNMENT HEALTH CENTER . . . . . 12 STAND-ALONE HTC CENTEI . . . . . 13 FAMILY PLANNING CLINIC . . . . . 14 MOBILE HTC SERVICES . . . . . 15 OTHER PUBLIC SECTOR _____ 16 (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/CLINIC/ PRIVATE DOCTOR . . . . . 21 STAND-ALONE HTC CENTEI . . . . . 22 PHARMACY . . . . . 23 MOBILE HTC SERVICES . . . . . 24 OTHER PRIVATE MEDICAL SECTOR _____ 26 (SPECIFY) OTHER _____ 96 (SPECIFY)	
1018	I don't want to know the results, but did you get the results of the test?	YES . . . . . 1 NO 2	→ 1020
1019	All women are supposed to receive counseling after being tested. After you were tested, did you receive counseling?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
1020	CHECK 430 FOR LAST BIRTH: ANY CODE '21-36' CIRCLED ↓	OTHER →	→ 1024
1021	Between the time you went for delivery but before the baby was born, were you offered an HIV test?	YES . . . . . 1 NO 2	
1022	I don't want to know the results, but were you tested for HIV at that time?	YES . . . . . 1 NO 2	→ 1024
1023	I don't want to know the results, but did you get the results of the test?	YES . . . . . 1 NO 2	→ 1025

SECTION 10. HIV/AIDS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1024	CHECK 1016: YES ☐ ↓ NO OR NOT ASKED ☐ → 1027		
1025	Have you been tested for HIV since that time you were tested during your pregnancy?	YES . . . . . 1 NO 2	→ 1028
1026	How many months ago was your most recent HIV test?	MONTHS AGO . . . . . ☐☐ TWO OR MORE YEARS 95	→ 1035
1027	I don't want to know the results, but have you ever been tested for HIV?	YES . . . . . 1 NO 2	→ 1031
1028	How many months ago was your most recent HIV test?	MONTHS AGO . . . . . ☐☐ TWO OR MORE YEARS 95	
1029	I don't want to know the results, but did you get the results of the test?	YES . . . . . 1 NO 2	
1030	Where was the test done? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**PUBLIC SECTOR** GOVERNMENT HOSPITA . . . . . 11 GOVERNMENT HEALTH CENTER . . . . . 12 STAND-ALONE HTC CENTEI . . . . . 13 FAMILY PLANNING CLINIC . . . . . 14 MOBILE HTC SERVICES . . . . . 15 OTHER PUBLIC SECTOR _____ 16 (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/CLINIC/ PRIVATE DOCTOR . . . . . 21 STAND-ALONE HTC CENTER . . . . . 22 PHARMACY . . . . . 23 MOBILE HTC SERVICES . . . . . 24 OTHER PRIVATE MEDICAL SECTOR _____ 26 (SPECIFY) OTHER _____ 96 (SPECIFY)	→ 1035
1031	Do you know of a place where people can go to get an HIV test?	YES . . . . . 1 NO 2	→ 1035

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1032	Where is that? Any other place? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**PUBLIC SECTOR** GOVERNMENT HOSPITA . . . . . A GOVERNMENT HEALTH CENTER . . . . . B STAND-ALONE HTC CENTER . . . . . C FAMILY PLANNING CLINIC . . . . . D MOBILE HTC SERVICES . . . . . E OTHER PUBLIC SECTOR _____ F (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/CLINIC/ PRIVATE DOCTOR . . . . . G STAND-ALONE HTC CENTER . . . . . H PHARMACY . . . . . I MOBILE HTC SERVICES . . . . . J OTHER PRIVATE MEDICAL SECTOR _____ K (SPECIFY) OTHER _____ X (SPECIFY)	
1035	Would you buy fresh vegetables from a shopkeeper or vendor if you knew that this person had HIV?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/NOT SURE/DEPEND 8	
1036	Do you think children living with HIV should be allowed to attend school with children who do not have HIV?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/NOT SURE/DEPEND 8	
1037	Do you think people hesitate to take an HIV test because they are afraid of how other people will react if the test result is positive for HIV?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/NOT SURE/DEPEND 8	
1038	Do people talk badly about people living with HIV, or who are thought to be living with HIV?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/NOT SURE/DEPEND 8	
1039	Do people living with HIV, or thought to be living with HIV, lose the respect of other people?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/NOT SURE/DEPEND 8	
1040	Do you agree or disagree with the following statement: I would be ashamed if someone in my family had HIV.	AGREE . . . . . 1 DISAGREE . . . . . 2 DON'T KNOW/NOT SURE/DEPEND 8	
1041	Do you fear that you could get HIV if you come into contact with the saliva of a person living with HIV?	YES . . . . . 1 NO . . . . . 2 SAYS SHE HAS HIV . . . . . 3 DON'T KNOW/NOT SURE/DEPEND 8	

SECTION 10. HIV/AIDS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1042	CHECK 1001: HEARD ABOUT HIV OR AIDS ☐ → a) Apart from HIV, have you heard about other infections that can be transmitted through sexual contact? NOT HEARD ABOUT HIV OR AIDS ☐ → b) Have you heard about infections that can be transmitted through sexual contact?	YES . . . . . 1 NO 2	
1043	CHECK 713: HAS HAD SEXUAL INTERCOURSE ☐ NEVER HAD SEXUAL INTERCOURSE ☐ →		1051
1044	CHECK 1042: HEARD ABOUT OTHER SEXUALLY TRANSMITTED INFECTIONS? YES ☐ NO ☐ →		1046
1045	Now I would like to ask you some questions about your health in the last 12 months. During the last 12 months, have you had a disease which you got through sexual contact?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
1046	Sometimes women experience a bad-smelling abnormal genital discharge. During the last 12 months, have you had a bad-smelling abnormal genital discharge?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
1047	Sometimes women have a genital sore or ulcer. During the last 12 months, have you had a genital sore or ulcer?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
1048	CHECK 1045, 1046, AND 1047: HAS HAD AN INFECTION (ANY 'YES') ☐ HAS NOT HAD AN INFECTION OR DOES NOT KNOW ☐ →		1051
1049	The last time you had (PROBLEM FROM 1045/1046/1047), did you seek any kind of advice or treatment?	YES . . . . . 1 NO 2	→ 1051

SECTION 10. HIV/AIDS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1050	Where did you go? Any other place? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**PUBLIC SECTOR** GOVERNMENT HOSPITAL . . . . . A GOVERNMENT HEALTH CENTER . . . . . B STAND-ALONE HTC CENTER . . . . . C FAMILY PLANNING CLINIC . . . . . D MOBILE HTC SERVICES . . . . . E OTHER PUBLIC SECTOR _____ F (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/CLINIC/ PRIVATE DOCTOR . . . . . G STAND-ALONE HTC CENTER . . . . . H PHARMACY . . . . . I MOBILE HTC SERVICES . . . . . J OTHER PRIVATE MEDICAL SECTOR _____ K (SPECIFY) **OTHER SOURCE** SHOP . . . . . L OTHER _____ X (SPECIFY)	
1051	If a wife knows her husband has a disease that she can get during sexual intercourse, is she justified in asking that they use a condom when they have sex?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
1052	Is a wife justified in refusing to have sex with her husband when she knows he has sex with other women?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
1053	CHECK 701: CURRENTLY MARRIED/ LIVING WITH A MAN ☐ ↓ NOT IN UNION ☐ → 1101		
1054	Can you say no to your (husband/partner) if you do not want to have sexual intercourse?	YES . . . . . 1 NO . . . . . 2 DEPENDS/NOT SURE 8	
1055	Could you ask your (husband/partner) to use a condom if you wanted him to?	YES . . . . . 1 NO . . . . . 2 DEPENDS/NOT SURE 8	

SECTION 11. OTHER HEALTH ISSUES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1101	Now I would like to ask you some other questions relating to health matters. Have you had an injection for any reason in the last 12 months? IF YES: How many injections have you had? IF NUMBER OF INJECTIONS IS 90 OR MORE, OR DAILY FOR 3 MONTHS OR MORE, RECORD '90'. IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE.	NUMBER OF INJECTIONS . . . . . [ ][ ] NONE 00	→ 1103A
1102	Among these injections, how many were administered by a doctor, a nurse, a pharmacist, a dentist, or any other health worker? IF NUMBER OF INJECTIONS IS 90 OR MORE, OR DAILY FOR 3 MONTHS OR MORE, RECORD '90'. IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE.	NUMBER OF INJECTIONS . . . . . [ ][ ] NONE 00	→ 1103A
1103	The last time you got an injection from a health worker, did he/she take the syringe and needle from a new, unopened package?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
1103A	In the past 12 months did you go to a health facility to seek advice or treatment for yourself?	YES . . . . . 1 NO 2	→ 1104
1103B	What was the reason you went to a health facility the last time?	ILLNESS . . . . . 1 ACCIDENT . . . . . 2 HEALTH CHECK UP . . . . . 3 FAMILY PLANNING CONSULTATION/METHO . . . . . 4 OTHER _____ 6 (SPECIFY)	
1103C	Where did you go? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**PUBLIC SECTOR** GOVERNMENT HOSPITAL . . . . . 11 GOVERNMENT HEALTH CENTER . . . . . 12 GOVERNMENT AID POST . . . . . 13 CHURCH HOSPITAL . . . . . 14 CHURCH HEALTH CENTER . . . . . 15 CHURCH AID POST . . . . . 16 MOBILE CLINIC . . . . . 17 TRAINED VHV . . . . . 18 OTHER PUBLIC SECTOR _____ 19 (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/CLINIC/ PRIVATE DOCTOR . . . . . 21 PHARMACY . . . . . 22 OTHER PRIVATE MEDICAL SECTOR _____ 23 (SPECIFY) **OTHER SOURCE** TRADITIONAL PRACTITIONER . . . . . 31 **OTHER** _____ 96 (SPECIFY)	

SECTION 11. OTHER HEALTH ISSUES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1103D	How did you go there? RECORD THE MEANS OF TRANSPORT WITH THE LONGEST TIME/DISTANCE TRAVELED.	ON FOOT . . . . . 1 PUBLIC MOTOR VEHICLE (BUS . . . . . 2 CAR/TRUCK . . . . . 3 BOAT/CANOE . . . . . 4 AIRPLANE . . . . . 5 OTHER _____ 6 (SPECIFY)	
1103E	How long did it take to get there? IF LESS THAN ONE HOUR CIRCLE "1" AND RECORD IN MINUTES. IF LESS THAN ONE DAY CIRCLE"2" AND RECORD IN HOURS.	MINUTES . . . . . 1 [ ][ ] HOURS . . . . . 2 [ ][ ] DAYS . . . . . 3 [ ][ ]	
1104	Do you currently smoke cigarettes every day, some days, or not at all?	EVERY DAY . . . . . 1 SOME DAYS . . . . . 2 NOT AT ALL 3	→ 1106
1105	On average, how many cigarettes do you currently smoke each day?	NUMBER OF CIGARETTES . . . . . [ ][ ]	
1106	Do you currently smoke or use any other type of tobacco every day, some days, or not at all?	EVERY DAY . . . . . 1 SOME DAYS . . . . . 2 NOT AT ALL 3	→ 1107A
1107	What other type of tobacco do you currently smoke or use? RECORD ALL MENTIONED.	PIPES FULL OF TOBACCO . . . . . A BRUS . . . . . B SPEAR ROLLS . . . . . C OTHER _____ X (SPECIFY)	
1107A	Do you chew betel nut on a daily basis? IF CHEWS WITHOUT LIME AND MUSTARD, CIRCLE CODE NO=2	YES . . . . . 1 NO 2	
1108	Many different factors can prevent women from getting medical advice or treatment for themselves. When you are sick and want to get medical advice or treatment, is each of the following a big problem or not a big problem: a) Getting permission to go to the doctor? b) Getting money needed for advice or treatment? c) The distance to the health facility? d) Not wanting to go alone?	BIG PROBLEM / NOT A BIG PROBLEM a) PERMISSION TO GO . . . . . 1 2 b) GETTING MONEY . . . . . 1 2 c) DISTANCE . . . . . 1 2 d) GO ALONE 1 2	
1109	Are you covered by any health insurance?	YES . . . . . 1 NO 2	→ MM01

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1110	What type of health insurance are you covered by? RECORD ALL MENTIONED.	MUTUAL HEALTH ORGANIZATION/ COMMUNITY-BASED HEALTH INSURANCE . . . . . A HEALTH INSURANCE THROUGH EMPLOYER . . . . . B SOCIAL SECURITY . . . . . C OTHER PRIVATELY PURCHASED COMMERCIAL HEALTH INSURANCE . . . . D OTHER _____ X (SPECIFY)	

SECTION MM. MATERNAL MORTALITY MODULE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
MM01	Now I would like to ask you some questions about your brothers and sisters born to your natural mother, including those who are living with you, those living elsewhere and those who have died. From our experience in prior surveys, we know it may sometimes be difficult to establish a complete list of all the children born to your natural mother. We will work together to draw the most complete list and work to recall all your siblings. Could you please now give me the names of all of your brothers and sisters born to your natural mother. DO NOT FILL IN THE ORDER NUMBER YET. NAME / ORDER NUMBER a _____ ☐☐ b _____ ☐☐ c _____ ☐☐ d _____ ☐☐ e _____ ☐☐ f _____ ☐☐ g _____ ☐☐ h _____ ☐☐ i _____ ☐☐ j _____ ☐☐ NAME / ORDER NUMBER k _____ ☐☐ l _____ ☐☐ m _____ ☐☐ n _____ ☐☐ o _____ ☐☐ p _____ ☐☐ q _____ ☐☐ r _____ ☐☐ s _____ ☐☐ t _____ ☐☐		
MM02	CHECK MM01: ONE OR MORE BROTHERS OR SISTERS LISTED ☐ ↓ NO BROTHERS OR SISTERS LISTED ☐ →		MM04
MM03	READ THE NAMES OF THE BROTHERS AND SISTERS TO THE RESPONDENT AND AFTER THE LAST ONE ASK: Are there any other brothers and sisters from the same mother that you have not mentioned? NO ☐ ↓ YES ☐ →	LIST ADDITIONAL BROTHERS AND SISTERS IN MM01.	
MM04	Sometimes people forget to mention children born to their natural mother because they do not live with them or they do not see them very often. Are there any brothers or sisters who do not live with you that you have not mentioned? NO ☐ ↓ YES ☐ →	LIST ADDITIONAL BROTHERS AND SISTERS IN MM01.	
MM05	Sometimes people forget to mention children born to their natural mother because they have died. Are there any brothers or sisters who died that you have not mentioned? NO ☐ ↓ YES ☐ →	LIST ADDITIONAL BROTHERS AND SISTERS IN MM01.	
MM06	Some people have brothers or sisters from the same mother but a different father. Are there any brothers or sisters born to your natural mother, but who have a different natural father, that you have not mentioned? NO ☐ ↓ YES ☐ →	LIST ADDITIONAL BROTHERS AND SISTERS IN MM01.	
MM07	COUNT THE NUMBER OF BROTHERS AND SISTERS RECORDED IN MM01.	TOTAL BROTHERS AND SISTERS . . ☐☐	

SECTION MM. MATERNAL MORTALITY MODULE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
MM08	CHECK MM07: Just to make make sure that I have this right: Your mother had in TOTAL _____ births, excluding you, during her lifetime. Is that correct? YES ☐ NO ☐ → PROBE AND CORRECT MM01 AND/OR MM07.		
MM09	CHECK MM07: ONE OR MORE BROTHERS/SISTERS ☐ NO BROTHER OR SISTER ☐ → DOM. VIOL. SECT.		
MM10	Please tell me, which brother or sister was born first? And which was born next? RECORD '01' FOR THE ORDER NUMBER IN MM01 FOR THE FIRST BROTHER OR SISTER, '02' FOR THE SECOND, AND SO ON UNTIL YOU HAVE RECORDED THE ORDER NUMBER FOR ALL BROTHERS AND SISTERS.		
MM11	How many births did your mother have before you were born?	NUMBER OF PRECEDING BIRTHS . . ☐☐	

MM12	LIST THE BROTHERS AND SISTERS ACCORDING TO THE ORDER NUMBER IN MM01. ASK MM13 TO MM24 FOR ONE BROTHER OR SISTER BEFORE ASKING ABOUT THE NEXT BROTHER OR SISTER. IF THERE ARE MORE THAN 12 BROTHERS AND SISTERS, USE AN ADDITIONAL QUESTIONNAIRE.						
MM13	NAME OF BROTHER OR SISTER.	(01) _____	(02) _____	(03) _____	(04) _____	(05) _____	(06) _____
MM14	Is (NAME) male or female?	MALE .... 1 FEMALE . 2	MALE .... 1 FEMALE . 2	MALE .... 1 FEMALE . 2	MALE .... 1 FEMALE . 2	MALE .... 1 FEMALE . 2	MALE .... 1 FEMALE . 2
MM15	Is (NAME) still alive?	YES ..... 1 NO ..... 2 → GO TO MM17 DK ..... 8 → GO TO (02)	YES ..... 1 NO ..... 2 → GO TO MM17 DK ..... 8 → GO TO (03)	YES ..... 1 NO ..... 2 → GO TO MM17 DK ..... 8 → GO TO (04)	YES ..... 1 NO ..... 2 → GO TO MM17 DK ..... 8 → GO TO (05)	YES ..... 1 NO ..... 2 → GO TO MM17 DK ..... 8 → GO TO (06)	YES ..... 1 NO ..... 2 → GO TO MM17 DK ..... 8 → GO TO (07)
MM16	How old is (NAME)?	☐☐ GO TO (02)	☐☐ GO TO (03)	☐☐ GO TO (04)	☐☐ GO TO (05)	☐☐ GO TO (06)	☐☐ GO TO (07)
MM17	How many years ago did (NAME) die?	☐☐	☐☐	☐☐	☐☐	☐☐	☐☐
MM18	How old was (NAME) when (he/she) died? IF DON'T KNOW, PROBE AND ASK ADDITIONAL QUESTIONS TO GET AN ESTIMATE.	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE, GO TO MM23	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE, GO TO MM23	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE, GO TO MM23	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE, GO TO MM23	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE, GO TO MM23	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE, GO TO MM23
MM19	Was (NAME) pregnant when she died?	YES ..... 1 → GO TO MM23 NO 2	YES ..... 1 → GO TO MM23 NO 2	YES ..... 1 → GO TO MM23 NO 2	YES ..... 1 → GO TO MM23 NO 2	YES ..... 1 → GO TO MM23 NO 2	YES ..... 1 → GO TO MM23 NO 2
MM20	Did (NAME) die during childbirth?	YES ..... 1 → GO TO (02) NO 2	YES ..... 1 → GO TO (03) NO 2	YES ..... 1 → GO TO (04) NO 2	YES ..... 1 → GO TO (05) NO 2	YES ..... 1 → GO TO (06) NO 2	YES ..... 1 → GO TO (07) NO 2
MM21	Did (NAME) die within two months after the end of a pregnancy or childbirth?	YES ..... 1 NO ..... 2 → GO TO MM23	YES ..... 1 NO ..... 2 → GO TO MM23	YES ..... 1 NO ..... 2 → GO TO MM23	YES ..... 1 NO ..... 2 → GO TO MM23	YES ..... 1 NO ..... 2 → GO TO MM23	YES ..... 1 NO ..... 2 → GO TO MM23
MM22	How many days after the end of the pregnancy did (NAME)	☐☐	☐☐	☐☐	☐☐	☐☐	☐☐
MM23	Was (NAME)'s death due to an act of violence?	YES ..... 1 → GO TO (02) NO 2	YES ..... 1 → GO TO (03) NO 2	YES ..... 1 → GO TO (04) NO 2	YES ..... 1 → GO TO (05) NO 2	YES ..... 1 → GO TO (06) NO 2	YES ..... 1 → GO TO (07) NO 2
MM24	Was (NAME)'s death due to an accident?	YES ..... 1 NO ..... 2 GO TO (02)	YES ..... 1 NO ..... 2 GO TO (03)	YES ..... 1 NO ..... 2 GO TO (04)	YES ..... 1 NO ..... 2 GO TO (05)	YES ..... 1 NO ..... 2 GO TO (06)	YES ..... 1 NO ..... 2 GO TO (07)
IF NO MORE BROTHERS OR SISTERS, GO TO NEXT SECTION.							

MM12	LIST THE BROTHERS AND SISTERS ACCORDING TO THE ORDER NUMBER IN MM01. ASK MM13 TO MM24 FOR ONE BROTHER OR SISTER BEFORE ASKING ABOUT THE NEXT BROTHER OR SISTER. IF THERE ARE MORE THAN 12 BROTHERS AND SISTERS, USE AN ADDITIONAL QUESTIONNAIRE.						
MM13	NAME OF BROTHER OR SISTER.	(07) _____	(08) _____	(09) _____	(10) _____	(11) _____	(12) _____
MM14	Is (NAME) male or female?	MALE .... 1 FEMALE . 2	MALE .... 1 FEMALE . 2	MALE .... 1 FEMALE . 2	MALE .... 1 FEMALE . 2	MALE .... 1 FEMALE . 2	MALE .... 1 FEMALE . 2
MM15	Is (NAME) still alive?	YES ..... 1 NO ..... 2 → GO TO MM17 DK ..... 8 → GO TO (08)	YES ..... 1 NO ..... 2 → GO TO MM17 DK ..... 8 → GO TO (09)	YES ..... 1 NO ..... 2 → GO TO MM17 DK ..... 8 → GO TO (10)	YES ..... 1 NO ..... 2 → GO TO MM17 DK ..... 8 → GO TO (11)	YES ..... 1 NO ..... 2 → GO TO MM17 DK ..... 8 → GO TO (12)	YES ..... 1 NO ..... 2 → GO TO MM17 DK ..... 8 → GO TO (13)
MM16	How old is (NAME)?	☐☐ GO TO (08)	☐☐ GO TO (09)	☐☐ GO TO (10)	☐☐ GO TO (11)	☐☐ GO TO (12)	☐☐ GO TO (13)
MM17	How many years ago did (NAME) die?	☐☐	☐☐	☐☐	☐☐	☐☐	☐☐
MM18	How old was (NAME) when (he/she) died? IF DON'T KNOW, PROBE AND ASK ADDITIONAL QUESTIONS TO GET AN ESTIMATE.	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE, GO TO MM23	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE, GO TO MM23	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE, GO TO MM23	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE, GO TO MM23	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE, GO TO MM23	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE, GO TO MM23
MM19	Was (NAME) pregnant when she died?	YES ..... 1 → GO TO MM23 NO 2	YES ..... 1 → GO TO MM23 NO 2	YES ..... 1 → GO TO MM23 NO 2	YES ..... 1 → GO TO MM23 NO 2	YES ..... 1 → GO TO MM23 NO 2	YES ..... 1 → GO TO MM23 NO 2
MM20	Did (NAME) die during childbirth?	YES ..... 1 → GO TO (08) NO 2	YES ..... 1 → GO TO (09) NO 2	YES ..... 1 → GO TO (10) NO 2	YES ..... 1 → GO TO (11) NO 2	YES ..... 1 → GO TO (12) NO 2	YES ..... 1 → GO TO (13) NO 2
MM21	Did (NAME) die within two months after the end of a pregnancy or childbirth?	YES ..... 1 NO ..... 2 → GO TO MM23	YES ..... 1 NO ..... 2 → GO TO MM23	YES ..... 1 NO ..... 2 → GO TO MM23	YES ..... 1 NO ..... 2 → GO TO MM23	YES ..... 1 NO ..... 2 → GO TO MM23	YES ..... 1 NO ..... 2 → GO TO MM23
MM22	How many days after the end of the pregnancy did (NAME) die?	☐☐	☐☐	☐☐	☐☐	☐☐	☐☐
MM23	Was (NAME)'s death due to an act of violence?	YES ..... 1 → GO TO (08) NO 2	YES ..... 1 → GO TO (09) NO 2	YES ..... 1 → GO TO (10) NO 2	YES ..... 1 → GO TO (11) NO 2	YES ..... 1 → GO TO (12) NO 2	YES ..... 1 → GO TO (13) NO 2
MM24	Was (NAME)'s death due to an accident?	YES ..... 1 NO ..... 2 GO TO (08)	YES ..... 1 NO ..... 2 GO TO (09)	YES ..... 1 NO ..... 2 GO TO (10)	YES ..... 1 NO ..... 2 GO TO (11)	YES ..... 1 NO ..... 2 GO TO (12)	YES ..... 1 NO ..... 2 GO TO (13)

IF NO MORE BROTHERS OR SISTERS, GO TO NEXT SECTION.

SECTION DV. DOMESTIC VIOLENCE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
DV00	CHECK COVER PAGE: WOMAN SELECTED FOR DV MODULE? WOMAN SELECTED FOR THIS SECTION ↓ WOMAN NOT SELECTED →		DV33
DV01	CHECK FOR PRESENCE OF OTHERS: DO NOT CONTINUE UNTIL PRIVACY IS ENSURED. PRIVACY OBTAINED . . . . . 1 ↓ PRIVACY NOT POSSIBLE . . . . . 2 →		DV32
DV01A	READ TO THE RESPONDENT: Now I would like to ask you questions about some other important aspects of a woman's life. You may find some of these questions very personal. However, your answers are crucial for helping to understand the condition of women in PNG. Let me assure you that your answers are completely confidential and will not be told to anyone and no one else in your household will know that you were asked these questions. If I ask you any question you don't want to answer, just let me know and I will go on to the next question.		
DV02	CHECK 701 AND 702: CURRENTLY MARRIED/ LIVING WITH A MAN ↓ FORMERLY MARRIED/ LIVED WITH A MAN (READ IN PAST TENSE AND USE 'LAST' WITH 'HUSBAND/PARTNER') ↓ NEVER MARRIED/ NEVER LIVED WITH A MAN →		DV16
DV03	First, I am going to ask you about some situations which happen to some women. Please tell me if these apply to your relationship with your (last) (husband/partner)? a) He (is/was) jealous or angry if you (talk/talked) to other men? b) He frequently (accuses/accused) you of being unfaithful? c) He (does/did) not permit you to meet your female friends? d) He (tries/tried) to limit your contact with your family? e) He (insists/insisted) on knowing where you (are/were) at all times?	YES NO DK JEALOUS . . . . . 1 2 8 ACCUSES . . . . . 1 2 8 NOT MEET FRIENDS . . 1 2 8 NO FAMILY . . . . . 1 2 8 WHERE YOU ARE 1 2 8	

DV04	A. Did your (last) (husband/partner) ever:	EVER	B. How often did this happen during the last 12 months: often, only sometimes, or not at all? OFTEN	SOME-TIMES	NOT IN LAST 12 MONTHS
	a) say or do something to humiliate you in front of others?	YES 1 → / NO 2 ↓	1	2	3
	b) threaten to hurt or harm you or someone you care about?	YES 1 → / NO 2 ↓	1	2	3
	c) insult you or make you feel bad about yourself?	YES 1 → / NO 2 ↓	1	2	3

DOMESTIC VIOLENCE MODULE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
DV05	A. Did your (last) (husband/partner) ever do any of the following things to you:	B. How often did this happen during the last 12 months: often, only sometimes, or not at all?	

	EVER		OFTEN	SOME-TIMES	NOT IN LAST 12 MONTHS
a) push you, shake you, or throw something at you?	YES	1 →	1	2	3
	NO	2 ↓			
b) slap you?	YES	1 →	1	2	3
	NO	2 ↓			
c) twist your arm or pull your hair?	YES	1 →	1	2	3
	NO	2 ↓			
d) punch you with his fist or with something that could hurt you?	YES	1 →	1	2	3
	NO	2 ↓			
e) kick you, drag you, or beat you up?	YES	1 →	1	2	3
	NO	2 ↓			
f) try to choke you or burn you on purpose?	YES	1 →	1	2	3
	NO	2 ↓			
g) threaten or attack you with a knife, gun, or other weapon?	YES	1 →	1	2	3
	NO	2 ↓			
h) physically force you to have sexual intercourse with him when you did not want to?	YES	1 →	1	2	3
	NO	2 ↓			
i) physically force you to perform any other sexual acts you did not want to?	YES	1 →	1	2	3
	NO	2 ↓			
j) force you with threats or in any other way to perform sexual acts you did not want to?	YES	1 →	1	2	3
	NO	2 ↓			

DV06	CHECK DV05A (a-j): AT LEAST ONE 'YES' ☐ ↓ NOT A SINGLE 'YES' ☐ →		DV09
DV07	How long after you first (got married/started living together) with your (last) (husband/partner) did (this/any of these things) first happen? IF LESS THAN ONE YEAR, RECORD '00'.	NUMBER OF YEARS . . . . ☐☐ BEFORE MARRIAGE/BEFORE LIVING TOGETHER 95	
DV08	Did the following ever happen as a result of what your (last) (husband/partner) did to you:		
	a) You had cuts, bruises, or aches?	YES . . . . . 1 NO 2	
	b) You had eye injuries, sprains, dislocations, or burns?	YES . . . . . 1 NO 2	
	c) You had deep wounds, broken bones, broken teeth, or any other serious injury?	YES . . . . . 1 NO 2	

DOMESTIC VIOLENCE MODULE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
DV09	Have you ever hit, slapped, kicked, or done anything else to physically hurt your (last) (husband/partner) at times when he was not already beating or physically hurting you?	YES . . . . . 1 NO 2	→ DV11
DV10	In the last 12 months, how often have you done this to your (last) (husband/partner): often, only sometimes, or not at all?	OFTEN . . . . . 1 SOMETIMES . . . . . 2 NOT AT ALL 3	
DV11	Does (did) your (last) (husband/partner) drink alcohol?	YES . . . . . 1 NO 2	→ DV13
DV12	How often does (did) he get drunk: often, only sometimes, or never?	OFTEN . . . . . 1 SOMETIMES . . . . . 2 NEVER 3	
DV13	Are (Were) you afraid of your (last) (husband/partner): most of the time, sometimes, or never?	MOST OF THE TIME AFRAID . . . . . 1 SOMETIMES AFRAID . . . . . 2 NEVER AFRAID 3	
DV14	CHECK 709: MARRIED MORE THAN ONCE ☐ ↓ MARRIED ONLY ONCE ☐ → DV16		
DV15	A. So far we have been talking about the behavior of your (current/last) (husband/partner). Now I want to ask you about the behavior of any previous (husband/partner).	B. How long ago did this last happen?	

	EVER		0 - 11 MONTHS AGO	12+ MONTHS AGO	DON'T REMEMBER
a) Did any previous (husband/partner) ever hit, slap, kick, or do anything else to hurt you physically?	YES NO	1 2 ↓	→ 1	2	3
b) Did any previous (husband/partner) physically force you to have intercourse or perform any other sexual acts against your will?	YES NO	1 2 ↓	→ 1	2	3

DV16	CHECK 701 AND 702: EVER MARRIED/EVER LIVED WITH A MAN ☐ ↓ a) From the time you were 15 years old has anyone other than (your/any) (husband/partner) hit you, slapped you, kicked you, or done anything else to hurt you physically?	NEVER MARRIED/NEVER LIVED WITH A MAN ☐ ↓ b) From the time you were 15 years old has anyone hit you, slapped you, kicked you, or done anything else to hurt you physically?	YES . . . . . 1 NO . . . . . 2 REFUSED TO ANSWER/ NO ANSWER . . . . . 3 → DV19

DOMESTIC VIOLENCE MODULE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
DV17	Who has hurt you in this way? Anyone else? RECORD ALL MENTIONED.	MOTHER/STEP-MOTHER . . . . . A FATHER/STEP-FATHER . . . . . B SISTER/BROTHER . . . . . C DAUGHTER/SON . . . . . D OTHER RELATIVE . . . . . E CURRENT BOYFRIEND . . . . . F FORMER BOYFRIEND . . . . . G MOTHER-IN-LAW . . . . . H FATHER-IN-LAW . . . . . I OTHER IN-LAW . . . . . J TEACHER . . . . . K EMPLOYER/SOMEONE AT WORK . . L POLICE/SOLDIER . . . . . M OTHER _____ X (SPECIFY)	
DV18	In the last 12 months, how often has (this person/have these persons) physically hurt you: often, only sometimes, or not at all?	OFTEN . . . . . 1 SOMETIMES . . . . . 2 NOT AT ALL 3	
DV19	CHECK 201, 226, AND 230: EVER BEEN PREGNANT ('YES' ON 201 OR 226 OR 230) ↓ NEVER BEEN PREGNANT →		DV22
DV20	Has any one ever hit, slapped, kicked, or done anything else to hurt you physically while you were pregnant?	YES . . . . . 1 NO 2	→ DV22
DV21	Who has done any of these things to physically hurt you while you were pregnant? Anyone else? RECORD ALL MENTIONED.	CURRENT HUSBAND/PARTNER . . . . A MOTHER/STEP-MOTHER . . . . . B FATHER/STEP-FATHER . . . . . C SISTER/BROTHER . . . . . D DAUGHTER/SON . . . . . E OTHER RELATIVE . . . . . F FORMER HUSBAND/PARTNER . . . . G CURRENT BOYFRIEND . . . . . H FORMER BOYFRIEND . . . . . I MOTHER-IN-LAW . . . . . J FATHER-IN-LAW . . . . . K OTHER IN-LAW . . . . . L TEACHER . . . . . M EMPLOYER/SOMEONE AT WORK . . N POLICE/SOLDIER . . . . . O OTHER _____ X (SPECIFY)	
DV22	CHECK 701 AND 702: EVER MARRIED/EVER LIVED WITH A MAN ↓ NEVER MARRIED/NEVER LIVED WITH A MAN →		DV22B
DV22A	Now I want to ask you about things that may have been done to you by someone other than (your/any) (husband/partner). At any time in your life, as a child or as an adult, has anyone ever forced you in any way to have sexual intercourse or perform any other sexual acts when you did not want to?	YES . . . . . 1 NO . . . . . 2 REFUSED TO ANSWER/ NO ANSWER 3	→ DV23 → DV24A

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
DV22B	At any time in your life, as a child or as an adult, has anyone ever forced you in any way to have sexual intercourse or perform any other sexual acts when you did not want to?	YES . . . . . 1 NO . . . . . 2 REFUSED TO ANSWER/ NO ANSWER 3	→ DV26
DV23	Who was the person who was forcing you the very first time this happened?	CURRENT HUSBAND/PARTNER . . . . 01 FORMER HUSBAND/PARTNER . . . . 02 CURRENT/FORMER BOYFRIEND . . . . 03 FATHER/STEP-FATHER . . . . . 04 BROTHER/STEP-BROTHER . . . . . 05 OTHER RELATIVE . . . . . 06 IN-LAW . . . . . 07 OWN FRIEND/ACQUAINTANCE . . . . 08 FAMILY FRIEND . . . . . 09 TEACHER . . . . . 10 EMPLOYER/SOMEONE AT WORK . . 11 POLICE/SOLDIER . . . . . 12 PRIEST/RELIGIOUS LEADER . . . . . 13 STRANGER . . . . . 14 OTHER _____ 96 (SPECIFY)	
DV24	CHECK 701 AND 702: EVER MARRIED/EVER LIVED WITH A MAN → a) In the last 12 months, has anyone other than (your/any) (husband/partner) physically forced you to have sexual intercourse when you did not want to? NEVER MARRIED/NEVER LIVED WITH A MAN → b) In the last 12 months has anyone physically forced you to have sexual intercourse when you did not want to?	YES . . . . . 1 NO 2	→ DV25

DOMESTIC VIOLENCE MODULE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
DV24A	CHECK DV05A (h-j) and DV15A(b) AT LEAST ONE 'YES' ☐ ↓ NOT A SINGLE 'YES' ☐ →		DV26
DV25	CHECK 701 AND 702: EVER MARRIED/EVER LIVED WITH A MAN ☐ ↓ a) How old were you the first time you were forced to have sexual intercourse or perform any other sexual acts by anyone, including (your/any) husband/partner? NEVER MARRIED/NEVER LIVED WITH A MAN ☐ ↓ b) How old were you the first first time you were forced to have sexual intercourse or perform any other sexual acts?	AGE IN COMPLETED YEARS . . . . . ☐☐ DON'T KNOW 98	
DV26	CHECK DV05A (a-j), DV15A (a,b), DV16, DV20, DV22A, AND DV22B: AT LEAST ONE 'YES' ☐ ↓ NOT A SINGLE 'YES' ☐ →		DV30
DV27	Thinking about what you yourself have experienced among the different things we have been talking about, have you ever tried to seek help?	YES . . . . . 1 NO . . . . . 2 →	DV29
DV28	From whom have you sought help? Anyone else? RECORD ALL MENTIONED.	OWN FAMILY . . . . . A HUSBAND'S/PARTNER'S FAMIL` . . . . B CURRENT/FORMER HUSBAND/PARTNER . . . . . C CURRENT/FORMER BOYFRIENI . . . . D FRIEND . . . . . E NEIGHBOR . . . . . F RELIGIOUS LEADER . . . . . G DOCTOR/MEDICAL PERSONNE . . . . H POLICE . . . . . I LAWYER . . . . . J SOCIAL SERVICE ORGANIZATION . . K OTHER _____ X (SPECIFY)	→ DV30
DV29	Have you ever told any one about this?	YES . . . . . 1 NO 2	
DV30	As far as you know, did your father ever beat your mother?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
	THANK THE RESPONDENT FOR HER COOPERATION AND REASSURE HER ABOUT THE CONFIDENTIALITY OF HER ANSWERS. FILL OUT THE QUESTIONS BELOW WITH REFERENCE TO THE		
DV31	DID YOU HAVE TO INTERRUPT THE INTERVIEW BECAUSE SOME ADULT WAS TRYING TO LISTEN, OR CAME INTO THE ROOM, OR INTERFERED IN ANY OTHER WAY?	YES, ONCE / YES, MORE THAN ONCE / NO HUSBAND . . . . . 1 / 2 / 3 OTHER MALE ADUL . . . . 1 / 2 / 3 FEMALE ADULT . . . . . 1 / 2 / 3	
DV32	INTERVIEWER'S COMMENTS/EXPLANATION FOR NOT COMPLETING THE DOMESTIC VIOLENCE _____ _____ _____		
DV33	RECORD THE TIME.	HOURS . . . . . ☐☐ MINUTES . . . . . ☐☐	

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT INTERVIEW:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

SUPERVISOR'S OBSERVATIONS

QUALITY CONTROLLER/DEO'S OBSERVATIONS

INSTRUCTIONS:

ONLY ONE CODE SHOULD APPEAR IN ANY BOX.
COLUMN 1 REQUIRES A CODE IN EVERY MONTH.

CODES FOR EACH COLUMN:

COLUMN 1: BIRTHS, PREGNANCIES, CONTRACEPTIVE USE

- B BIRTHS
- P PREGNANCIES
- T TERMINATIONS

- 0 NO METHOD

- 1 FEMALE STERILISATION
- 2 MALE STERILISATION
- 3 IUD
- 4 INJECTABLES
- 5 IMPLANTS
- 6 PILL
- 7 CONDOM
- 8 FEMALE CONDOM
- 9 RHYTHM METHOD/PERIODIC ABSTINENCE/NATURAL FAMILY PLANNING

- M WITHDRAWAL

- X OTHER MODERN METHOD
- Y OTHER TRADITIONAL METHOD

COLUMN 2: DISCONTINUATION OF CONTRACEPTIVE USE

- 0 INFREQUENT SEX/HUSBAND AWAY
- 1 BECAME PREGNANT WHILE USING
- 2 WANTED TO BECOME PREGNANT
- 3 HUSBAND/PARTNER DISAPPROVED
- 4 WANTED MORE EFFECTIVE METHOD
- 5 SIDE EFFECTS/HEALTH CONCERNS

- 6 LACK OF ACCESS/TOO FAR
- 7 COSTS TOO MUCH
- 8 INCONVENIENT TO USE
- F UP TO GOD/FATALISTIC
- A DIFFICULT TO GET PREGNANT/MENOPAUSAL
- D MARITAL DISSOLUTION/SEPARATION
- X OTHER

_____
(SPECIFY)

- Z DON'T KNOW

				COL. 1	COL. 2	
	12	DEC	01			
	11	NOV	02			
	10	OCT	03			
	09	SEP	04			
2	08	AUG	05			2
0	07	JUL	06			0
1	06	JUN	07			1
6	05	MAY	08			6
	04	APR	09			
	03	MAR	10			
	02	FEB	11			
	01	JAN	12			
	12	DEC	13			
	11	NOV	14			
	10	OCT	15			
	09	SEP	16			
2	08	AUG	17			2
0	07	JUL	18			0
1	06	JUN	19			1
5	05	MAY	20			5
	04	APR	21			
	03	MAR	22			
	02	FEB	23			
	01	JAN	24			
	12	DEC	25			
	11	NOV	26			
	10	OCT	27			
	09	SEP	28			
2	08	AUG	29			2
0	07	JUL	30			0
1	06	JUN	31			1
4	05	MAY	32			4
	04	APR	33			
	03	MAR	34			
	02	FEB	35			
	01	JAN	36			
	12	DEC	37			
	11	NOV	38			
	10	OCT	39			
	09	SEP	40			
2	08	AUG	41			2
0	07	JUL	42			0
1	06	JUN	43			1
3	05	MAY	44			3
	04	APR	45			
	03	MAR	46			
	02	FEB	47			
	01	JAN	48			
	12	DEC	49			
	11	NOV	50			
	10	OCT	51			
	09	SEP	52			
2	08	AUG	53			2
0	07	JUL	54			0
1	06	JUN	55			1
2	05	MAY	56			2
	04	APR	57			
	03	MAR	58			
	02	FEB	59			
	01	JAN	60			
	12	DEC	61			
	11	NOV	62			
	10	OCT	63			
	09	SEP	64			
2	08	AUG	65			2
0	07	JUL	66			0
1	06	JUN	67			1
1	05	MAY	68			1
	04	APR	69			
	03	MAR	70			
	02	FEB	71			
	01	JAN	72			

NATIONAL STATISTICAL OFFICE
2016 PAPUA NEW GUINEA DEMOGRAPHIC AND HEALTH SURVEY
MALE INDIVIDUAL QUESTIONNAIRE

IDENTIFICATION

PLACE NAME _____

NAME OF HOUSEHOLD HEAD _____

CLUSTER NUMBER . . . . . [ ][ ][ ][ ]

HOUSEHOLD NUMBER . . . . . [ ][ ][ ][ ]

PROVINCE . . . . . [ ][ ]

DISTRICT . . . . . [ ][ ]

LLG . . . . . [ ][ ]

WARD . . . . . [ ][ ]

CU . . . . . [ ][ ][ ]

CU TYPE . . . . . [ ][ ]

DWELLING NO. . . . . [ ][ ][ ]

NAME AND LINE NUMBER OF MAN . . _____ [ ][ ]

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE				DAY [ ][ ]
				MONTH [ ][ ]
				YEAR [ ][ ][ ][ ]
INTERVIEWER'S NAME				INTRV. NO. [ ][ ][ ][ ]
RESULT*				RESULT* [ ]
NEXT VISIT: DATE				TOTAL NUMBER OF VISITS [ ]
TIME				

*RESULT CODES: 1 COMPLETED; 2 NOT AT HOME; 3 POSTPONED; 4 REFUSED; 5 PARTLY COMPLETED; 6 INCAPACITATED; 7 OTHER _____ SPECIFY

LANGUAGE OF QUESTIONNAIRE** [1] LANGUAGE OF INTERVIEW** [ ] NATIVE LANGUAGE OF RESPONDENT** [ ] TRANSLATOR USED (YES = 1, NO = 2) [ ]

LANGUAGE OF QUESTIONNAIRE** **ENGLISH**

**LANGUAGE CODES:
1 ENGLISH 3 MOTU
2 PIDGIN 4 TOK PLES

SUPERVISOR		QUALITY CONTROLLER/DEO		OFFICE EDITOR	KEYED BY
NAME	NUMBER	NAME	NUMBER	NUMBER	NUMBER
_____	[ ][ ][ ][ ]	_____	[ ][ ][ ][ ]	[ ][ ]	[ ][ ]

INTRODUCTION AND CONSENT

SECTION 1. RESPONDENT'S BACKGROUND

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME.	HOURS . . . . . [ ][ ] MINUTES . . . . . [ ][ ]	
102	How long have you been living continuously in (NAME OF CURRENT CITY, TOWN OR VILLAGE OF RESIDENCE)? IF LESS THAN ONE YEAR, RECORD '00' YEARS.	YEARS . . . . . [ ][ ] ALWAYS . . . . . 95 VISITOR 96	→ 105
103	Just before you moved here, did you live in a city, in a town, or in a rural area?	CITY . . . . . 1 TOWN . . . . . 2 RURAL AREA 3	
104	Before you moved here, which province did you live in?	WESTERN . . . . . 01 GULF . . . . . 02 CENTRAL . . . . . 03 NATIONAL CAPITAL . . . . . 04 MILNE BAY . . . . . 05 NORTHERN (ORO) . . . . . 06 SOUTHERN HIGHLANDS . . . . . 07 ENGA . . . . . 08 WESTERN HIGHLANDS . . . . . 09 CHIMBU (SIMBU) . . . . . 10 EASTERN HIGHLANDS . . . . . 11 MOROBE . . . . . 12 MADANG . . . . . 13 EAST SEPIK . . . . . 14 WEST SEPIK (SANDAUN) . . . . . 15 MANUS . . . . . 16 NEW IRELAND . . . . . 17 EAST NEW BRITAIN . . . . . 18 WEST NEW BRITAIN . . . . . 19 A. R OF BOUGAINVILLE . . . . . 20 HELA . . . . . 21 JIWAKA . . . . . 22 OUTSIDE OF PNG 96	
105	In what month and year were you born?	MONTH . . . . . [ ][ ] DON'T KNOW MONTH . . . . . 98 YEAR . . . . . [ ][ ][ ][ ] DON'T KNOW YEAR 9998	
106	How old were you at your last birthday? COMPARE AND CORRECT 105 AND/OR 106 IF INCONSISTENT.	AGE IN COMPLETED YEARS . . . . . [ ][ ]	
107	Have you ever attended school?	YES . . . . . 1 NO 2	→ 111
108	What is the highest level of school you attended: elementary, primary, secondary, or higher?	ELEMENTARY . . . . . 1 PRIMARY . . . . . 2 SECONDARY - REGULAR . . . . . 3 SECONDARY -VOCATIONAL . . . . . 4 HIGHER 5	

SECTION 1. RESPONDENT'S BACKGROUND

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
109	What is the highest grade you completed at that level? IF COMPLETED LESS THAN ONE YEAR AT THAT LEVEL, RECORD '00'.	GRADE . . . . . ☐☐ DON'T KNOW 98	
110	CHECK 108: ELEMENTAR OR PRIMARY CODE '1' OR '2' CIRCLED ☐ ↓ SECONDARY OR HIGHER CODE '3', '4' OR '5' CIRCLED ☐ →		113
111	Now I would like you to read this sentence to me. SHOW CARD TO RESPONDENT. IF RESPONDENT CANNOT READ WHOLE SENTENCE, PROBE: Can you read any part of the sentence to me?	CANNOT READ AT ALL . . . . . 1 ABLE TO READ ONLY PART OF THE SENTENCE . . . . . 2 ABLE TO READ WHOLE SENTENCE . . . . . 3 NO CARD WITH REQUIRED LANGUAGE _____ 4 (SPECIFY LANGUAGE) BLIND/VISUALLY IMPAIRED 5	
112	CHECK 111: CODE '2', '3' OR '4' CIRCLED ☐ ↓ CODE '1' OR '5' CIRCLED ☐ →		114
113	Do you read a newspaper or magazine at least once a week, less than once a week or not at all?	AT LEAST ONCE A WEEK . . . . . 1 LESS THAN ONCE A WEEK . . . . . 2 NOT AT ALL 3	
114	Do you listen to the radio at least once a week, less than once a week or not at all?	AT LEAST ONCE A WEEK . . . . . 1 LESS THAN ONCE A WEEK . . . . . 2 NOT AT ALL 3	
115	Do you watch television at least once a week, less than once a week or not at all?	AT LEAST ONCE A WEEK . . . . . 1 LESS THAN ONCE A WEEK . . . . . 2 NOT AT ALL 3	
116	Do you own a mobile telephone?	YES . . . . . 1 NO . . . . . 2 →	118
117	Do you use your mobile phone for any financial transactions?	YES . . . . . 1 NO 2	
118	Do you have an account in a bank or other financial institution that you yourself use?	YES . . . . . 1 NO 2	
119	Have you ever used the internet?	YES . . . . . 1 NO . . . . . 2 →	122
120	In the last 12 months, have you used the internet? IF NECESSARY, PROBE FOR USE FROM ANY LOCATION, WITH ANY DEVICE.	YES . . . . . 1 NO . . . . . 2 →	122
121	During the last one month, how often did you use the internet: almost every day, at least once a week, less than once a week, or not at all?	ALMOST EVERY DAY . . . . . 1 AT LEAST ONCE A WEEK . . . . . 2 LESS THAN ONCE A WEEK . . . . . 3 NOT AT ALL 4	

SECTION 1. RESPONDENT'S BACKGROUND

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
122	What is your religion and denomination, if any?	ANGLICAN . . . . . 01 EVANGELICAL ALLIANCE . . . . . 02 PENTECOSTAL . . . . . 03 EVANGELICAL LUTHERAN . . . . . 04 ROMAN CATHOLIC . . . . . 05 SALVATION ARMY . . . . . 06 SEVENTH DAY ADVENTIST . . . . . 07 UNITED CHURCH . . . . . 08 OTHER CHRISTIAN CHURCH . . . . . 09 NON-CHRISTIAN . . . . . 10 NO RELIGION 11	

SECTION 2. REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	Now I would like to ask about any children you have had during your life. I am interested in all of the children that are biologically yours, even if they are not legally yours or do not have your last name. Have you ever fathered any children with any woman?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 206
202	Do you have any sons or daughters that you have fathered who are now living with you?	YES . . . . . 1 NO 2	→ 204
203	a) How many sons live with you? b) And how many daughters live with you? IF NONE, RECORD '00'.	a) SONS AT HOME . . . . . [ ][ ] b) DAUGHTERS AT HOME . . . . . [ ][ ]	
204	Do you have any sons or daughters that you have fathered who are alive but do not live with you?	YES . . . . . 1 NO 2	→ 206
205	a) How many sons are alive but do not live with you? b) And how many daughters are alive but do not live with you? IF NONE, RECORD '00'.	a) SONS ELSEWHERE . . . . . [ ][ ] b) DAUGHTERS ELSEWHERE . . . . [ ][ ]	
206	Have you ever fathered a son or a daughter who was born alive but later died? IF NO, PROBE: Any baby who cried, who made any movement, sound, or effort to breathe, or who showed any other signs of life even if for a very short	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 208
207	a) How many boys have died? b) And how many girls have died? IF NONE, RECORD '00'.	a) BOYS DEAD . . . . . [ ][ ] b) GIRLS DEAD . . . . . [ ][ ]	
208	SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, RECORD '00'.	TOTAL CHILDREN . . . . . [ ][ ]	
209	CHECK 208: HAS HAD MORE THAN ONE CHILD HAS HAD ONLY ONE CHILD → 211 HAS NOT HAD ANY CHILDREN → 301		
210	Did all of the children you have fathered have the same biological mother?	YES . . . . . 1 NO 2	
211	CHECK 208: HAS HAD MORE THAN ONE CHILD: a) How old were you when your first child was born? HAS HAD ONLY ONE CHILD: b) How old were you when your child was born?	AGE IN YEARS . . . . . [ ][ ]	
212	CHECK 203 AND 205: AT LEAST ONE LIVING CHILD NO LIVING CHILDREN → 301		

SECTION 2. REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
213	CHECK 203 AND 205: MORE THAN ONE LIVING CHILD ☐ → a) How old is your youngest child? ONLY ONE LIVING CHILD ☐ → b) How old is your child?	AGE IN YEARS . . . . . ☐☐	
214	CHECK 213: (YOUNGEST) CHILD IS AGE 0-2 YEARS ☐ ↓ (YOUNGEST) CHILD IS AGE 3 YEARS OR OLDER ☐ →		301
215	CHECK 203 AND 205: MORE THAN ONE LIVING CHILD ☐ → a) What is the name of your youngest child? ONLY ONE LIVING CHILD ☐ → b) What is the name of your child?	_____ (NAME OF (YOUNGEST) CHILD)	
216	When (NAME)'s mother was pregnant with (NAME), did she have any antenatal check-ups?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 218
217	Were you ever present during any of those antenatal check-ups?	PRESENT . . . . . 1 NOT PRESENT 2	
218	Was (NAME) born in a hospital or health facility?	HOSPITAL/HEALTH FACILIT` . . . . . 1 OTHER 2	
219	When a child has diarrhoea, how much should he or she be given to drink: more than usual, about the same as usual, less than usual, or nothing to drink at all?	MORE THAN USUAL . . . . . 1 ABOUT THE SAME . . . . . 2 LESS THAN USUAL . . . . . 3 NOTHING TO DRINK . . . . . 4 DON'T KNOW 8	

SECTION 3. CONTRACEPTION

301	Now I would like to talk about family planning - the various ways or methods that a couple can use to delay or avoid a pregnancy. Have you ever heard of (METHOD)?	
01	Female Sterilization. PROBE: Women can have an operation to avoid having any more children.	YES . . . . . 1 NO 2
02	Male Sterilization. PROBE: Men can have an operation to avoid having any more children.	YES . . . . . 1 NO 2
03	IUD/LOOP PROBE: Women can have a loop or coil placed inside them by a doctor or a nurse which can prevent pregnancy for one or more	YES . . . . . 1 NO 2
04	Injectables. PROBE: Women can have an injection by a health provider that stops them from becoming pregnant for one or more months.	YES . . . . . 1 NO 2
05	Implants. PROBE: Women can have one or more small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for one or more years.	YES . . . . . 1 NO 2
06	Pill. PROBE: Women can take a pill every day to avoid becoming pregnant.	YES . . . . . 1 NO 2
07	Condom. PROBE: Men can put a rubber sheath on their penis before sexual intercourse.	YES . . . . . 1 NO 2
08	Female Condom. PROBE: Women can place a sheath in their vagina before sexual intercourse.	YES . . . . . 1 NO 2
10	Ovulation/Periodic abstinence/Natural Family Planning PROBE: To avoid pregnancy, women do not have sexual intercourse on the days of the month they think they can get	YES . . . . . 1 NO 2
11	Withdrawal. PROBE: Men can be careful and pull out before climax.	YES . . . . . 1 NO 2
12	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	YES, MODERN METHOD _____ 1 (SPECIFY) YES, TRADITIONAL METHOD _____ 2 (SPECIFY) NO 3

SECTION 3. CONTRACEPTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
302	In the last few months have you:	YES NO	
	a) Heard about family planning on the radio?	a) RADIO 1 2	
	b) Seen anything about family planning on the television?	b) TELEVISION 1 2	
	c) Read about family planning in a newspaper or magazine?	c) NEWSPAPER OR MAGAZINE 1 2	
303	In the last few months, have you discussed family planning with a health worker or health professional?	YES . . . . . 1 NO 2	
304	Now I would like to ask you about a woman's risk of pregnancy. From one menstrual period to the next, are there certain days when a woman is more likely to become pregnant when she has sexual relations?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 306
305	Is this time just before her period begins, during her period, right after her period has ended, or halfway between two periods?	JUST BEFORE HER PERIOD BEGIN . . . . . 1 DURING HER PERIOD . . . . . 2 RIGHT AFTER HER PERIOD HAS ENDED . . . . 3 HALFWAY BETWEEN TWO PERIOI . . . . . 4 OTHER _____ 6 (SPECIFY) DON'T KNOW 8	
306	After the birth of a child, can a woman become pregnant before her menstrual period has returned?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
307	I will now read you some statements about contraception. Please tell me if you agree or disagree with each one.	AGREE / DISAGREE / DK a) CONTRACEPTION WOMAN'S CONCERN 1 2 8 b) WOMEN MAY BECOME PROMISCUOUS 1 2 8	
	a) Contraception is a woman's concern and a man should not have to worry about it.		
	b) Women who use contraception may become promiscuous.		
308	Are you aware that your government encourages men and women to plan their families?	YES . . . . . 1 NO 2	
309	Are you aware that men and women do not require consent from their partner to use family planning?	YES . . . . . 1 NO 2	

SECTION 4. MARRIAGE AND SEXUAL ACTIVITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
401	Are you currently married or living together with a woman as if married?	YES, CURRENTLY MARRIED . . . . . 1 YES, LIVING WITH A WOMAN . . . . . 2 NO, NOT IN UNION 3	→ 404
402	Have you ever been married or lived together with a woman as if married?	YES, FORMERLY MARRIED . . . . . 1 YES, LIVED WITH A WOMAN . . . . . 2 NO 3	→ 413
403	What is your marital status now: are you widowed, divorced, or separated?	WIDOWED . . . . . 1 DIVORCED . . . . . 2 SEPARATED 3	→ 410
404	Is your (wife/partner) living with you now or is she staying elsewhere?	LIVING WITH HIM . . . . . 1 STAYING ELSEWHERE 2	
405	Do you have other wives or do you live with other women as if married?	YES (MORE THAN ONE WIFE) . . . . . 1 NO (ONLY ONE WIFE) 2	→ 407
406	Altogether, how many wives or live-in partners do you have?	TOTAL NUMBER OF WIVES AND LIVE-IN PARTNERS . . . . . ☐☐	
407	CHECK 405: ONE WIFE/ PARTNER ☐ → a) Please tell me the name of (your wife/the woman you are living with as if married). MORE THAN ONE WIFE/ PARTNER ☐ → b) Please tell me the name of each of your wives or each woman you are living with as if married. RECORD THE NAME AND THE LINE NUMBER FROM THE HOUSEHOLD QUESTIONNAIRE FOR EACH WIFE AND LIVE-IN PARTNER. IF A WOMAN IS NOT LISTED IN THE HOUSEHOLD, RECORD '00'.	NAME / LINE NUMBER / 408 How old was (NAME) on her last birthday? / AGE _____ ☐☐ ☐☐ _____ ☐☐ ☐☐	
408	ASK 408 FOR EACH PERSON.	_____ ☐☐ ☐☐ _____ ☐☐ ☐☐	
409	CHECK 407: ONE WIFE/ PARTNER ☐ MORE THAN ONE WIFE/ PARTNER ☐	→ 411	
410	Have you been married or lived with a woman only once or more than once?	MORE THAN ONCE . . . . . 1 ONLY ONCE 2	

SECTION 4. MARRIAGE AND SEXUAL ACTIVITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
411	CHECK 405 AND 410: BOTH ARE CODE '2' ☐ → a) In what month and year did you start living with your (wife/partner)? OTHER ☐ → b) Now I would like to ask about your first (wife/partner). In what month and year did you start living with her?	MONTH . . . . . ☐☐ DON'T KNOW MONTH . . . . . 98 YEAR . . . . . ☐☐☐☐ DON'T KNOW YEAR 9998	→ 413
412	How old were you when you first started living with her?	AGE . . . . . ☐☐	
413	**CHECK FOR PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE**		
414	I would like to ask some questions about sexual activity in order to gain a better understanding of some important life issues. Let me assure you again that your answers are completely confidential and will not be told to anyone. If we should come to any question that you don't want to answer, just let me know and we will go to the next question. How old were you when you had sexual intercourse for the very first time?	NEVER HAD SEXUAL INTERCOURSE . . . . . 00 AGE IN YEARS . . . . . ☐☐	→ 501
415	I would like to ask you about your recent sexual activity. When was the last time you had sexual intercourse? IF LESS THAN 12 MONTHS, ANSWER MUST BE RECORDED IN DAYS, WEEKS OR MONTHS. IF 12 MONTHS (ONE YEAR) OR MORE, ANSWER MUST BE RECORDED IN YEARS.	DAYS AGO . . . . . 1 ☐☐ WEEKS AGO . . . . . 2 ☐☐ MONTHS AGO . . . . . 3 ☐☐ YEARS AGO . . . . . 4 ☐☐	→ 417 → 427

		LAST SEXUAL PARTNER	SECOND-TO-LAST SEXUAL PARTNER	THIRD-TO-LAST SEXUAL PARTNER
416	When was the last time you had sexual intercourse with this person?		DAYS AGO . . 1 WEEKS AGO . . 2 MONTHS AGO . . 3	DAYS AGO . . 1 WEEKS AGO . . 2 MONTHS AGO . . 3
417	The last time you had sexual intercourse with this person, was a condom used?	YES . . . . 1 NO . . . . 2 (SKIP TO 419)	YES . . . . 1 NO . . . . 2 (SKIP TO 419)	YES . . . . 1 NO . . . . 2 (SKIP TO 419)
418	Was a condom used every time you had sexual intercourse with this person in the last 12 months?	YES . . . . 1 NO 2	YES . . . . 1 NO 2	YES . . . . 1 NO 2
419	What was your relationship to this person with whom you had sexual intercourse? IF GIRLFRIEND: Were you living together as if married? IF YES, RECORD '2'. IF NO, RECORD '3'.	WIFE . . . . 1 LIVE-IN PARTNER . . . . 2 GIRLFRIEND NOT LIVING WITH RESPONDENT . . . . 3 CASUAL ACQUAINTANCE . . 4 CLIENT/SEX WORKER . . 5 OTHER ______ 6 (SPECIFY)	WIFE . . . . 1 LIVE-IN PARTNER . . . . 2 GIRLFRIEND NOT LIVING WITH RESPONDENT . . . . 3 CASUAL ACQUAINTANCE . . 4 CLIENT/SEX WORKER . . 5 OTHER ______ 6 (SPECIFY)	WIFE . . . . 1 LIVE-IN PARTNER . . . . 2 GIRLFRIEND NOT LIVING WITH RESPONDENT . . . . 3 CASUAL ACQUAINTANCE . . 4 CLIENT/SEX WORKER . . 5 OTHER ______ 6 (SPECIFY)
420	How long ago did you first have sexual intercourse with this person?	DAYS AGO . . 1 WEEKS AGO . . 2 MONTHS AGO . . 3 YEARS AGO . . 4	DAYS AGO . . 1 WEEKS AGO . . 2 MONTHS AGO . . 3 YEARS AGO . . 4	DAYS AGO . . 1 WEEKS AGO . . 2 MONTHS AGO . . 3 YEARS AGO . . 4
421	How many times during the last 12 months did you have sexual intercourse with this person? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF TIMES IS 95 OR MORE, RECORD '95'.	NUMBER OF TIMES	NUMBER OF TIMES	NUMBER OF TIMES . . . .
422	How old is this person?	AGE OF PARTNER DON'T KNOW 98	AGE OF PARTNER DON'T KNOW 98	AGE OF PARTNER DON'T KNOW 98
423	Apart from this person, have you had sexual intercourse with any other person in the last 12 months?	YES . . . . 1 (GO BACK TO 416 IN NEXT NO . . . . 2 (SKIP TO 425)	YES . . . . 1 (GO BACK TO 416 IN NEXT NO . . . . 2 (SKIP TO 425)	
424	In total, with how many different people have you had sexual intercourse in the last 12 months? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS 95 OR MORE, RECORD '95'.			NUMBER OF PARTNERS LAST 12 MONTHS . . DON'T KNOW 98

SECTION 4. MARRIAGE AND SEXUAL ACTIVITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
425	CHECK 419 (ALL COLUMNS): AT LEAST ONE PARTNER IS A SEX WORKER ☐ ↓ NO PARTNERS ARE SEX WORKERS ☐ → 427		
426	CHECK 419 AND 417 (ALL COLUMNS): CONDOM USED WITH EVERY SEX WORKER ☐ → 430 OTHER ☐ → 431		
427	In the last 12 months, did you pay anyone in exchange for having sexual intercourse?	YES . . . . . 1 NO 2	→ 429
428	Have you ever paid anyone in exchange for having sexual intercourse?	YES . . . . . 1 NO 2	☐ → 431
429	The last time you paid someone in exchange for having sexual intercourse, was a condom used?	YES . . . . . 1 NO 2	→ 431
430	Was a condom used during sexual intercourse every time you paid someone in exchange for having sexual intercourse in the last 12 months?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
431	In the past 12 months have you given any gifts or other goods in order to have sex or to become sexually involved with anyone?	YES . . . . . 1 NO 2	→ 433
431A	In the past 12 months, did you receive payment or gifts in exchange for having sexual intercourse?	YES . . . . . 1 NO 2	
432	Have you ever given any gifts or other goods in order to have sex or to become sexually involved with	YES . . . . . 1 NO 2	
433	In total, with how many different people have you had sexual intercourse in your lifetime? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS 95 OR MORE, RECORD '95'.	NUMBER OF PARTNERS IN LIFETIME . . . . . ☐☐ DON'T KNOW 98	
434	CHECK 417: MOST RECENT PARTNER (FIRST COLUMN) CONDOM USED ☐ ↓ NOT ASKED ☐ → 438 NO CONDOM USED ☐ → 438		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
436	You told me that a condom was used the last time you had sex. From where did you obtain the condom the last time? PROBE TO IDENTIFY TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**PUBLIC SECTOR** GOVERNMENT HOSPITA . . . . . 11 GOVERNMENT HEALTH CENTER . . . . . 12 GOVERNMENT HEALTH SUB CENTER . . . . 13 COMMUNITY AID/HEALTH POS . . . . . 14 FAMILY PLANNING CLINIC . . . . . 15 MOBILE CLINIC . . . . . 16 PATROL CLINIC . . . . . 17 COMMUNITY BASED DISTRIBUTOI . . . . . 18 OTHER PUBLIC SECTOR _____ 19 (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/CLINIC . . . . . 21 PHARMACY . . . . . 22 PRIVATE DOCTOR . . . . . 23 OTHER PRIVATE MEDICAL SECTOR _____ 26 (SPECIFY) **OTHER SOURCE** SHOP . . . . . 31 TRADITIONAL PRACTITIONER . . . . . 32 FRIEND/RELATIVE . . . . . 33 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	
437	The last time you had sex did you or your partner use any method other than a condom to avoid or prevent a pregnancy?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 439 → 440
438	The last time you had sex did you or your partner use any method to avoid or prevent a pregnancy?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 440
439	What method did you or your partner use? PROBE: Did you or your partner use any other method to prevent pregnancy? RECORD ALL MENTIONED.	FEMALE STERILIZATION . . . . . A MALE STERILIZATION . . . . . B IUD . . . . . C INJECTABLES . . . . . D IMPLANTS . . . . . E PILL . . . . . F CONDOM . . . . . G FEMALE CONDOM . . . . . H RHYTHM METHOD . . . . . L WITHDRAWAL . . . . . M OTHER MODERN METHOD . . . . . X OTHER TRADITIONAL METHOD . . . . . Y	→ 501
440	Do you know of a place where you can obtain a method of family planning?	YES . . . . . 1 NO 2	

SECTION 5. FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
501	CHECK 401: CURRENTLY MARRIED OR LIVING WITH A PARTNER ☐ ↓ NOT CURRENTLY MARRIED AND NOT LIVING WITH A PARTNER ☐ →		514
502	CHECK 439: MAN NOT STERILIZED ☐ ↓ MAN STERILIZED ☐ →		514
503	CHECK 407: ONE WIFE/ PARTNER ☐ ↓ MORE THAN ONE WIFE/ PARTNER ☐ →		509
504	Is your (wife/partner) currently pregnant?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 507
505	Now I have some questions about the future. After the child you and your (wife/partner) are expecting now, would you like to have another child, or would you prefer not to have any more children?	HAVE ANOTHER CHILD . . . . . 1 NO MORE . . . . . 2 UNDECIDED/DON'T KNOW 8	→ 514
506	After the birth of the child you are expecting now, how long would you like to wait before the birth of another child?	MONTHS . . . . . 1 ☐☐ YEARS . . . . . 2 ☐☐ SOON/NOW . . . . . 993 OTHER _____ 996 (SPECIFY) DON'T KNOW 998	→ 514
507	CHECK 208: HAS FATHERED CHILDREN ☐ ↓ a) Now I have some questions about the future. Would you like to have another child, or would you prefer not to have any more children? HAS NOT FATHERED CHILDREN ☐ ↓ b) Now I have some questions about the future. Would you like to have a child, or would you prefer not to have any children?	HAVE (A/ANOTHER) CHILD . . . . . 1 NO MORE/NONE . . . . . 2 SAYS COUPLE CAN'T GET PREGNAN . . . . . 3 WIFE/PARTNER STERILIZED . . . . . 4 NOT UP TO ME . . . . . 5 UNDECIDED/DON'T KNOW 8	→ 507A → 507B → 514 → 507C → 514
507A	What is the main reason you would like to have (a/another) child?	LOVE FOR CHILDREN . . . . . 1 FAMILY WISH . . . . . 2 WIFE'S WISH . . . . . 3 OLD AGE SECURITY . . . . . 4 RECENT CHILD DEATH . . . . . 5 OTHER _____ 6 (SPECIFY)	→ 508
507B	What is the main reason you would not want to have (a/another) child?	MEDICAL REASONS . . . . . 1 FINANCIAL REASONS . . . . . 2 HAVE ENOUGH CHILDREN . . . . . 3 CAREER . . . . . 4 SINGLE PARENT . . . . . 5 LAND SHORTAGE . . . . . 6 OTHER _____ 7 (SPECIFY) DON'T KNOW 8	→ 514

SECTION 5. FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
507C	Who will make the decision on whether you would have (a/another) child?	WIFE . . . . . 1 WIFE'S CLAN . . . . . 2 RESPONDENT'S CLAN . . . . . 3 RESPONDENT'S MOTHEI . . . . . 4 GOD . . . . . 5 JOINTLY WITH WIFE . . . . . 6 OTHER _____ 7 (SPECIFY)	→ 514
508	CHECK 208: HAS FATHERED CHILDREN ☐ → a) How long would you like to wait from now before the birth of another child? HAS NOT FATHERED CHILDREN ☐ → b) How long would you like to wait from now before the birth of a child?	MONTHS . . . . . 1 ☐☐ YEARS . . . . . 2 ☐☐ SOON/NOW . . . . . 993 SAYS COUPLE CAN'T GET PREGNANT . . . . . 994 OTHER _____ 996 (SPECIFY) DON'T KNOW 998	→ 514
509	Are any of your (wives/partners) currently pregnant?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 512
510	Now I have some questions about the future. After the (child/children) you and your (wives/partners) are expecting now, would you like to have another child, or would you prefer not to have any more children?	HAVE ANOTHER CHILD . . . . . 1 NO MORE . . . . . 2 UNDECIDED/DON'T KNOW 8	→ 514
511	After the birth of the child you are expecting now, how long would you like to wait before the birth of another child?	MONTHS . . . . . 1 ☐☐ YEARS . . . . . 2 ☐☐ SOON/NOW . . . . . 993 OTHER _____ 996 (SPECIFY) DON'T KNOW 998	→ 514
512	CHECK 208: HAS FATHERED CHILDREN ☐ → a) Now I have some questions about the future. Would you like to have another child, or would you prefer not to have any more children? HAS NOT FATHERED CHILDREN ☐ → b) Now I have some questions about the future. Would you like to have a child, or would you prefer not to have any children?	HAVE (A/ANOTHER) CHILD . . . . . 1 → 512A NO MORE/NONE . . . . . 2 → 512B SAYS COUPLE CAN'T GET PREGNAN . . . . . 3 → 514 (WIFE/WIVES/PARTNER(S)) STERILIZED . . . . 4 → 514 NOT UP TO ME . . . . . 5 → 512C UNDECIDED/DON'T KNOW . . . . . 8 → 514	
512A	What is the main reason you would like to have (a/another) child?	LOVE FOR CHILDREN . . . . . 1 FAMILY WISH . . . . . 2 WIFE'S WISH . . . . . 3 OLD AGE SECURITY . . . . . 4 RECENT CHILD DEATH . . . . . 5 OTHER _____ 6 (SPECIFY)	→ 513

SECTION 5. FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
512B	What is the main reason you would not want to have (a/another) child?	MEDICAL REASONS . . . . . 1 FINANCIAL REASONS . . . . . 2 HAVE ENOUGH CHILDRE . . . . . 3 CAREER . . . . . 4 SINGLE PARENT . . . . . 5 LAND SHORTAGE . . . . . 6 OTHER _____ 7 (SPECIFY) DON'T KNOW 8	→ 514
512C	Who will make the decision on whether you would have (a/another) child?	WIFE . . . . . 1 WIFE'S CLAN . . . . . 2 RESPONDENT'S CLAN . . . . . 3 RESPONDENT'S MOTHEI . . . . . 4 GOD . . . . . 5 JOINTLY WITH WIFE . . . . . 6 OTHER _____ 7 (SPECIFY)	→ 514
513	CHECK 208: HAS FATHERED CHILDREN a) How long would you like to wait from now before the birth of another child? HAS NOT FATHERED CHILDREN b) How long would you like to wait from now before the birth of a child?	MONTHS . . . . . 1 ☐☐ YEARS . . . . . 2 ☐☐ SOON/NOW . . . . . 993 SAYS COUPLE CAN'T GET PREGNANT . . . . . 994 OTHER _____ 996 (SPECIFY) DON'T KNOW 998	
514	CHECK 203 AND 205: HAS LIVING CHILDREN a) If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be? NO LIVING CHILDREN b) If you could choose exactly the number of children to have in your whole life, how many would that be? PROBE FOR A NUMERIC RESPONSE.	NONE . . . . . 00 → 601 NUMBER . . . . . ☐☐ OTHER _____ 96 → 601 (SPECIFY)	
515	How many of these children would you like to be boys, how many would you like to be girls and for how many would it not matter if it's a boy or a girl?	BOYS GIRLS EITHER NUMBER . . ☐☐ ☐☐ ☐☐ OTHER _____ 96 (SPECIFY)	

SECTION 6. EMPLOYMENT AND GENDER ROLES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	Have you done any work in the last seven days?	YES . . . . . 1 NO 2	→ 604
601A	What did you do most of the time last week?	FULL TIME STUDENT . . . . . 1 HOME DUTIES . . . . . 2 LOOKING FOR WORK . . . . . 3 NO WORK AVAILABLE . . . . . 4 WAITING TO START WORK . . . . . 5 TOO OLD/SICK/HANDICAPPED . . . . . 6 OTHER . . . . . 7 DON'T KNOW 8	
602	Although you did not work in the last seven days, do you have any job or business from which you were absent for leave, illness, vacation, or any other such reason?	YES . . . . . 1 NO 2	→ 604
603	Have you done any work in the last 12 months?	YES . . . . . 1 NO 2	→ 607
604	What is your occupation? That is, what kind of work do you mainly do?	_____ _____ ☐☐ _____	
605	Do you usually work throughout the year, or do you work seasonally, or only once in a while?	THROUGHOUT THE YEAR . . . . . 1 SEASONALLY/PART OF THE YEAR . . . . . 2 ONCE IN A WHILE 3	
606	Are you paid in cash or kind for this work or are you not paid at all?	CASH ONLY . . . . . 1 CASH AND KIND . . . . . 2 IN KIND ONLY . . . . . 3 NOT PAID 4	
607	CHECK 401: CURRENTLY MARRIED OR LIVING WITH A PARTNER ☐ ↓ NOT CURRENTLY MARRIED AND NOT LIVING WITH A PARTNER ☐		→ 612
608	CHECK 606: CODE '1' OR '2' CIRCLED ☐ ↓ OTHER ☐		→ 610
609	Who usually decides how the money you earn will be used: you, your (wife/partner), or you and your (wife/partner) jointly?	RESPONDENT . . . . . 1 WIFE/PARTNER . . . . . 2 RESPONDENT AND WIFE/PARTNER JOINTL . . 3 OTHER _____ 6 (SPECIFY)	
610	Who usually makes decisions about health care for yourself: you, your (wife/partner), you and your (wife/partner) jointly, or someone else?	RESPONDENT . . . . . 1 WIFE/PARTNER . . . . . 2 RESPONDENT AND WIFE/PARTNER JOINTL . . 3 SOMEONE ELSE . . . . . 4 OTHER 6	
611	Who usually makes decisions about making major household purchases?	RESPONDENT . . . . . 1 WIFE/PARTNER . . . . . 2 RESPONDENT AND WIFE/PARTNER JOINTL . . 3 SOMEONE ELSE . . . . . 4 OTHER 6	

SECTION 6. EMPLOYMENT AND GENDER ROLES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
612	Do you own this or any other house either alone or jointly with someone else?	ALONE ONLY . . . . . 1 JOINTLY ONLY . . . . . 2 BOTH ALONE AND JOINTLY . . . . . 3 DOES NOT OWN 4	→ 615
613	Do you have a title deed for any house you own?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 615
614	Is your name on the title deed?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
615	Do you own any agricultural or non-agricultural land either alone or jointly with someone else?	ALONE ONLY . . . . . 1 JOINTLY ONLY . . . . . 2 BOTH ALONE AND JOINTLY . . . . . 3 DOES NOT OWN 4	→ 618
616	Do you have a title deed for any land you own?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 618
617	Is your name on the title deed?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
618	In your opinion, is a husband justified in hitting or beating his wife in the following situations: a) If she goes out without telling him? b) If she neglects the children? c) If she argues with him? d) If she refuses to have sex with him? e) If she burns the food?	YES NO DK a) GOES OUT . . . . . 1 2 8 b) NEGLECTS CHILDREN . . 1 2 8 c) ARGUES . . . . . 1 2 8 d) REFUSES SEX . . . . . 1 2 8 e) BURNS FOOD 1 2 8	

SECTION 7. HIV/AIDS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701	Now I would like to talk about something else. Have you ever heard of HIV or AIDS?	YES . . . . . 1 NO 2	→ 727
702	HIV is the virus that can lead to AIDS. Can people reduce their chance of getting HIV by having just one uninfected sex partner who has no other sex partners?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
703	Can people get HIV from mosquito bites?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
704	Can people reduce their chance of getting HIV by using a condom every time they have sex?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
705	Can people get HIV by sharing food with a person who has HIV?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
706	Can people get HIV because of witchcraft or other supernatural means?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
707	Is it possible for a healthy-looking person to have HIV?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
708	Can HIV be transmitted from a mother to her baby: a) During pregnancy? b) During delivery? c) By breastfeeding?	YES NO DK a) DURING PREGNANCY . . 1 2 8 b) DURING DELIVERY . . . . 1 2 8 c) BREASTFEEDING 1 2 8	
709	CHECK 708: AT LEAST ONE 'YES' ↓ ☐ OTHER ☐ → 711		
710	Are there any special drugs that a doctor or a nurse can give to a woman infected with HIV to reduce the risk of transmission to the baby?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
711	**CHECK FOR PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE PRIVACY.**		
712	I don't want to know the results, but have you ever been tested for HIV?	YES . . . . . 1 NO 2	→ 716
713	How many months ago was your most recent HIV test?	MONTHS AGO . . . . . ☐☐ TWO OR MORE YEARS 95	

SECTION 7. HIV/AIDS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
714	I don't want to know the results, but did you get the results of the test?	YES . . . . . 1 NO 2	
715	Where was the test done? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**PUBLIC SECTOR** GOVERNMENT HOSPITA . . . . . 11 GOVERNMENT HEALTH CENTER . . . . . 12 STAND-ALONE HTC CENTEI . . . . . 13 FAMILY PLANNING CLINIC . . . . . 14 MOBILE HTC SERVICES . . . . . 15 OTHER PUBLIC SECTOR _____ 16 (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/CLINIC/ PRIVATE DOCTOR . . . . . 21 STAND-ALONE HTC CENTER . . . . . 22 PHARMACY . . . . . 23 MOBILE HTC SERVICES . . . . . 24 OTHER PRIVATE MEDICAL SECTOR _____ 26 (SPECIFY) OTHER _____ 96 (SPECIFY)	→ 720
716	Do you know of a place where people can go to get an HIV test?	YES . . . . . 1 NO 2	→ 720
717	Where is that? Any other place? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**PUBLIC SECTOR** GOVERNMENT HOSPITA . . . . . A GOVERNMENT HEALTH CENTER . . . . . B STAND-ALONE HTC CENTER . . . . . C FAMILY PLANNING CLINIC . . . . . D MOBILE HTC SERVICES . . . . . E OTHER PUBLIC SECTOR _____ F (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/CLINIC/ PRIVATE DOCTOR . . . . . G STAND-ALONE HTC CENTER . . . . . H PHARMACY . . . . . I MOBILE HTC SERVICES . . . . . J OTHER PRIVATE MEDICAL SECTOR _____ K (SPECIFY) OTHER _____ X (SPECIFY)	

SECTION 7. HIV/AIDS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
720	Would you buy fresh vegetables from a shopkeeper or vendor if you knew that this person had HIV?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/NOT SURE/DEPEND 8	
721	Do you think children living with HIV should be allowed to attend school with children who do not have HIV?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/NOT SURE/DEPEND 8	
722	Do you think people hesitate to take an HIV test because they are afraid of how other people will react if the test result is positive for HIV?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/NOT SURE/DEPEND 8	
723	Do people talk badly about people living with HIV, or who are thought to be living with HIV?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/NOT SURE/DEPEND 8	
724	Do people living with HIV, or thought to be living with HIV, lose the respect of other people?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/NOT SURE/DEPEND 8	
725	Do you agree or disagree with the following statement: I would be ashamed if someone in my family had HIV.	AGREE . . . . . 1 DISAGREE . . . . . 2 DON'T KNOW/NOT SURE/DEPEND 8	
726	Do you fear that you could get HIV if you come into contact with the saliva of a person living with HIV?	YES . . . . . 1 NO . . . . . 2 SAYS HE HAS HIV . . . . . 3 DON'T KNOW/NOT SURE/DEPEND 8	
727	CHECK 701: HEARD ABOUT HIV OR AIDS → a) Apart from HIV, have you heard about other infections that can be transmitted through sexual contact? NOT HEARD ABOUT HIV OR AIDS → b) Have you heard about infections that can be transmitted through sexual contact?	YES . . . . . 1 NO 2	
728	CHECK 414: HAS HAD SEXUAL INTERCOURSE NEVER HAD SEXUAL INTERCOURSE → 736		
729	CHECK 727: HEARD ABOUT OTHER SEXUALLY TRANSMITTED INFECTIONS? YES NO → 731		
730	Now I would like to ask you some questions about your health in the last 12 months. During the last 12 months, have you had a disease which you got through sexual contact?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
731	Sometimes men experience an abnormal discharge from their penis. During the last 12 months, have you had an abnormal discharge from your penis?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
732	Sometimes men have a sore or ulcer near their penis. During the last 12 months, have you had a sore or ulcer on or near your penis?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

SECTION 7. HIV/AIDS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
733	CHECK 730, 731 AND 732: HAS HAD AN INFECTION (ANY 'YES') ☐ ↓ HAS NOT HAD AN INFECTION OR DOES NOT KNOW ☐ →		736
734	The last time you had (PROBLEM FROM 730/731/732), did you seek any kind of advice or treatment?	YES . . . . . 1 NO 2	→ 736
735	Where did you go? Any other place? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**PUBLIC SECTOR** GOVERNMENT HOSPITAL . . . . . A GOVERNMENT HEALTH CENTER . . . . . B STAND-ALONE HTC CENTER . . . . . C FAMILY PLANNING CLINIC . . . . . D MOBILE HTC SERVICES . . . . . E OTHER PUBLIC SECTOR _____ F (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/CLINIC/ PRIVATE DOCTOR . . . . . G STAND-ALONE HTC CENTER . . . . . H PHARMACY . . . . . I MOBILE HTC SERVICES . . . . . J OTHER PRIVATE MEDICAL SECTOR _____ K (SPECIFY) OTHER _____ X (SPECIFY)	
736	If a wife knows her husband has a disease that she can get during sexual intercourse, is she justified in asking that they use a condom when they have sex?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
737	Is a wife justified in refusing to have sex with her husband when she knows he has sex with other women?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

SECTION 8. OTHER HEALTH ISSUES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801	Some men are circumcised, that is, the foreskin is completely removed from the penis. Are you circumcised?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 805
802	How old were you when you got circumcised?	AGE IN COMPLETED YEARS . . . . . [ ][ ] DURING CHILDHOOD (<5 YEARS) . . . . . 95 DON'T KNOW 98	
803	Who did the circumcision?	TRADITIONAL PRACTITIONER/FAMILY/ FRIEND . . . . . 1 HEALTH WORKER/PROFESSIONAL . . . . . 2 OTHER . . . . . 3 DON'T KNOW 8	
804	Where was it done?	HEALTH FACILITY . . . . . 1 HOME OF A HEALTH WORKER/PROFESSIO . . 2 CIRCUMCISION DONE AT HOM . . . . . 3 RITUAL SITE . . . . . 4 OTHER HOME/PLACE . . . . . 5 DON'T KNOW 8	
805	Now I would like to ask you some other questions relating to health matters. Have you had an injection for any reason in the last 12 months? IF YES: How many injections have you had? IF NUMBER OF INJECTIONS IS 90 OR MORE, OR DAILY FOR 3 MONTHS OR MORE, RECORD '90'. IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE.	NUMBER OF INJECTIONS . . . . . [ ][ ] NONE 00	→ 807A
806	Among these injections, how many were administered by a doctor, a nurse, a pharmacist, a dentist, or any other health worker? IF NUMBER OF INJECTIONS IS 90 OR MORE, OR DAILY FOR 3 MONTHS OR MORE, RECORD '90'. IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE.	NUMBER OF INJECTIONS . . . . . [ ][ ] NONE 00	→ 807A
807	The last time you got an injection from a health worker, did he/she take the syringe and needle from a new, unopened package?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
807A	In the past 12 months did you go to a health facility to seek advice or treatment for yourself?	YES . . . . . 1 NO 2	→ 808
807B	What was the reason you went to a health facility the l	ILLNESS . . . . . 1 ACCIDENT . . . . . 2 HEALTH CHECK UP . . . . . 3 FAMILY PLANNING CONSULTATION/METHOI . . . . . 4 OTHER _____ 6 (SPECIFY)	

SECTION 8. OTHER HEALTH ISSUES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
807C	Where did you go? Any other place? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**PUBLIC SECTOR** GOVERNMENT HOSPITAL . . . . . A GOVERNMENT HEALTH CENTER . . . . . B GOVERNMENT AID POST . . . . . C CHURCH HOSPITAL . . . . . D CHURCH HEALTH CENTER . . . . . E CHURCH AID POST . . . . . F MOBILE CLINIC . . . . . G TRAINED VHV . . . . . H OTHER PUBLIC SECTOR . . . . . I _____ (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/CLINIC/ PRIVATE DOCTOR . . . . . J PHARMACY . . . . . K OTHER PRIVATE MEDICAL SECTOR _____ K (SPECIFY) **OTHER SOURCE** TRADITIONAL PRACTITIONER . . . . . L OTHER _____ X (SPECIFY)	
807D	How did you go there? RECORD THE MEANS OF TRANSPORTATION WITH THE LONGEST DISTANCE TRAVELLED	ON FOOT . . . . . 1 PMV . . . . . 2 CAR/TRUCK . . . . . 3 BOAT/CANOE . . . . . 4 AIRPLANE . . . . . 5 OTHER _____ 6 (SPECIFY)	
807E	How long did it take to get there? IF LESS THAN ONE HOUR, CIRCLE "1' AND RECORD IN MINUTES IF LESS THAN ONE DAY, CIRCLE "2" AND RECORD IN HOURS.	MINUTES . . . . . 1 ☐☐ HOURS . . . . . 2 ☐☐ DAYS . . . . . 3 ☐☐	
808	Do you currently smoke tobacco every day, some days, or not at all?	EVERY DAY . . . . . 1 SOME DAYS . . . . . 2 NOT AT ALL 3	→ 811 → 810
809	In the past, have you smoked tobacco every day?	YES . . . . . 1 NO 2	→ 812
810	In the past, have you ever smoked tobacco every day, some days, or not at all?	EVERY DAY . . . . . 1 SOME DAYS . . . . . 2 NOT AT ALL 3	→ 815A

SECTION 8. OTHER HEALTH ISSUES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
811	On average, how many of the following products do you currently smoke each day? Also, let me know if you use the product, but not every day. IF RESPONDENT REPORTS USING THE PRODUCT BUT NOT EVERY DAY, RECORD '888'. IF THE PRODUCT IS NOT USED AT ALL, RECORD '000'. a) Manufactured cigarettes? b) Spear rolls/Hand-rolled cigarettes? c) Brus? d) Pipes full of tobacco? e) Any others? _____ (SPECIFY)	NUMBER DAILY a) MANUFACTURED CIGARETTES . . . . . [ ][ ][ ] b) SPEAR ROLLS/HAND-ROLLED CIGARETTES . . . . . [ ][ ][ ] c) BRUS . . . . . [ ][ ][ ] d) PIPES FULL OF TOBACCO . . . . . [ ][ ][ ] g) OTHERS . . . . . [ ][ ][ ]	→ 815A
812	On average, how many of the following products do you currently smoke each week? Also, let me know if you use the product, but not every week. IF RESPONDENT REPORTS USING THE PRODUCT BUT NOT EVERY WEEK, RECORD '888'. IF THE PRODUCT IS NOT USED AT ALL, RECORD '000'. a) Manufactured cigarettes? b) Spear rolls/Hand-rolled cigarettes? c) Brus? d) Pipes full of tobacco? f) Any others? _____ (SPECIFY)	NUMBER WEEKLY a) MANUFACTURED CIGARETTES . . . . . [ ][ ][ ] b) SPEAR ROLLS/HAND-ROLLED CIGARETTES . . . . . [ ][ ][ ] c) BRUS . . . . . [ ][ ][ ] d) PIPES FULL OF TOBACCO . . . . . [ ][ ][ ] g) OTHERS . . . . . [ ][ ][ ]	
815A	Do you chew betel nut on a daily basis? IF CHEWS WITHOUT LIME AND MUSTARD CODE NO=2	YES . . . . . 1 NO 2	
816	Are you covered by any health insurance?	YES . . . . . 1 NO 2	→ 818
817	What type of health insurance are you covered by? RECORD ALL MENTIONED.	MUTUAL HEALTH ORGANIZATION/ COMMUNITY-BASED HEALTH INSURANCE . . . . . A HEALTH INSURANCE THROUGH EMPLOYER . . . . . B SOCIAL SECURITY . . . . . C OTHER PRIVATELY PURCHASED COMMERCIAL HEALTH INSURANCE . . . . D OTHER _____ (SPECIFY) X	
818	RECORD THE TIME.	HOURS . . . . . [ ][ ] MINUTES . . . . . [ ][ ]	

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT INTERVIEW:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

SUPERVISOR'S OBSERVATIONS

EDITOR'S OBSERVATIONS

ADDITIONAL DHS PROGRAM RESOURCES

The DHS Program Website – Download free DHS reports, standard documentation, key indicator data, and training tools, and view announcements.	DHSprogram.com	
STATcompiler – Build custom tables, graphs, and maps with data from 90 countries and thousands of indicators.	Statcompiler.com	
DHS Program Mobile App – Access key DHS indicators for 90 countries on your mobile device (Apple, Android, or Windows).	Search DHS Program in your iTunes or Google Play store	
DHS Program User Forum – Post questions about DHS data, and search our archive of FAQs.	userforum.DHSprogram.com	
Tutorial Videos – Watch interviews with experts and learn DHS basics, such as sampling and weighting, downloading datasets, and how to read DHS tables.	www.youtube.com/DHSProgram	
Datasets – Download DHS datasets for analysis.	DHSprogram.com/Data	
Spatial Data Repository – Download geographically-linked health and demographic data for mapping in a geographic information system (GIS).	spatialdata.DHSprogram.com	

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