

Service Availability and Readiness Assessment (SARA)

An annual monitoring
system for service delivery

Reference Manual



World Health
Organization

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The service availability and readiness assessment (SARA) methodology was developed through a joint World Health Organization (WHO) – United States Agency for International Development (USAID) collaboration. The methodology builds upon previous and current approaches designed to assess service delivery including the service availability mapping (SAM) tool developed by WHO, and the service provision assessment (SPA) tool developed by ICF International under the USAID-funded MEASURE DHS project (monitoring and evaluation to assess and use results, demographic and health surveys) project, among others. It draws on best practices and lessons learned from the many countries that have implemented health facility assessments as well as guidelines and standards developed by WHO technical programmes and the work of the International Health Facility Assessment Network (IHFAN).

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Project Management Group

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Table of contents

Acknowledgements	2
Abbreviations	4
CHAPTER 1 OVERVIEW	5
1.1 Background	7
1.2 Survey overview	9
1.3 Pre-survey preparation	16
1.4 Planning the survey.....	22
1.5 Training field supervisors, data collectors and data entry personnel.....	25
1.6 Preparing for data collection in the field	30
1.7 Data collection in the field.....	36
1.8 Data entry and processing	40
1.9 Data analysis	46
1.10 Data archiving	55
References.....	63
CHAPTER 2 CORE INSTRUMENT	65
CHAPTER 3 INDICATORS INDEX.....	125
3.1 Indicators ID numbers.....	127
3.2 SARA general service availability indicators.....	127
3.3 SARA general service readiness indicators	131
3.4 SARA service specific availability and readiness indicators	136

Abbreviations

AIDS	acquired immunodeficiency syndrome
ALT	alanine aminotransferase
CBR	crude birth rate
CSV	comma-separated values
DBS	dried blood spot
DCMI	Dublin Core Metadata Initiative
DDI	Data Documentation Initiative
DQRC	Data quality report card
DV	Data verification
EDC	electronic data collection device
FBO	faith-based organization
GIS	geographical information system
GPS	global positioning system
HIV	human immunodeficiency virus
HMIS	health management information system
HRIS	human resources information system
ID	identification
IHFAN	International Health Facility Assessment Network
IHP+	International Health Partnership and related initiatives
IHSN	International Household Survey Network
M&E	monitoring and evaluation
MDG	Millennium Development Goal
MFL	master facility list
MNCH	maternal, newborn and child health
MoH	ministry of health
NADA	national data archive
NGO	nongovernmental organization
OECD	Organisation for Economic Co-operation and Development
PMTCT	prevention of mother-to-child transmission (of HIV)
RDT	rapid diagnostic test
SAM	service availability mapping
SARA	service availability and readiness assessment
SPA	service provision assessment
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization
XML	extensible markup language

3. Indicators index

3.1 Indicators ID numbers

In order to more easily identify which questions in the questionnaire correspond to the indicators in this document, an ID number has been given for each indicator and the corresponding questions in the questionnaire are labelled with the same ID number. This can be useful for a number of purposes including:

- Identifying which questions corresponds to each indicator;
- Determining which questions to remove from the questionnaire if certain indicators are not to be included in the survey; and
- Identifying items for inclusion in the analysis portion of the survey implementation.

The ID numbers have been assigned to each indicator using a two part system: First the indicator is given a letter based on the category of indicator. Second, the indicator is given a unique number. Table 3.1.1 below gives the categories used for the indicator types:

TABLE 3.1.1: INDICATOR CATEGORIES

Indicator type	Abbreviation
Service availability	S
Infrastructure	I
Equipment	E
Medicines and commodities	M
Diagnostics	D
Training	T
Domains	DO
Indices	IN

3.2 SARA general service availability indicators

An important note regarding service availability: although this information is collected through the SARA questionnaire, these indicators should not be calculated for a sample of facilities. **Data must be available for ALL facilities in an administrative unit in order to calculate service availability.** All service availability measures require data that link the numerator (e.g. number of facilities) to the denominator - population size. A sample survey would not allow computation of the service availability indicators, as it is not clear what the corresponding population size to be used as the denominator should be. The information needed to calculate service availability can be gathered from multiple sources in addition to the SARA, namely the HMIS and other routine information systems, and should be collated for all facilities before calculating the service availability indicators. If the SARA is implemented as a census, then it can be used to calculate service availability.

Service Availability is described by three areas of tracer indicators:

3.2.1 Health infrastructure

- **Facility density per 10 000 population:** the facility density is primarily an indicator of outpatient service access.
- **Inpatient bed density per 10 000 population:** inpatient bed density provides an indicator of the inpatient services access. Paediatric beds (cots) are included, but maternity beds are excluded.
- **Maternity bed density per 1000 pregnant women:** maternity bed density provides an indicator of access to delivery services. Data on maternity beds can be used calculate the density of maternal beds per 1000 pregnant women per year. The denominator is estimated from the population data. The indicator does not include delivery beds.

3.2.2 Health workforce

- **Health workforce density:** core medical professionals per 10 000 population: physicians, non-physician clinicians, registered nurses, and midwives. This includes part-time physicians who are given the value of 0.5 in the scoring.

3.2.3 Service utilization

In populations with poor or suboptimal health infrastructure the service utilization rate is an indicator of access.

- **Number of outpatient visits per capita per year:** the number of visits for ambulant care, not including immunization, over the total population.
- **Number of hospital discharges per 100 population (excluding deliveries):** this indicator provides additional information on the availability and access to inpatient services.

These indicators must all be expressed as a percentage score compared with a target or benchmark. Table 3.1.2 below shows the benchmark and computation of each indicator. If the tracer indicator score exceeds the benchmark, it will be scored as 100%.

TABLE 3.1.2: SERVICE AVAILABILITY INDICATORS

		Indicator	Target	Score
Health infrastructure				Score = N/target
(a)	Facilities	N per 10 000 population	2	$N/2 * 100$ (max.100)
(b)	Inpatient beds	N per 10 000 population	25	$N/25 * 100$ (max.100)
(c)	Maternity beds	N per 1000 pregnant women	10	$N/10 * 100$ (max.100)
Health workforce				
(d)	Core health workforce	N per 10 000 population	23	$N/23 * 100$ (max.100)
Service utilization				
(e)	Utilization	Outpatient visits per person/year	5	$N/5 * 100$ (max.100)
(f)	Utilization	Hospital discharges per 100/year	10	$N/10 * 100$ (max.100)

The rationale for the targets can be summarized as follows:

(a) Facility density: usually there is a country target, such as at least one facility per 5000 population, or 2 per 10 000. A major limitation is that this indicator does not take into account the size of the facilities. The indicator is scored as $N \text{ of facilities} / 2 * 100\%$ (max. 100).

(b) Inpatient beds: the global average is 27 per 10 000, lower- and upper middle-income countries have 18 and 39 hospital beds per 10 000 respectively. An arbitrary benchmark of 25 per 10 000 is selected. The indicator is scored as $N / 25 * 100\%$ (max. 100).

(c) Maternity beds: under the assumption that there should be sufficient beds for all pregnant women with an occupancy rate of 80% (to account for the uneven spread of demand over time) and a mean duration of stay of 3 days, the target should be $(1000/.8) * (3/365) = 10$ per 1000 pregnant women. The indicator is scored as $N / 10 * 100\%$ (max. 100).

An estimation for the number of pregnant women in the population can be derived from the CBR (crude birth rate) for the country of interest and the following equations*:

i = Estimated number of live births = $(\text{CBR per } 1,000 * \text{total population})$

ii = Estimated live births expected per month = $(a / 12)$

iii = Estimated number of pregnancies ending in stillbirths or miscarriages = $(a * 0.15)$

iv = Estimated pregnancies expected in the year = $(a + c)$

v = Estimated number of women pregnant in a given month = $(0.70 * d)$

vi = Estimated % of total population who are pregnant at a given period = $(e / \text{total population} * 100)$

(d) Health workers: WHO has published a figure of 23 per 10 000 population. The indicator is scored as $N/23*100\%$ (max. 100).

(e) Outpatient service utilization: in the OECD countries, the average number of physician consultations per person per year is about 6. The proposed benchmark is 5 visits per person per year. The indicator is scored as $(N \text{ of outpatient visits per person per year}) / 5 * 100\%$ (max. 100).

(f) Inpatient service utilization: in the OECD countries, which have an ageing population, there are about 15 discharges per 100 population per year. 10 discharges per 100 people per year is proposed as a benchmark. The indicator is scored as $(N \text{ of hospital discharges per } 100 \text{ people per year}) / 10 * 100\%$ (max. 100).

The service availability index is calculated using the above mentioned indicators. First, indices are calculated for health services infrastructure, health workforce, and service utilization. The calculations for creating those indices are as follows in Table 3.1.3. Please refer Table 3.1.2 for the definitions of indicators a-f. The service availability index is the un-weighted average of the three areas: infrastructure, health workforce, and utilization: $[(a + b + c)/3] + d + [(e + f) / 2] / 3$, and is a percentage score.

* Equation from UNFPA: <http://www.unfpa.org/emergencies/manual/9a5.htm>

3. Indicators index

TABLE 3.1.3: SERVICE AVAILABILITY INDICES

	Indicator	Target	Score
Health Services Infrastructure Index	Average score of the three indicators: facility density, inpatient beds, maternity beds	100	$((a) + (b) + (c)) / 3$
Health Workforce Index	Core health workers	100	d
Service Utilization Index	Average score of the two indicators: outpatient visits, hospital discharges	100	$((e) + (f)) / 2$
Service Availability Index	Un-weighted average of the three areas: infrastructure, workforce, and utilization	100	$(((a + b + c)/3) + d + ((e + f) / 2)) / 3$

Table 3.1.4 below gives the ID numbers for the service availability indicators and indices.

TABLE 3.1.4: SERVICE AVAILABILITY INDICATOR ID NUMBERS

Indicator	ID Number
Facilities	S1
Inpatient beds	S2
Maternity beds	S3
Core health workforce	S4
Outpatient service utilization	S5
In-patient service utilization	S6
Health infrastructure index	IN1
Core health workforce index	IN2
Service utilization index	IN3
Service availability index	IN4

3.3 SARA general service readiness indicators

TABLE 3.3.1: TRACER INDICATORS FOR GENERAL SERVICE READINESS

Domain	Tracer indicator	ID	Definition	Data collection notes
Basic amenities DO1 Domain score = Mean score of items as percentage N/7*100	Power	I1	Facility routinely has electricity for lights and communication (at a minimum) from any power source during normal working hours; there has not been a break in power for more than 2 hours per day during the past 7 days.	Reported availability.
	Improved water source inside OR within the ground of the facility	I2	Improved water source uses uniform definitions for safe water sources promoted by UNICEF. These include the following: Piped, public tap, standpipe, tubewell/borehole, protected dug well, protected spring, rain water. NOTE: The type of base for the standpipe or tubewell is not considered for this question. The water source is located inside the facility or within the ground of the facility	Observed availability.
	Room with auditory and visual privacy for patient consultations	I3	Private room or screened off area available in main service area (usually the general outpatient service area), a sufficient distance from sites where providers/clients routinely may be, so that a normal conversation could be held without being overheard, and without the client being observed.	Observed availability.
	Access to adequate sanitation facilities for clients	I4	The toilet/latrine is classified using uniform criteria for improved sanitation promoted by UNICEF. These include the following: Flush/pour flush to piped sewer system or septic tank or pit latrine, pit latrine (ventilated improved pit (VIP) or other) with slab, composting toilet. There is adequate sanitation facilities accessible (unlocked or key available) for clients on premises.	Observed availability.

3. Indicators index

Domain	Tracer indicator	ID	Definition	Data collection notes
	Communication equipment (phone or SW radio)	I5	Functioning communication equipment. This will not include private cell phones unless the facility reimburses for cost of phone calls. This will not include payphones outside of the facility.	Reported availability accepted
	Facility has access to computer with email/internet access	I6	Facility has a functioning computer and has access to email/internet with internet working on the day of the survey.	Reported availability accepted
	Emergency transportation	I7	Facility has a functioning vehicle with fuel that is routinely available that can be used for emergency transportation or access to a vehicle in near proximity that can be used for emergency transportation	Reported availability accepted
<p>REFERENCES:</p> <p>Progress on sanitation and drinking water 2010 update http://www.wssinfo.org/fileadmin/user_upload/resources/1278061137-JMP_report_2010_en.pdf</p> <p>Guidance for Selecting and Using Core Indicators for Cross-Country Comparisons of Health Facility Readiness to Provide Services http://ihfan.org/home/docs/attachments/WP-07-97_Guidance_HF_Core_Indicators.pdf</p>				
<p>Basic equipment DO2</p> <p>Domain score = Mean score of items as percentage</p> <p>$N/6 \times 100$</p>	Adult scale	E1		Items observed and functioning in the main service area (usually the general outpatient department) or in the immediate vicinity where it is reasonable to assume that they can be used for the services being provided in the main service area. Note: if items are in service specific areas but are readily available for use for general outpatient clients, this is acceptable
	Child scale	E2	Weight gradation minimum 250 grams. A digital standing scale where adult holds child and gradations go to 250 grams is acceptable	
	Thermometer	E3		
	Stethoscope	E4		
	Blood pressure apparatus	E5	Digital BP machine or manual sphygmomanometer with stethoscope	
	Light source	E6	Spotlight source that can be used for patient examinations. A functional flashlight is accepted.	

Domain	Tracer indicator	ID	Definition	Data collection notes
REFERENCES: Guidance for Selecting and Using Core Indicators for Cross-Country Comparisons of Health Facility Readiness to Provide Services http://ihfan.org/home/docs/attachments/WP-07-97_Guidance_HF_Core_Indicators.pdf				
Standard precautions for infection prevention DO3 Domain score = Mean score of items as percentage $N/9*100$	Safe final disposal of sharps	I9	Safe final disposal of sharps includes incineration, open burning in protected area, dump without burning in protected area, or remove offsite with protected storage. If method is incineration, incinerator functioning and fuel available.	Observed final disposal/holding site for sharps and verify no unprotected sharps are observed.
	Safe final disposal of infectious wastes	I10	Safe final disposal of infectious wastes includes incineration, open burning in protected area, dump without burning in protected area, or remove offsite with protected storage. If method is incineration, incinerator functioning and fuel available.	Observed final disposal/holding site for infectious wastes and verify no unprotected waste is observed.
	Appropriate storage of sharps waste	I11	A puncture-resistant, rigid, leak-resistant container designed to hold used sharps safely during collection, disposal and destruction. Sharps containers should be made of plastic, metal, or cardboard and have a lid that can be closed. Sharps containers should be fitted with a sharps aperture, capable of receiving syringes and needle assemblies of all standard sizes, together with other sharps. Boxes must be clearly marked with the international bio-hazard warning not less than 50mm diameter, printed in black or red on each of the front and back faces of the box. .	Observed availability in all three main service areas: general OPD, HIV testing area, and surgery area
	Appropriate storage of infectious waste	I12	Waste receptacle (pedal bin) with lid and plastic bin liner.	
	Disinfectant	I13	Chlorine-based or other country specific used for environmental disinfection	Observed availability anywhere in the facility
Single use —standard disposable or auto-disable syringes	I14			

3. Indicators index

Domain	Tracer indicator	ID	Definition	Data collection notes
	Soap and running water or alcohol based hand rub	I15		Observed available in all four main service areas: general OPD, HIV testing area, basic obstetric and newborn care area and surgery area.
	Latex gloves	I16	If equivalent non latex gloves are available this is acceptable.	
	Guidelines for standard precautions	T1		Observed availability anywhere in their facility
REFERENCES:				
Practical Guidelines for Infection Control in Health Care Facilities. Geneva http://whqlibdoc.who.int/wpro/2003/a82694.pdf				
Diagnostic capacity DO4 Domain score = Mean score of items as percentage N/8*100	Haemoglobin	D1	This may include colorimeter OR haemoglobinometer OR hemocue.	Able to conduct the test on-site (in the facility) and functioning equipment and reagents needed to conduct the test are observed on-site on the day of the survey. These may be in a laboratory or in the service area where the test is conducted.
	Blood glucose	D2	Glucometer and glucometer test strips	
	Malaria diagnostic capacity	D3	RDT kit or smear with microscope, slides, and Wright Giemsa stain	
	Urine dipstick- protein	D4	Dipsticks for urine protein (with valid expiration date)	
	Urine dipstick- glucose	D5	Dipsticks for urine glucose (with valid expiration date)	
	HIV diagnostic capacity	D6	RDT kit or ELISA test with ELISA washer, ELISA reader, incubator, specific assay kit	
	Syphilis rapid test	D9	RDT kit	
	Urine test for pregnancy	D11	RDT kit	
REFERENCES:				
Consolation on technical and operation recommendations for clinical laboratory testing harmonization and standardization http://www.who.int/healthsystems/round9_9.pdf				
Essential medicines DO5 Domain score = Mean score of items as percentage N/25*100	Amlodipine tablet or alternative calcium channel blocker	M56		Observed in pharmacy or in area where they are routinely stored, at least one with valid expiration date.
	Amoxicillin syrup/suspension or dispersible tablet	M33		
	Amoxicillin tablet	M2	Respiratory antibiotic	
	Ampicillin powder for injection	M71		
	Aspirin cap/tab	M57		
	Beclometasone inhaler	M59		
	Beta blocker (e.g.bisoprolol, metoprolol, carvedilol, atenolol)	M55		
	Carbamazepine tablet	M119		
	Ceftriaxone injection	M5	2nd line injectable antibiotic	

Domain	Tracer indicator	ID	Definition	Data collection notes
	Diazepam injection	M25		
	Enalapril tablet or alternative ACE inhibitor e.g. lisinopril, ramipril, perindopril	M53		
	Fluoxetine tablet	M94		
	Gentamicin injection	M72		
	Glibenclamide tablet	M10	Oral treatment type 2 diabetes	
	Haloperidol tablet	M124		
	Insulin regular injection	M51		
	Magnesium sulphate injectable	M24		
	Metformin tablet	M50		
	Omeprazole tablet or alternative such as pantoprazole, rabeprazole	M11	Gastro-esophageal reflux	
	Oral rehydration solution	M32		
	Oxytocin injection	M22		
	Salbutamol inhaler	M13	Chronic asthma attacks	
	Simvastatin tablet or other statin e.g. atorvastatin, pravastatin, fluvastatin	M14	High cholesterol	
	Thiazide (e.g. hydrochlorothiazide)	M54		
	Zinc sulphate tablets, dispersible tablets or syrup	M36		
REFERENCES:				
WHO (2013). WHO Model List of Essential Medicines. http://apps.who.int/iris/bitstream/10665/93142/1/EML_18_eng.pdf?ua=1 Monitoring the Building Blocks of Health Systems: A Handbook of Indicators and their Measurement Strategies. Geneva: World Health Organization. Available at: http://www.who.int/healthinfo/systems/WHO_MBHSS_2010_full_web.pdf				

3.4 SARA service specific availability and readiness indicators

TABLE 3.4.1: TRACER INDICATORS FOR REPRODUCTIVE, MATERNAL, NEWBORN, CHILD, AND ADOLESCENT HEALTH SERVICE AVAILABILITY AND READINESS

Domain	Tracer indicator	ID	Definition	Data collection notes
Family planning services				
SERVICE AVAILABILITY				
% of facilities offering:				
	Family planning services	S7		
	Provision of combined oral contraceptive pills	S7_01		
	Provision of progestin-only contraceptive pills	S7_02		
	Provision of combined injectable contraceptives	S7_03		
	Provision of progestin-only injectable contraceptives	S7_04		
	Provision of male condoms	S7_05		
	Provision of female condoms	S7_06		
	Provision of intrauterine contraceptive device	S7_07		
	Provision of implant	S7_08		
	Provision of cycle beads for standard days method	S7_09		
	Provision of emergency contraceptive pills	S7_10		
	Male sterilization	S7_11		
	Female sterilization	S7_12		
SERVICE READINESS IN6				
% of facilities providing family planning services with tracer items on the day of the assessment				
Staff and guidelines DO6	Guidelines on family planning	T2	Country adapt to which guidelines are required/accepted	Guidelines observed in service area.
	Family planning check-lists and/or job-aids	T62		
	Staff trained in FP	T3	At least one staff member providing the service trained in the last two years in some aspect of FP	Interview response from in-charge of service area day of survey.

Domain	Tracer indicator	ID	Definition	Data collection notes
Equipment DO7	Blood pressure apparatus	E5	Digital BP machine or manual sphygmomanometer with stethoscope	Observed availability, reported functionality, and in service area or adjacent area.
Medicines and commodities DO8	Combined estrogen progesterone oral contraceptive pills	M15		Observed in service area OR where routinely stored; in stock with at least one valid.
	Progestin-only contraceptive pills	M96		
	Injectable contraceptives	M16	Can be either combined estrogen progesterone injectable contraceptives or progestin-only injectable contraceptives	
	Condoms	M17	Male	
AUXILIARY INDICATORS				
% of facilities providing family planning services with:				
Other family planning commodities in stock	Combined estrogen progesterone injectable contraceptives	M97		Observed in service area OR where routinely stored; in stock with at least one valid.
	Progestin-only injectable contraceptives	M98		
	Female condoms	M99		
	Implants	M108	E.g.levonorgestrel or etonogestrel implant	
	Emergency contraceptive	M109	E.g.Levonorgestrel tablet or ulipristal acetate tablet or mifepristone tablet 10-25 mg	
	Intrauterine contraceptive device (IUCD)	M105		
Stock-outs (in past 3 months)	Female condoms	M99_A		
	Implants	M108_A	E.g.levonorgestrel or etonogestrel implant	
	Emergency contraceptive	M109_A	E.g.Levonorgestrel tablet or ulipristal acetate tablet or mifepristone tablet 10-25 mg	
REFERENCES:				
Family Planning: A Global Handbook for Providers http://whqlibdoc.who.int/publications/2011/9780978856373_eng.pdf				
Essential Medicines for Reproductive Health: Guiding Principles for Their Inclusion on National Medicines Lists http://whqlibdoc.who.int/hq/2006/a91388.pdf				
Antenatal care services				
SERVICE AVAILABILITY				
% of facilities offering:				
	Antenatal care services	S8		
	Iron supplementation	S8_01		
	Folic acid supplementation	S8_02		

3. Indicators index

Domain	Tracer indicator	ID	Definition	Data collection notes
	Intermittent Preventive Treatment in pregnancy (IPTp) for malaria	S8_03		
	Tetanus toxoid vaccination	S8_04		
	Monitoring for hypertensive disorder of pregnancy	S8_05		
SERVICE READINESS IN7				
% of facilities providing antenatal care services with tracer items on the day of the assessment				
Staff and guidelines DO9	Guidelines on ANC	T4	Country adapt to which guidelines are required/accepted	Guidelines observed in service area.
	ANC check-lists and/or job-aids	T63		
	Staff trained in ANC	T5	At least one staff member providing the service trained in some aspect of ANC in the last two years	Interview response from in-charge of service area day of survey.
Equipment DO10	Blood pressure apparatus	E5	Digital BP machine or manual sphygmomanometer with stethoscope	Observed availability, reported functionality, and in service area or adjacent area.
Diagnostics DO11	Haemoglobin	D1	This may include colorimeter, haemoglobinometer, hemocue, or any other country specific method.	Able to conduct the test on-site (in the facility) and functioning equipment and reagents needed to conduct the test are observed on-site on the day of the survey. In the area where ANC tests are conducted or anywhere in the facility where laboratory testing is routinely conducted.
	Urine dipstick- protein	D4	This includes urine protein dipsticks.	
Medicines and commodities DO12	Iron tablets	M18	Iron and folic acid may be combined	Observed in service area OR where routinely stored; in stock with at least one valid.
	Folic acid tablets	M19		
	Tetanus toxoid vaccine	M20		
	*IPT drug	M39	Sulfadoxine + Pyrimethamine(SP)	
	*ITNs	M40	ITNs or vouchers available for distribution	
REFERENCES:				
Pregnancy, childbirth, postpartum and newborn care: a guide for essential practice http://whqlibdoc.who.int/publications/2006/924159084X_eng.pdf *Only in high prevalence areas				
Basic obstetric and newborn care				
SERVICE AVAILABILITY				
% of facilities offering:				
	Delivery services	S9		
OBSTETRIC SIGNAL FUNCTIONS				
	Parenteral administration of antibiotics for mothers	S9_01		

Domain	Tracer indicator	ID	Definition	Data collection notes
	Parenteral administration of oxytocic drug	S9_02		
	Parenteral administration of anticonvulsants	S9_03		
	Assisted vaginal delivery	S9_04		
	Manual removal of placenta	S9_05		
	Manual removal of retained products	S9_06		
	Mean availability of obstetric signal functions offered	S9_18		
NEWBORN SIGNAL FUNCTIONS				
	Antibiotics for preterm or prolonged PROM to prevent infection	S9_09		
	Neonatal resuscitation with bag and mask	S9_07		
	Corticosteroids in preterm labour	S9_10		
	KMC (Kangaroo mother care) for premature/very small babies	S9_11		
	Injectable antibiotics for neonatal sepsis	S9_12		
	Mean availability of newborn signal functions offered	S9_19		
ROUTINE PRACTICES (perinatal)				
	Administration of oxytocin for the prevention of post-partum haemorrhage	S9_13	Routine administration of oxytocin injection immediately after birth to all women for the prevention of post-partum haemorrhage	
	Monitoring and management of labour using partograph	S9_14		
	Immediate and exclusive breastfeeding	S9_15		
	Hygienic cord care	S9_16	Cut with sterile item and apply disinfectant to tip and stump, and no application of other substances	
	Thermal protection (drying baby immediately after birth and wrapping)	S9_17		
SERVICE READINESS IN8				
% of facilities providing facility-based delivery services with tracer items on the day of the assessment				
Staff and guidelines DO13	Guidelines for essential childbirth care	T6	Country adapt to which guidelines are required/accepted	Guidelines observed in service area.
	Check-lists and/or job-aids for essential childbirth care	T64		

3. Indicators index

Domain	Tracer indicator	ID	Definition	Data collection notes
	Guidelines for essential newborn care	T66		
	Staff trained in essential childbirth care	T7	At least one staff member providing the service trained in essential childbirth care in the last two years (other than training on newborn resuscitation using bag and mask)	Interview response from in-charge of service area day of survey.
	Staff trained in newborn resuscitation	T65	At least one staff member providing the service trained in newborn resuscitation using bag and mask in the last two years	
Equipment DO14	Emergency transport	I7	Facility has a functioning vehicle with fuel that is routinely available that can be used for emergency transportation or access to a vehicle in near proximity that can be used for emergency transportation	Reported availability and functionality.
	Sterilization equipment	I8	This is usually either a dry heat sterilizer or an autoclave. If the machine is not electric, then make sure that the heat source is available and (If relevant) functioning (e.g., wood or gas is present for the autoclave).	Observed availability anywhere in the facility reported functionality.
	Examination light	E7	Functioning spotlight source that can be used for patient examinations. A functional flashlight is accepted.	Observed availability, reported functionality, and in service area or adjacent area.
	Delivery pack	E8	Delivery pack OR cord clamp, episiotomy scissors, scissors/blade to cut cord, suture material with needle, AND needle holder	
	Suction apparatus (mucus extractor)	E9	Suction bulb (single use or sterilizable multi-use) or electric suction pump AND suction catheter for suctioning newborn	
	Manual vacuum extractor	E10		
	Vacuum aspirator or D&C kit (with speculum)	E11		
	Neonatal bag and mask	E12	Newborn bag and mask (size 1 for term babies AND size 0 for pre-term babies)	
	Delivery bed	E37		
	Partograph	E13	Blank partographs	
	Gloves	I20	Sterile latex or equivalent	
	Infant weighting scale	E51		Observed in service area.

Domain	Tracer indicator	ID	Definition	Data collection notes
	Blood pressure apparatus	E52	Digital BP machine or manual sphygmomanometer with stethoscope	
	Soap and running water OR alcohol based hand rub	I25		
Medicines and commodities DO15	Antibiotic eye ointment for newborn	M21		Observed in service area OR where routinely stored; in stock with at least one valid.
	Injectable uterotonic	M22	Oxytocin	
	Injectable antibiotic	M23	Broad-spectrum injectable antibiotic treatment of sepsis in mother and newborn- Specific combination- Ampicillin + gentamicin OR penicillin + gentamicin OR ceftriaxone OR as per country specific formulation	
	Magnesium sulphate (injectable)	M24	Magnesium sulphate 50% injection or alternative strength	
	Skin disinfectant	M26		
	Intravenous solution with infusion set	M27	Normal saline or Ringers Lactate, and Dextrose 5%	
REFERENCES:				
Guidelines for Monitoring the Availability and Use of Obstetric Services http://www.childinfo.org/files/maternal_mortality_finalgui.pdf				
Monitoring Emergency Obstetric Care: a handbook http://whqlibdoc.who.int/publications/2009/9789241547734_eng.pdf				
Comprehensive obstetric care				
SERVICE AVAILABILITY				
% of HOSPITALS and LOWER-LEVEL FACILITIES offering:				
	Caesarean section	S26_01		
	Blood transfusion	S26_02		
	Comprehensive emergency obstetric care	S26_03	Offers all 7 obstetric signal functions + caesarean section and blood transfusion	
SERVICE READINESS IN23				
% of HOSPITALS AND FACILITIES PROVIDING CAESAREAN SECTION with tracer items on the day of the assessment				
Staff and guidelines DO62	Guidelines for CEmOC	T51	Country adapt to which guidelines are required/accepted	Guidelines observed in service area.
	Staff trained in CEmOC	T52	At least one staff member providing the service trained in CEmOC within the past 2 years	Interview response from in-charge of service area day of survey.
	Staff trained in surgery	T53	Health worker who can perform caesarean section present in the facility or on-call 24 hours a day	

3. Indicators index

Domain	Tracer indicator	ID	Definition	Data collection notes
	Staff trained in anaesthesia	T54	Anaesthetist present in the facility or on-call 24 hours a day	
Equipment DO63	Anaesthesia equipment	E29	<ul style="list-style-type: none"> Anaesthesia machine to deliver aesthetic gases and oxygen Tubings and connectors to connect to the endotracheal tube Resuscitator bag and mask-adult and paediatric Intubation set adult and paediatric: (Oropharyngeal airway, endotracheal tubes, laryngoscope, Magill's forceps, stylet) 	Observed availability, reported functionality, and in service area.
	Resuscitation table	E50	Resuscitation table with heat source for newborn resuscitation	
	Incubator	E30		
	Oxygen	E45	Oxygen cylinders OR concentrators OR central oxygen supply AND (functioning flowmeter for oxygen therapy AND oxygen delivery apparatus (key connecting tubes and mask/nasal prongs) AND oxygen available at all times during the 3 past months	
	Spinal needle	E32		
Diagnostics DO64	Blood typing	D21	ABO blood group test, Rhesus blood group test, and centrifuge	Able to conduct the test on-site (in the facility) and functioning equipment and reagents needed to conduct the test are observed on-site on the day of the survey. This may be in a laboratory or in the service area where the test is conducted.
	Cross match testing	D22	Cross match (should use methods that demonstrate ABO incompatibility and incompatibility due to other clinically significant antibodies and should include an indirect anti-globulin test or a test of equivalent sensitivity), centrifuge, 37°C incubator, and grouping sera	
Medicines and commodities DO65	Blood supply sufficiency	M66	No interruption of blood availability in last three months	Reported availability.
	Blood supply safety	M67	Blood obtained ONLY from national or regional blood bank, OR blood obtained from other sources but screened for HIV, Syphilis, Hepatitis B, and Hepatitis C.	
	Lidocaine 5%	M89		Observed in service area; in

Domain	Tracer indicator	ID	Definition	Data collection notes
	Epinephrine (injectable)	M62		stock with at least one valid.
	Halothane (inhalation)	M87		
	Atropine (injectable)	M86		
	Thiopental (powder)	M84		
	Suxamethonium bromide (powder)	M85		
	Ketamine (injectable)	M64		
REFERENCES:				
Guide to Infrastructure and Supplies at Various Levels of Health Care Facilities: Emergency and Essential Surgical and Anaesthesia Procedures http://www.who.int/surgery/publications/GuideAnestheticInfrastFormatted06.pdf				
Guidelines for Monitoring the Availability and Use of Obstetric Services http://www.childinfo.org/files/maternal_mortality_finalgui.pdf				
Monitoring Emergency Obstetric Care: a handbook http://whqlibdoc.who.int/publications/2009/9789241547734_eng.pdf				
Immunization				
SERVICE AVAILABILITY				
% of facilities offering:				
	Routine immunization services	S10		
	Birth doses	S10_07	As per national schedule. Immunization service delivery provided at the facility, as outreach or both	
	Infant vaccines	S10_08	As per national schedule. Immunization service delivery provided at the facility, as outreach or both	
	Adolescent/adult vaccines	S10_09	As per national schedule. Immunization service delivery provided at the facility, as outreach or both	
Frequency routine child immunization	Frequency all child immunization services offered in the facility	S10_10A S10_10B S10_10C S10_10D S10_10E	Routine child immunization services are offered in the facility on daily, weekly, monthly, quarterly or other basis.	
	Frequency all child immunization services offered as outreach	S10_11A S10_11B S10_11C S10_11D S10_11E	Routine child immunization services are offered as outreach on a daily, weekly, monthly, quarterly or other basis.	
SERVICE READINESS IN9				
% of facilities providing routine immunization services with tracer items on the day of the assessment				
Staff and guidelines DO16	Guidelines for child immunization	T8	Country adapt to which guidelines are required/accepted for routine child immunization	Guidelines observed in service area.

3. Indicators index

Domain	Tracer indicator	ID	Definition	Data collection notes
	Staff trained in child immunization	T9	At least one staff member providing the service trained in some aspect of immunization service delivery in the last two years by formal training	Interview response from in-charge of service area day of survey.
Equipment DO17	Cold box/vaccine carrier with ice packs	E14		Observed in service area or adjacent site.
	Refrigerator	E15	Functioning refrigerator with sufficient storage capacity to accommodate all needed vaccines.	Observed availability, and functionality, and in service area or adjacent site.
	Sharps container/safety box	I21	A puncture-resistant, rigid, leak-resistant container designed to hold used sharps safely during collection, disposal and destruction. Sharps containers should be made of plastic, metal, or cardboard and have a lid that can be closed. Sharps containers should be fitted with a sharps aperture, capable of receiving syringes and needle assemblies of all standard sizes, together with other sharps. Boxes must be clearly marked with the international bio-hazard warning not less than 50mm diameter, printed in black or red on each of the front and back faces of the box.	Observed in service area
	Auto-disable syringes	I22		
	Temperature monitoring device in refrigerator	E39	Thermometer or recorder/logger	Observed availability, and functionality, and in service area or adjacent site.
	Adequate refrigerator temperature	E49	The temperature is monitored twice daily and has not been out of the range 2 to 8 °C inclusive in the last 30 days /record verification)	Observed in records in the services area OR where routinely stored
	Immunization cards	E41	In stock	Observed in service area OR where routinely stored.
	Immunization tally sheets	E42	In stock	Observed in service area OR where routinely stored.
Medicines and commodities DO18	Measles vaccine	M28		Observed in service area OR where routinely stored; in stock with at least one valid (not expired and VVM not turned) on day of assessment
	DPT-Hib+HepB vaccine	M29	Country specific vaccine combination	
	Oral polio vaccine	M30		
	BCG vaccine	M31		
	Pneumococcal vaccine	M93	If part of the national schedule	
	Rotavirus vaccine	M92	If part of the national schedule	
	*Vaccines to be specified as per the national schedule			

Domain	Tracer indicator	ID	Definition	Data collection notes
	IPV (Inactivated Poliovirus Vaccine)	M142	If part of the national schedule	
	HPV (Human Papillomavirus)	M143	If part of the national schedule	
AUXILIARY INDICATORS				
% of facilities providing routine immunization services with:				
Stock-outs (in past 3 months) *Vaccines to be specified as per the national schedule	Measles vaccine	M28_A		Check vaccine stock records. Inability to give vaccine anytime in past three months due to unavailable stock
	DPT-Hib+HepB vaccine	M29_A	Country specific vaccine combination	
	Oral polio vaccine	M30_A		
	BCG vaccine	M31_A		
	Pneumococcal vaccine	M93_A	If part of the national schedule	
	Rotavirus vaccine	M92_A	If part of the national schedule	
	IPV	M142_A		
	HPV	M143_A		
Cold Chain	Cold chain minimum requirements	E47	The minimum adequate cold chain requirements are available (there is a functional refrigerator, there is a temperature monitoring device, and the temperature has been maintained between 2 and 8 C checked for the last 30 days.	
	Energy source and power supply for vaccine refrigerator	E40	Energy provided to the vaccine refrigerator through any source that supplies power to the refrigerator 24hours a day and for 7 days in the week	
	Types of power used for cold chain refrigeration	E40_A E40_B E40_C E40_D E40_E E40_F	Grid or generator Solar Gas Kerosene Mixed Other	
REFERENCES:				
Immunization Essentials: A Practical Field Guide http://www.who.int/pmnch/topics/tools/20081021_usaidimmunization/en/index.htm				
Child health services: preventative and curative care				
SERVICE AVAILABILITY				
% of facilities offering:				
	Preventive and curative care for children under 5	S11		
	Malnutrition diagnosis and treatment	S11_01		
	Vitamin A supplementation	S11_02		
	Iron supplementation	S11_03		

3. Indicators index

Domain	Tracer indicator	ID	Definition	Data collection notes
	ORS and zinc supplementation	S11_04		
	Growth monitoring	S11_05		
	Treatment of pneumonia	S11_06		
	Administration of amoxicillin for the treatment of pneumonia in children	S11_07		
	Treatment of malaria in children	S11_08		
SERVICE READINESS IN10				
% of facilities providing child curative care services with tracer items on the day of the assessment				
Staff and guidelines DO19	Guidelines for IMCI	T10	Country adapt to which guidelines are required/accepted	Guidelines observed in service area.
	Guidelines for growth monitoring	T11	Country adapt to which guidelines are required/accepted	
	Staff trained in IMCI	T12	At least one staff member providing the service trained in some aspect of IMCI in the last two years	Interview response from in-charge of service area day of survey.
	Staff trained in growth monitoring	T13	At least one staff member providing the service trained in some aspect of growth monitoring in the last two years	
Equipment DO20	Child and infant scale	E38	Weight gradations at minimum 250 grams and 100 grams	Observed availability, reported functionality, and in service area or adjacent area.
	Length/height measuring equipment	E16	Wooden boards or metal beams with a mounted rule that permits measurement of crown-to-heel length (infants under 2 y, lying down) or height (older children, standing up) in centimetres. Gradations at 1 or 5 mm.	
	Thermometer	E3		
	Stethoscope	E4		
	Growth chart	E17		Observed in service area or adjacent area.
Diagnostics DO21	Haemoglobin (Hb)	D1	This may include colorimeter, haemoglobinometer, hemocue, or any other country specific method.	Able to conduct the test on-site (in the facility) and functioning equipment and reagents needed to conduct the test are observed on-site on the
	Test parasite in stool (general microscopy)	D10	Microscope, slides, covers	

Domain	Tracer indicator	ID	Definition	Data collection notes
	Malaria diagnostic capacity	D3	Malaria rapid test or smear (microscope, slides, and stain)	day of the survey. In area where tests for child health are carried out or anywhere in the facility where laboratory testing is routinely conducted.
Medicines and commodities DO22	Oral rehydration solution packet	M32	Any child dosage or formulation.	Observed in service area OR where routinely stored; in stock with at least one valid.
	Amoxicillin (dispersible tablet 250 or 500 mg OR syrup/suspension)	M33		
	Co-trimoxazole syrup/suspension	M7		
	Paracetamol syrup/suspension	M12		
	Vitamin A capsules	M34		
	Me-/albendazole cap/tab	M35		
	Zinc sulphate tablets, dispersible tablets or syrup	M36		
REFERENCES:				
Handbook: IMCI integrated management of childhood illness http://whqlibdoc.who.int/publications/2005/9241546441.pdf				
Training Course on Child Growth Assessment http://www.who.int/childgrowth/training/en/				
Adolescent health ‡				
SERVICE AVAILABILITY				
% of facilities offering:				
	Adolescent health services	S12		
	HIV testing and counselling services to adolescents	S12_01		
	Family planning services to adolescents	S12_02	Facility provides condoms and at least one other method of family planning to adolescents	
	Provision of combined oral contraceptive pills to adolescents	S12_03		
	Provision of male condoms to adolescents	S12_04		
	Provision of emergency contraceptive pills to adolescents	S12_06		
	Provision of intrauterine contraceptive device (IUCD) to adolescents	S12_07		
	Provision of ART to adolescents	S12_09		
SERVICE READINESS IN11				
% of facilities providing adolescent health services with tracer items on the day of the assessment				

3. Indicators index

Domain	Tracer indicator	ID	Definition	Data collection notes
Staff and guidelines DO23	Guidelines for service provision to adolescents	T14	Country adapt to which standards/guidelines are required/accepted.	Guidelines observed in service area.
	Staff trained in provision of adolescent health services	T15	At least one staff providing services for adolescents trained in adolescent health in the last two years.	Interview response from in-charge of service area day of survey.
	Staff providing family planning services trained in adolescent sexual and reproductive health	T16	At least one staff providing family planning services trained in adolescent sexual and reproductive health in the last two years.	
	Staff providing HIV testing and counselling services trained in HIV/AIDS prevention, care, and management for adolescents	T17	At least one staff providing HIV testing and counselling services trained in HIV prevention, care, and management in the last two years.	
Diagnostics DO77	HIV diagnostic capacity	D6	RDT kit or ELISA test with ELISA washer, ELISA reader, incubator, specific assay kit	
Medicines and commodities DO24	Condoms	M17	Male	Observed in service area OR where routinely stored; in stock with at least one valid.
REFERENCES:				
Quality assessment guidebook: a guide to assessing health services for adolescent clients http://whqlibdoc.who.int/publications/2009/9789241598859_eng.pdf				
Adolescent job aid: a handy desk reference tool for primary level health workers http://whqlibdoc.who.int/publications/2010/9789241599962_eng.pdf				
Orientation programme on adolescent health for health-care providers http://www.who.int/child_adolescent_health/documents/9241591269/en/index.html				
Adolescent friendly health services: An agenda for change http://whqlibdoc.who.int/hq/2003/WHO_FCH_CAH_02.14.pdf				
Protecting young people from HIV and AIDS: the role of health services http://whqlibdoc.who.int/publications/2004/9241592478.pdf				
Priority medicines for mothers DO70				
% of facilities offering delivery services that have:				
	Oxytocin injectable	M22		Observed in pharmacy or in area where they are routinely stored, at least one with valid expiration date.
	Sodium chloride injectable solution	M69		
	Calcium gluconate injectable	M70		

Domain	Tracer indicator	ID	Definition	Data collection notes
	Magnesium sulphate injectable	M24	Magnesium sulphate 50% injection or alternative strength	
	Ampicillin powder for injection	M71		
	Gentamicin injectable	M72		
	Metronidazole injectable	M73		
	Misoprostol cap/tab	M74		
	Azithromycin cap/tab or oral liquid	M75		
	Cefixime cap/tab	M76		
	Benzathine benzylpenicillin powder for injection	M77		
	Betamethasone or Dexamethasone injectable	M78		
	Nifedipine cap/tab	M79	Immediate release 10mg capsule formulation	
	Hydralazine injection	M106		
	Methyldopa tablet	M107		

REFERENCES:

Priority medicines for mothers and children 2011
<http://www.who.int/medicines/publications/A4prioritymedicines.pdf>

Priority medicines for children DO71

% of facilities providing child health curative care services that have:

	Amoxicillin (dispersible tablet 250 or 500 mg OR syrup/suspension)	M33	Any child dosage or formulation.	Observed in pharmacy or in area where they are routinely stored, at least one with valid expiration date.
	Ampicillin powder for injection	M71		
	Ceftriaxone powder for injection	M5		
	Gentamicin injectable	M141		
	Procaine benzylpenicillin powder for injection	M80		
	Oral Rehydration Salts (ORS) sachets	M32		
	Zinc sulphate tablets, dispersible tablets or syrup	M36		
	Artemisinin combination therapy (ACT)	M81		
	Artesunate rectal or injectable forms	M82		
	Vitamin A capsules	M34		

3. Indicators index

Domain	Tracer indicator	ID	Definition	Data collection notes
	Morphine granule, injectable or cap/tab	M83		
	Paracetamol syrup/suspension	M12		
REFERENCES:				
Priority medicines for mothers and children 2011 http://www.who.int/medicines/publications/A4prioritymedicines.pdf				
Life-saving commodities for women and children				
% of facilities that have:				
COMMODITIES IN STOCK				
Family planning	Female condoms	M99		Observed available in pharmacy or where they are routinely stored, at least one with valid expiration date;
	Implants	M108	E.g. levonorgestrel or etonogestrel implant	
	Emergency contraceptives	M109	E.g. levonorgestrel, ulipristal acetate, or mifepristone 10-25 mg tablet	
Maternal health	Oxytocin	M22	Injectable	
	Misoprostol	M74	200 µg tablets	
	Magnesium sulphate	M24	Injectable (50% or alternative strength)	
Newborn health	Injectable antibiotics	M110	Procaine benzylpenicillin (PBP) or gentamicin and ceftriaxone	
	Antenatal corticosteroids	M78	Betamethasone or dexamethasone	
	Skin disinfectant	M26		
	Resuscitation equipment	E43	Newborn bag and mask (size 1 for term babies AND size 0 for pre-term babies), suction device (suction catheter and electric suction bulb, or mucus aspirator bulb – single use or multi-use sterilizable)	
Child health	Amoxicillin	M33	250 mg or 500 mg dispersible tablets or syrup/suspension	
	Oral rehydration salts	M32		
	Zinc sulphate	M36	Tablets, dispersible tablets or syrup	
STOCK OUTS				
% of facilities that had a stock out in the previous 3 months				
	Female condoms	M99_A		
	Implants	M108_A	E.g. levonorgestrel, etonogestrel (or other as per country official standard)	
	Emergency contraceptive	M109_A	Levonorgestrel tablet, ulipristal acetate tablet, mifepristone tablet 10-25 mg (or other as per country official standard)	

Domain	Tracer indicator	ID	Definition	Data collection notes
	Oxytocin injection	M22_A		
	Misoprostol 200µg tablets	M74_A		
	Magnesium sulphate injection	M24_A	Magnesium sulphate 50% injection or alternative strength	
	Gentamicin injection	M72_A		
	Procaine benzylpenicillin injection	M80_A		
	Ceftriaxone injection	M5_A		
	Betamethasone injection	M78_A		
	Dexamethasone injection	M78_B		
	Amoxicillin (dispersible tablet 250 or 500 mg OR syrup/suspension)	M33_A		
	Oral rehydration salts (ORS)	M32_A		
	Zinc sulphate tablets	M36_A		
	Zinc sulphate syrup or dispersible tablets	M36_B		

REFERENCES:

UN Commission on Life-Saving Commodities
<http://www.everywomaneverychild.org/resources/un-commission-on-life-saving-commodities/life-saving-commodities>

NOTES :**Malaria :**

* Only for high prevalence regions.

Adolescent health :

‡ This is an optional indicator. In countries with adolescent health programs, definitions need to be further refined to reflect country-specific context and content of the programs. Indicators may not be comparable across countries.

Staff training :

† During a pretest of the core SARA questionnaire, it was suggested that indicators regarding trained staff may be subject to data quality issues given the current methodology i.e., the phrasing of the questionnaire, and the respondent of the questions on trained staff. Results should be interpreted with caution. Alternate questions are being planned to be tested, and the definition will be updated accordingly.

3. Indicators index

TABLE 3.4.2: TRACER INDICATORS FOR COMMUNICABLE DISEASE SERVICE AVAILABILITY AND READINESS

Domain	Tracer indicator	ID	Definition	Data collection notes
Malaria				
SERVICE AVAILABILITY				
% of facilities offering:				
	Malaria services	S15		
	Malaria diagnosis	S15_01		
	Malaria diagnostic testing	S15_02	Facility uses laboratory diagnostic test (RDT or microscopy) to diagnose malaria	
	Malaria diagnosis by clinical symptoms	S15_05		
	Malaria diagnosis by RDT	S15_06		
	Malaria diagnosis by microscopy	S15_07		
	Malaria treatment	S15_03		
	IPT	S15_04	Only for high prevalence areas	
SERVICE READINESS IN12				
% of facilities providing malaria services with tracer items on the day of the assessment				
Staff and guidelines DO26	Guidelines for diagnosis and treatment of malaria	T18	Country adapt to which guidelines are required/accepted	Guidelines observed in service area.
	*Guidelines for IPT	T19	Country adapt to which guidelines are required/accepted	
	Staff trained in malaria diagnosis and treatment	T20	At least one staff member providing the service trained in some aspect of malaria diagnosis and treatment in the last two years.	Interview response from in-charge of service area day of survey.
	*Staff trained in IPT	T21	At least one staff member providing the service trained in some aspect of IPT in the last two years.	
Diagnostics DO27	Malaria diagnostic capacity	D3	Malaria rapid test or smear (microscope, slides, stain, and accredited/certified microscopist)	Able to conduct the test on-site (in the facility) and functioning equipment and reagents needed to conduct the test are observed on-site on the day of the survey. In area where tests for malaria are carried out or anywhere in the facility where laboratory testing is routinely conducted.
Medicines and commodities DO28	First-line antimalarial in stock	M37	Artemisinin-based Combination Therapy (ACT) or other country specific	Observed in service area OR where routinely stored; in stock with at least one valid.
	Paracetamol cap/tab	M38		
	*IPT drug	M39	Sulfadoxine + Pyrimethamine (SP)	

Domain	Tracer indicator	ID	Definition	Data collection notes
	*ITN	M40	ITNs or vouchers available for distribution	
AUXILIARY INDICATORS				
% of facilities providing malaria services with:				
Staff	Accredited/certified microscopist	T59		
Diagnostics	Capacity to conduct malaria microscopy	D35	Microscope, slides, stain, and accredited/certified microscopist	
	Capacity to conduct RDT	D34	Staff trained in malaria diagnosis with RDTs, and RDTs available (observed and non-expired) at the facility on the day of the assessment	
	Availability of RDT	D36		Observed in service area OR where routinely stored; in stock with at least one valid.
Stock outs	RDT stock out	D36_A	Facility had a stock out of malaria RDTs in the past four weeks	
	Length of RDT stock out	D36_B		
	ACT stock out	M37_A	Facility had a stock out of ACT in the past four weeks	
	Length of ACT stock out	M37_B		
Medicines	Artemisinin monotherapy (oral)	M136	Facilities are not expected to have this medicine	
	Artesunate rectal or injection dosage forms	M82		
	Chloroquine (oral)	M138	Facilities are not expected to have this medicine	
	Quinine (oral)	M139		
	Primaquine (oral)	M140		
REFERENCES:				
World Malaria Report http://www.who.int/malaria/world_malaria_report_2010/worldmaliareport2010.pdf				
Guidelines for the treatment of malaria, second edition http://whqlibdoc.who.int/publications/2010/9789241547925_eng.pdf				
Tuberculosis				
SERVICE AVAILABILITY				
% of facilities offering:				
	TB services	S16		
	TB diagnosis	S16_01		
	TB diagnostic testing	S16_02	Facility uses laboratory diagnostic test (sputum smear microscopy, culture, rapid test) or chest X-ray to diagnose TB	

3. Indicators index

Domain	Tracer indicator	ID	Definition	Data collection notes
	TB diagnosis by clinical symptoms	S16_03		
	TB diagnosis by sputum smear microscopy examination	S16_04		
	TB diagnosis by culture	S16_05		
	TB diagnosis by rapid test (GeneXpert MTB/RIF)	S16_06		
	TB diagnosis by chest X-ray	S16_07		
	Prescription of drugs to TB patients	S16_08		
	Provision of drugs to TB patients	S16_09		
	Management and treatment follow-up for TB patients	S16_10		
SERVICE READINESS IN13				
% of facilities providing tuberculosis services with tracer items on the day of the assessment				
Staff and guidelines DO29	Guidelines for diagnosis and treatment of TB	T22	Country adapt to which guidelines are required/accepted	Guidelines observed in service area.
	Guidelines for management of HIV & TB co-infection	T23	Country adapt to which guidelines are required/accepted	
	Guidelines related to MDR-TB treatment (or identification of need for referral)	T24	Country adapt to which guidelines are required/accepted	
	Guidelines for TB infection control	T25	Country adapt to which guidelines are required/accepted	
	Staff trained in TB diagnosis and treatment	T26	At least one staff member providing the service trained in TB diagnosis and treatment in the last two years.	Interview response from in-charge of service area day of survey.
	Staff trained in management of HIV & TB co-infection	T27	At least one staff member providing the service trained in HIV & TB co-infection in the last two years.	
	Staff trained in client MDR-TB treatment or identification of need for referral	T28	At least one staff member providing the service trained in MDR-TB in the last two years.	
	Staff trained in TB Infection Control	T29	At least one staff member is a referral person in charge of TB infection control and has received training in the last two years.	
Diagnostics DO30	TB microscopy	D8	Light or fluorescent microscope, slides, and ZN stain OR fluorescent microscope, slides, and auramine-rhodamine stain	Able to conduct the test off-site OR ability to conduct the test on-site (in the facility) and functioning equipment and reagents needed to conduct the test are observed on-site on the day of the survey.
	HIV diagnostic capacity	D6	RDT kit or ELISA test with ELISA washer, ELISA reader, incubator, specific assay kit	

Domain	Tracer indicator	ID	Definition	Data collection notes
	System for diagnosis of HIV among TB clients	D13	Record or register showing TB clients who have been tested for HIV	Observed availability and in service area or adjacent area.
Medicines and commodities D031	First-line TB medications	M41	Isoniazid, Pyrazinamide, Rifampicin, and Ethambutol, or combinations to meet first-line TB treatment	Observed in service area OR where routinely stored; in stock with at least one valid.
REFERENCES:				
Treatment of Tuberculosis: Guidelines for national programmes, 4th edition http://whqlibdoc.who.int/publications/2010/9789241547833_eng.pdf				
The Global Plan to Stop TB 2011-2015: Transforming the fight towards elimination of tuberculosis http://www.stoptb.org/assets/documents/global/plan/TB_GlobalPlanToStopTB2011-2015.pdf				
HIV: counselling and testing				
SERVICE AVAILABILITY				
% of facilities offering:				
	HIV counselling and testing	S17		
SERVICE READINESS IN14				
% of facilities providing HIV counselling and testing services with tracer items on the day of the assessment				
Staff and guidelines D032	Guidelines on HIV counselling and testing	T30	Country adapt to which guidelines are required/accepted	Guidelines observed in service area.
	Staff trained in HIV counselling and testing	T31	At least one staff member providing the service trained in some aspect of VCT in the last two years.	Interview response from in-charge of service area day of survey.
Equipment D033	Visual and auditory privacy	I23	Private room or screened off area available in HIV/AIDS counselling area, a sufficient distance from sites where providers/clients routinely may be, so that a normal conversation could be held without being overheard, and without the client being observed.	Observed in service area.
Diagnostics D034	HIV diagnostic capacity	D6	RDT kit or ELISA test with ELISA washer, ELISA reader, incubator, specific assay kit	Able to conduct the test on-site (in the facility) and functioning equipment and reagents needed to conduct the test are observed on-site on the day of the survey. In area where tests for HIV are carried out or anywhere in the facility where laboratory testing is routinely conducted.
Medicines and commodities D035	Condoms	M91	Male	Observed in service area or immediate vicinity; in stock with at least one valid.

3. Indicators index

Domain	Tracer indicator	ID	Definition	Data collection notes
REFERENCES:				
A Handbook for Improving HIV Testing and Counselling Services http://whqlibdoc.who.int/publications/2010/9789241500463_eng.pdf				
HIV/AIDS care and support services				
SERVICE AVAILABILITY				
% of facilities offering:				
	HIV/AIDS care and support services	S18		
	Treatment of opportunistic infections	S18_01		
	Provision of palliative care	S18_02		
	Intravenous treatment of fungal infections	S18_03		
	Treatment for Kaposi's sarcoma	S18_04		
	Nutritional rehabilitation services	S18_05		
	Prescribe/provide fortified protein supplementation	S18_06		
	Care for paediatric HIV/AIDS patients	S18_07		
	Provide/prescribe preventative treatment for TB	S18_08		
	Primary preventative treatment for opportunistic infections	S18_09		
	Provide/prescribe micronutrient supplementation	S18_10		
	Family planning counselling	S18_11		
	Provide condoms	S18_12		
SERVICE READINESS IN15				
% of facilities providing HIV/AIDS care and support services with tracer items on the day of the assessment				
Staff and guidelines D036	Guidelines for clinical management of HIV & AIDS	T32	Country adapt to which guidelines are required/accepted	Guidelines observed in service area.
	Guidelines for palliative care	T33	Country adapt to which guidelines are required/accepted	
	Staff trained in clinical management of HIV & AIDS	T34	At least one staff member providing the service trained in some aspect of treatment of opportunistic infections in the last two years	Interview response from in-charge of service area day of survey.
Diagnostics D037	System for diagnosis of TB among HIV + clients	D14	Record or register showing HIV+ clients who have been tested for TB	Observed availability and in service area or adjacent area.
Medicines and commodities	Intravenous solution with infusion set	M27	Normal saline or Ringers Lactate, and Dextrose 5%	Observed in service area OR where routinely stored;

Domain	Tracer indicator	ID	Definition	Data collection notes
D038	IV treatment fungal infections	M42	Country-specific treatment of choice	in stock with at least one valid.
	Co-trimoxazole cap/tab	M43	Oral adult formulation	
	First-line TB treatment medications	M41	Isoniazid, Pyrazinamide, Rifampicin, and Ethambutol, or combinations to meet first-line TB treatment	
	Palliative care pain management	M44	Country-specific treatment of choice for high level oral pain medication (e.g., codeine, demerol, diclofenac, ibuprofen, paracetamol, morphine)	
	Condoms	M17	Male	
REFERENCES:				
Essential Prevention and Care Interventions for Adults and Adolescents Living with HIV in Resource-Limited Settings http://www.who.int/hiv/pub/toolkits/Essential%20Prevention%20and%20Care%20interventions%20Jan%2008.pdf				
HIV/AIDS: Antiretroviral prescription and client management				
SERVICE AVAILABILITY				
% of facilities offering:				
	ARV prescription or ARV treatment follow-up services	S19		
	Antiretroviral prescription	S19_01		
	Treatment follow-up services for persons on ART	S19_02		
SERVICE READINESS IN16				
% of facilities providing antiretroviral prescription and client management services with tracer items on the day of the assessment				
Staff and guidelines DO39	Guidelines for antiretroviral therapy	T35	Country adapt to which guidelines are required/accepted	Guidelines observed in service area.
	Staff trained in ART prescription and management	T36	At least one staff member providing the service trained in some aspect of ART in the last two years	Interview response from in-charge of service area day of survey.
Diagnostics DO40	Full blood count	D15	Haematological counter, stains	Able to conduct the test off-site OR ability to conduct the test on-site (in the facility) and functioning equipment and reagents needed to conduct the test are observed on-site on the day of the survey. In area where tests for HIV are carried out or anywhere in the facility where laboratory testing is routinely conducted.
	CD4 or Viral load	D16	CD4:CD4 counter and specific assay kit	
		D17	VL: Assay specific automated system, centrifuge, vortex mixer, pipettes	
	Renal function test (serum creatinine testing or other)	D18	Specific assay kit, centrifuge, biochemistry analyzer	
	Liver function test (ALT or other)	D19	Specific assay kit, centrifuge, biochemistry analyzer	
Medicines and commodities DO41	Three first-line antiretrovirals	M45	Country-specific first line treatment regimen	Observed in service area OR where routinely stored; in stock with at least one valid.

3. Indicators index

Domain	Tracer indicator	ID	Definition	Data collection notes
REFERENCES:				
Antiretroviral Therapy for HIV Infection in Adults and Adolescent http://www.who.int/hiv/pub/guidelines/artadultguidelines.pdf				
HIV/AIDS: Preventing mother-to-child transmission (PMTCT)				
SERVICE AVAILABILITY				
% of facilities offering:				
	Preventing mother-to-child transmission (PMTCT) services	S20		
	Counselling and testing for HIV+ pregnant women	S20_01		
	Counselling and testing for infants born to HIV+ women	S20_02		
	ARV prophylaxis to HIV+ pregnant women	S20_03		
	ARV prophylaxis to infants born to HIV+ women	S20_04		
	Infant and young child feeding counselling	S20_05		
	Nutritional counselling for HIV+ women and their infants	S20_06		
	Family planning counselling to HIV+ women	S20_07		
SERVICE READINESS IN17				
% of facilities providing prevention of mother-to-child transmission (PMTCT) services with tracer items on the day of the assessment				
Staff and guidelines DO42	Guidelines for PMTCT	T37	Country adapt to which guidelines are required/accepted	Guidelines observed in service area.
	Guidelines for infant and young child feeding counselling	T38	Country adapt to which guidelines are required/accepted	
	Staff trained in PMTCT	T39	At least one staff member providing the service trained in some aspect of PMTCT in the last two years	Interview response from in-charge of service area day of survey.
	Staff trained in infant and young child feeding	T40	At least one staff member providing the service trained in some aspect of infant and young child feeding for HIV+ mothers in the last two years	

Domain	Tracer indicator	ID	Definition	Data collection notes
Equipment DO43	Visual and auditory privacy	I24	Private room or screened off area available in PMTCT area, a sufficient distance from sites where providers/clients routinely may be, so that a normal conversation could be held without being overheard, and without the client being observed.	Observed in service area.
Diagnostics DO44	HIV diagnostic capacity for adults	D6	RDT kit or ELISA test with ELISA washer, ELISA reader, incubator, specific assay kit	Able to conduct the test on-site (in the facility) and functioning equipment and reagents needed to conduct the test are observed on-site on the day of the survey. In area where tests for PMTCT are carried out or anywhere in the facility where laboratory testing is routinely conducted.
	Dried blood spot (DBS) filter paper for diagnosing HIV in newborns	D7	DBS filter paper (with valid expiration date)	
Medicines and commodities DO45	Zidovudine (AZT) syrup	M46		Observed in service area OR where routinely stored; in stock with at least one valid.
	Nevirapine (NVP) syrup	M47		
	Maternal ARV prophylaxis	M48	Option A: AZT, NVP, and 3TC Option B: AZT + 3TC + LPV or AZT + 3TC + ABC or AZT + 3TC + EFV or TDF + 3TC (or FTC) + EFV	
REFERENCES:				
Antiretroviral Drugs for Treating Pregnant Women and Preventing HIV Infections in Infant http://whqlibdoc.who.int/publications/2010/9789241599818_eng.pdf				
Pregnancy, childbirth, postpartum and newborn care: a guide for essential practice http://whqlibdoc.who.int/publications/2006/924159084X_eng.pdf				
Sexually transmitted infections (STI)				
SERVICE AVAILABILITY				
% of facilities offering:				
	STI services	S21		
	STI diagnosis	S21_01		
	STI treatment	S21_02		

3. Indicators index

Domain	Tracer indicator	ID	Definition	Data collection notes
SERVICE READINESS IN18				
% of facilities providing sexually transmitted infection services with tracer items on the day of the assessment				
Staff and guidelines DO46	Guidelines for diagnosis and treatment of STIs	T41	Country adapt to which guidelines are required/accepted	Guidelines observed in service area.
	Staff trained in STI diagnosis and treatment	T42	At least one staff providing the service trained in STI diagnosis and treatment in the last two years	Interview response from in-charge of service area day of survey.
Diagnostics DO47	Syphilis rapid test	D9	RDT kit	Able to conduct the test on-site (in the facility) and functioning equipment and reagents needed to conduct the test are observed on-site on the day of the survey. In area where tests for STIs are carried out or anywhere in the facility where laboratory testing is routinely conducted.
Medicines and commodities DO48	Condoms	M17	Male	Observed in service area OR where routinely stored; in stock with at least one valid.
	Metronidazole cap/tab	M49		
	Ciprofloxacin cap/tab	M6		
	Ceftriaxone injection	M5		
REFERENCES:				
Sexually transmitted and other reproductive tract infections: a guide to essential practice http://whqlibdoc.who.int/publications/2005/9241592656.pdf				

NOTES :

Malaria :

* Only for high prevalence regions.

Adolescent health :

‡ This is an optional indicator. In countries with adolescent health programs, definitions need to be further refined to reflect country-specific context and content of the programs. Indicators may not be comparable across countries.

Staff training :

† During a pretest of the core SARA questionnaire, it was suggested that indicators regarding trained staff may be subject to data quality issues given the current methodology i.e., the phrasing of the questionnaire, and the respondent of the questions on trained staff. Results should be interpreted with caution. Alternate questions are being planned to be tested, and the definition will be updated accordingly.

TABLE 3.4.3: TRACER INDICATORS FOR NON-COMMUNICABLE DISEASE SERVICE AVAILABILITY AND READINESS

Domain	Tracer indicator	ID	Definition	Data collection notes
Diabetes				
SERVICE AVAILABILITY				
% of facilities offering:				
	Diabetes diagnosis and/or management	S22		
SERVICE READINESS IN19				
% of facilities providing diabetes services with tracer items on the day of the assessment				
Staff and guidelines DO49	Guidelines for diabetes diagnosis and treatment	T43	Country adapt to which guidelines are required/accepted (can be NCD guidelines which contain information on diabetes)	Guidelines observed in service area.
	Staff trained in diabetes diagnosis and treatment	T44	At least one staff providing the service trained in diabetes diagnosis and treatment in the last two years (can be an NCD training including a section on diabetes)	Interview response from in-charge of service area day of survey.
Equipment DO50	Blood pressure apparatus	E5	Digital BP machine or manual sphygmomanometer with stethoscope	Observed availability, reported functionality, and in service area or adjacent area.
	Adult scale	E1		
	Measuring tape (height board/ stadiometre)	E18		
Diagnostics DO51	Blood glucose	D2		Able to conduct the test on-site (in the facility) and functioning equipment and reagents needed to conduct the test are observed on-site on the day of the survey. In area where tests for NCDs are carried out or anywhere in the facility where laboratory testing is routinely conducted.
	Urine dipstick- protein	D4		
	Urine dipstick- ketones	D20		
Medicines and commodities DO52	Metformin cap/tab	M50		Observed in service area OR where routinely stored; in stock with at least one valid.
	Glibenclamide cap/tab	M10		
	Insulin regular injectable	M51		
	Glucose 50% injectable	M52		
	Gliclazide tablet or glipizide tablet	M115		
REFERENCES:				
Definition, Diagnosis and Classification of Diabetes Mellitus http://whqlibdoc.who.int/hq/1999/who_ncd_ncs_99.2.pdf				
Definition and diagnosis of diabetes mellitus and intermediate hyperglycemia http://www.who.int/diabetes/publications/Definition%20and%20diagnosis%20of%20diabetes_new.pdf				

3. Indicators index

Domain	Tracer indicator	ID	Definition	Data collection notes
Cardiovascular disease				
SERVICE AVAILABILITY				
% of facilities offering:				
	Cardiovascular disease diagnosis and/or management	S23		
SERVICE READINESS IN20				
% of facilities providing cardiovascular disease services with tracer items on the day of the assessment				
Staff and guidelines DO53	Guidelines for diagnosis and treatment of chronic cardiovascular conditions	T45	Country adapt to which guidelines are required/accepted (can be NCD guidelines which contain information on CVD)	Guidelines observed in service area.
	Staff trained in diagnosis and management of chronic cardiovascular conditions	T46	At least one staff providing the service trained in diagnosis and management of chronic cardiovascular conditions in the last two years (can be an NCD training including a section on CVD).	Interview response from in-charge of service area day of survey.
Equipment DO54	Stethoscope	E4		Observed availability, reported functionality, and in service area or adjacent area.
	Blood pressure apparatus	E5	Digital BP machine or manual sphygmomanometer with stethoscope	
	Adult scale	E1		
	Oxygen	E45	Oxygen cylinders OR concentrators OR central oxygen supply with functioning flowmeter for oxygen therapy (with humidification) AND oxygen delivery apparatus (key connecting tubes and mask/nasal prongs), available at any time during the 3 past months	
Medicines and commodities DO55	ACE inhibitor (e.g. enalapril, lisinopril, ramipril, perindopril)	M53		Observed in service area OR where routinely stored; in stock with at least one valid.
	Hydrochlorothiazide tablet or other thiazide diuretic tablet	M54		
	Beta blocker (e.g. bisoprolol, metoprolol, carvedilol, atenolol)	M55		
	Calcium channel blockers (e.g. amlodipine)	M56		
	Aspirin cap/tabs	M57		
	Metformin cap/tabs	M50		
REFERENCES:				
Prevention of cardiovascular disease: guideline of assessment and management of cardiovascular risk http://www.who.int/cardiovascular_diseases/guidelines/Full%20text.pdf				
WHO CVD-risk management package for low – and medium-resource settings http://whqlibdoc.who.int/publications/2002/9241545852.pdf				

Domain	Tracer indicator	ID	Definition	Data collection notes
Chronic respiratory disease (CRD)				
SERVICE AVAILABILITY				
% of facilities offering:				
	Chronic respiratory disease diagnosis and/or management	S24		
SERVICE READINESS IN21				
% of facilities providing chronic respiratory disease services with tracer items on the day of the assessment				
Staff and guidelines DO56	Guidelines for diagnosis and management of CRD	T47	Country adapt to which guidelines are required/accepted (can be NCD guidelines which contain information on CRD)	Guidelines observed in service area.
	Staff trained in diagnosis and management of CRD	T48	At least one staff providing the service trained in diagnosis and management of CRD in the last two years (can be an NCD training including a section on CRD).	Interview response from in-charge of service area day of survey.
Equipment DO57	Stethoscope	E4	Oxygen cylinders OR concentrators OR central oxygen supply with functioning flowmeter for oxygen therapy (with humidification) AND oxygen delivery apparatus (key connecting tubes and mask/nasal prongs), available at any time during the 3 past months	Observed availability, reported functionality, and in service area or adjacent area.
	Peak flow meter	E19		
	Spacers for inhalers	E20		
	Oxygen	E45		
Medicines and commodities DO58	Salbutamol inhaler	M13		Observed in service area OR where routinely stored; in stock with at least one valid.
	Beclomethasone inhaler	M59		
	Prednisolone cap/tabs	M60		
	Hydrocortisone injection	M61		
	Epinephrine injectable	M62		
Cervical cancer screening				
SERVICE AVAILABILITY				
% of facilities offering:				
	Cervical cancer diagnosis	S29		
SERVICE READINESS IN26				
% of facilities providing cervical cancer screening services with tracer items on the day of the assessment				
Staff and guidelines DO78	Guidelines for cervical cancer prevention and control	T60	Country adapt to which guidelines are required/accepted	Guidelines observed in service area.
	Staff trained in cervical cancer prevention and control	T61	At least one staff providing the service trained in cervical cancer prevention and control in the last two years (can be a broader training including a section on cervical cancer).	

3. Indicators index

Domain	Tracer indicator	ID	Definition	Data collection notes
Equipment DO79	Speculum	E44		
Diagnostics DO80	Acetic acid	D37		

NOTES :

Malaria :

* Only for high prevalence regions.

Adolescent health :

‡ This is an optional indicator. In countries with adolescent health programs, definitions need to be further refined to reflect country-specific context and content of the programs. Indicators may not be comparable across countries.

Staff training :

† During a pretest of the core SARA questionnaire, it was suggested that indicators regarding trained staff may be subject to data quality issues given the current methodology i.e., the phrasing of the questionnaire, and the respondent of the questions on trained staff. Results should be interpreted with caution. Alternate questions are being planned to be tested, and the definition will be updated accordingly.

TABLE 3.4.4: TRACER INDICATORS FOR SURGERY AND BLOOD TRANSFUSION SERVICE AVAILABILITY AND READINESS

Domain	Tracer indicator	ID	Definition	Data collection notes
Basic surgery				
SERVICE AVAILABILITY				
% of facilities offering:				
	Basic surgical services	S25		
	Incision and drainage of abscesses	S25_01		
	Wound debridement	S25_02		
	Acute burn management	S25_03		
	Suturing	S25_04		
	Closed repair of fracture	S25_05		
	Cricothyroidotomy	S25_06		
	Male circumcision	S25_07		
	Hydrocele reduction	S25_08		
	Chest tube insertion	S25_09		
	Closed repair of dislocated joint	S25_10		
	Biopsy of lymph node or mass or other	S25_11		
	Removal of foreign body (throat, eye, ear or nose)	S25_12		
SERVICE READINESS IN22				
% of facilities providing basic surgical services with tracer items on the day of the assessment				
Staff and guidelines DO59	Guidelines for IMEESC	T49	Country adapt to which guidelines are required/accepted	Guidelines observed in service area.
	Staff trained in IMEESC	T50	At least one staff member providing the service trained in some aspect of IMEESC in the last two years	Interview response from in-charge of service area day of survey.
Equipment DO60	Needle holder	E21		Observed availability, reported functionality, and in service area.
	Scalpel handle with blades	E22		
	Retractor	E23		
	Surgical scissors	E24		
	Nasogastric tubes (10-16 FG)	E25		
	Tourniquet	E26		
	Adult and paediatric resuscitators	E27		
	Suction apparatus (manual or electric sucker)	E28	Suction apparatus with catheter	
Oxygen	E45	Oxygen cylinders OR		

3. Indicators index

Domain	Tracer indicator	ID	Definition	Data collection notes
			concentrators OR central oxygen supply with functioning flowmeter for oxygen therapy (with humidification) AND oxygen delivery apparatus (key connecting tubes and mask/nasal prongs), available at any time during the 3 past months	
Medicines and commodities DO61	Skin disinfectant	M26		Observed in service area; in stock with at least one valid.
	Sutures (any type)	M63		
	Ketamine (injectable)	M64		
	Lidocaine (1% or 2% injectable)	M65		
	Splints for extremities	M148		
	Material for cast	M149		
REFERENCES:				
Guide to Infrastructure and Supplies at Various Levels of Health Care Facilities: Emergency and Essential Surgical and Anaesthesia Procedure http://www.who.int/surgery/publications/GuideAnestheticInfrastFormatted06.pdf				
Surgical care at the district hospital http://www.who.int/surgery/publications/en/SCDH.pdf				
Blood transfusion				
SERVICE AVAILABILITY				
% of facilities offering:				
	Blood transfusion	S27		
SERVICE READINESS IN24				
% of facilities providing blood transfusion services with tracer items on the day of the assessment				
Staff and guidelines DO66	Guidelines on the appropriate use of blood and safe blood transfusion	T55	Country adapt to which guidelines are required/accepted	Guidelines observed in service area.
	Staff trained in the appropriate use of blood and safe blood transfusion	T56	At least one staff member providing the service trained in the appropriate use of blood and safe blood transfusion within the past 2 years	Interview response from in-charge of service area day of survey.
Equipment DO67	Blood storage refrigerator	E31	Available and functional and with temperature being monitored (checked that temperature has been monitored at least once in the past 24 hours AND maintained at 2 – 6 °C)	Observed availability, reported functionality, and in service area or adjacent area.
Diagnostics	Blood typing	D21	ABO blood group test, Rhesus blood group test, and centrifuge	Able to conduct the test on-site (in the facility) and

Domain	Tracer indicator	ID	Definition	Data collection notes
DO68	Cross match testing	D22	Cross match (should use methods that demonstrate ABO incompatibility and incompatibility due to other clinically significant antibodies and should include an indirect anti-globulin test or a test of equivalent sensitivity), centrifuge, 37°C incubator, and grouping sera	functioning equipment and reagents needed to conduct the test are observed on-site on the day of the survey. This may be in a laboratory or in the service area where the test is conducted.
Medicines and commodities	Blood supply sufficiency	M66	No interruption of blood availability in last three months	Reported availability.
	DO69 Blood supply safety	M67	Blood obtained ONLY from national or regional blood bank, OR blood obtained from other sources but screened for HIV, Syphilis, Hepatitis B, and Hepatitis C.	
REFERENCES:				
Universal access to safe blood transfusion http://www.who.int/bloodsafety/publications/UniversalAccessToSafeBT.pdf				
Screening Donated Blood for Transfusion-Transmissible Infection http://whqlibdoc.who.int/publications/2009/9789241547888_eng.pdf				

NOTES :
Malaria :

* Only for high prevalence regions.

Adolescent health :

‡ This is an optional indicator. In countries with adolescent health programs, definitions need to be further refined to reflect country-specific context and content of the programs. Indicators may not be comparable across countries.

Staff training :

† During a pretest of the core SARA questionnaire, it was suggested that indicators regarding trained staff may be subject to data quality issues given the current methodology i.e., the phrasing of the questionnaire, and the respondent of the questions on trained staff. Results should be interpreted with caution. Alternate questions are being planned to be tested, and the definition will be updated accordingly.

TABLE 3.4.5: TRACER ESSENTIAL MEDICINES BY CATEGORY

Domain	Tracer indicator	ID	Definition	Data collection notes
Infectious disease medicines				
% of facilities that have the following medicines in stock (observed valid) on the day of the assessment				
	Me-/albendazole cap/tab	M35		Observed in pharmacy or in area where they are routinely stored, at least one with valid expiration date.
	Amoxicillin cap/tab	M2		
	Ceftriaxone injection	M5		
	Co-trimoxazole cap/tab	M43		
	Ciprofloxacin cap/tab	M6		
	Fluconazole cap/tab	M135		
	Metronidazole cap/tab	M49		
Non-communicable disease medicines				
% of facilities that have the following medicines in stock (observed valid) on the day of the assessment				
	Amlodipine tablet or alternative calcium channel blocker	M56		Observed in pharmacy or in area where they are routinely stored, at least one with valid expiration date.
	Aspirin cap/tab	M57		
	Beclometasone inhaler	M59		
	Beta blocker (e.g. bisoprolol, metoprolol, carvedilol, atenolol)	M55		
	Enalapril tablet or other ACE inhibitor e.g. lisinopril, ramipril, perindopril	M53		
	Epinephrine injectable	M62		
	Furosemide cap/tab	M114		
	Glibenclamide cap/tab	M10		
	Gliclazide tablet or glipizide tablet	M115		
	Glucose 50% injection	M52		
	Glyceryl trinitrate sublingual tablet	M116		
	Hydrochlorothiazide tablet or other thiazide diuretic tablet	M54		
	Hydrocortisone injection	M61		
	Ibuprofen tablet	M95		
	Insulin regular injection	M51		
	Isosorbide dinitrate tablet	M118		
	Metformin tablet	M50		
	Omeprazole tablet or alternative such as pantoprazole, rabeprazole	M11		
	Paracetamol cap/tab	M38		
	Prednisolone cap/tab	M60		
	Salbutamol inhaler	M13		
	Simvastatin tablet or other statin e.g. atorvastatin, pravastatin, fluvastatin	M14		

Domain	Tracer indicator	ID	Definition	Data collection notes
	Spironolactone tablet	M147		
Reproductive health medicines				
% of facilities that have the following medicines in stock (observed valid) on the day of the assessment				
See “8. Priority medicines for mothers”				
Child health medicines				
% of facilities that have the following medicines in stock (observed valid) on the day of the assessment				
See “9. Priority medicines for children”				
Mental health and neurological medicines				
% of facilities that have the following medicines in stock (observed valid) on the day of the assessment				
	Amitriptyline tablet	M1		Observed in pharmacy or in area where they are routinely stored, at least one with valid expiration date.
	Carbamazepine tablet	M119		
	Chlorpromazine injection	M120		
	Diazepam tablet	M121		
	Diazepam injection or diazepam rectal tubes	M122		
	Fluoxetine tablet	M94		
	Fluphenazine injection	M123		
	Haloperidol tablet	M124		
	Levodopa + carbidopa tablet	M145	Levodopa+carbidopa combination tablet	
	Lorazepam injection	M144		
	Lithium tablet	M125		
	Phenobarbital tablet	M126		
	Phenytoin tablet	M127		
	Valproate sodium tablet	M128		
Palliative care medicines				
% of facilities that have the following medicines in stock (observed valid) on the day of the assessment				
	Dexamethasone injection	M129		Observed in pharmacy or in area where they are routinely stored, at least one with valid expiration date.
	Haloperidol injection	M130		
	Hyoscine butylbromide injection	M131		
	Ibuprofen	M95		
	Loperamide tab/cap	M146		
	Lorazepam tablet	M132		
	Metoclopramide injection	M133		
	Morphine granule, injectable or cap/tab	M83		
	Paracetamol	M38		
	Senna preparation (laxative)	M134		

**TABLE 3.4.6: TRACER INDICATORS GENERAL SERVICE READINESS:
HOSPITAL LEVEL OPTIONAL INDICATORS**

*** THESE ARE IN ADDITION TO THE PRIMARY LEVEL INDICATORS***

Domain	Tracer indicator	ID	Definition	Data collection notes
23. Comprehensive surgery				
SERVICE AVAILABILITY				
% of facilities offering:				
	Comprehensive surgical services	S28	Hospital that provide surgical services	
	Tracheostomy	S28_01		
	Tubal ligation	S28_02		
	Vasectomy	S28_03		
	Dilatation & Curettage	S28_04		
	Obstetric fistula repair	S28_05		
	Episiotomy	S28_06		
	Appendectomy	S28_07		
	Hernia repair (strangulated)	S28_08		
	Hernia repair (elective)	S28_22		
	Cystostomy	S28_09		
	Urethral stricture dilatation	S28_10		
	Laparotomy	S28_11		
	Congenital hernia repair	S28_12		
	Neonatal surgery	S28_13		
	Cleft palate	S28_14		
	Skin grafting and Contracture release	S28_23		
	Open reduction and fixation for fracture	S28_17		
	Amputation	S28_18		
	Cataract surgery	S28_19		
	Club foot repair	S28_20	Casting or open club foot release	
	Drainage of osteomyelitis-septic arthritis	S28_21		
SERVICE READINESS IN25				
% of facilities providing comprehensive surgical services with tracer items on the day of the assessment				
Staff and guidelines DO72	Materials for IMEESC (WHO Integrated Management for Essential and Emergency Care)	T49	Country adapt to which guidelines are required/accepted	Guidelines observed in service area.
	Staff trained in IMEESC	T50	At least one staff member providing the service trained in some aspect of IMEESC in the last two years	Interview response from in-charge of service area day of survey.
	Staff trained in surgery	T57	Trained health professional (clinical officer, general doctor, or surgeon) providing surgery present in the facility or available 24 hours a day	

Domain	Tracer indicator	ID	Definition	Data collection notes
	Staff trained in anaesthesia	T58	Trained health professional (nurse, clinical officer, general doctor, surgeon, or anaesthesiologist) providing anaesthesia present in the facility or available 24 hours a day	
Equipment D073	Oxygen	E45	Oxygen cylinders OR concentrators OR central oxygen supply AND (functioning flowmeter for oxygen therapy AND oxygen delivery apparatus (key connecting tubes and mask/nasal prongs) AND oxygen available at all times during the 3 past months	Observed availability, reported functionality, and in service area.
	Anaesthesia equipment	E29	<ul style="list-style-type: none"> •Anaesthesia machine to deliver aesthetic gases and oxygen •Tubings and connectors to connect to the endotracheal tube (neonatal, paediatric and adult) •Resuscitator bag and mask- adult and paediatric and neonatal (size 1 for term babies) •Intubation set adult and paediatric: (Oropharyngeal airway, endotracheal tubes, laryngoscope (neonatal, paediatric and adult), Magill's forceps, stylet) 	
	Spinal needle	E32		
	Suction apparatus	E28	Manual or electric	
Medicines and commodities D074	Thiopental (powder)	M84		Observed in service area; in stock with at least one valid.
	Suxamethonium bromide (powder)	M85		
	Atropine (injectable)	M86		
	Diazepam (injectable)	M25		
	Halothane (inhalation)	M87		
	Bupivacaine (injectable)	M88		
	Lidocaine 5% (heavy spinal solution)	M89		
	Epinephrine (injectable)	M62		
Ephedrine (injectable)	M90			
REFERENCES:				
Guide to Infrastructure and Supplies at Various Levels of Health Care Facilities: Emergency and Essential Surgical and Anaesthesia Procedures http://www.who.int/surgery/publications/GuideAnestheticInfrastFormatted06.pdf				
Surgical care at the district hospital http://www.who.int/surgery/publications/en/SCDH.pdf				

3. INDICATORS INDEX

Domain	Tracer indicator	ID	Definition	Data collection notes
24. Laboratory capacity DO75 (in addition to the primary lab tests)				
SERVICE AVAILABILITY % of facilities offering:				
	Serum electrolytes	D24	Specific assay kit, centrifuge, biochemistry analyser	Able to conduct the test on-site (in the facility) and functioning equipment and reagents needed to conduct the test are observed on-site on the day of the survey. This may be in a laboratory or in the service area where the test is conducted.
	Full blood count with differential	D25	Haematological counter, stains	
	Blood typing (ABO and Rhesus) and cross match (by anti-globulin or equivalent)	D21/ D22	ABO blood group test, Rhesus blood group test, and centrifuge. Cross match (should use methods that demonstrate ABO incompatibility and incompatibility due to other clinically significant antibodies and should include an indirect anti-globulin test or a test of equivalent sensitivity), centrifuge, 37°C incubator, and grouping sera	
	Liver function test (ALT or other)	D19	Specific assay kit, centrifuge, biochemistry analyzer	
	Renal function test (serum creatinine testing or other)	D18	Specific assay kit, centrifuge, biochemistry analyzer	
	CD4 count and percentage	D16	CD4 counter, specific assay kit	
	HIV antibody testing (ELISA)	D23	ELISA washer, incubator, ELISA reader, specific assay kit	
	Syphilis serology	D29	Specific assay kit	
	Cryptococcal antigen	D30	Specific assay kit	
	Gram stain	D31	Microscope, slides, gram stains	
	Urine microscopy testing	D32	Microscope, slides	
	CSF/body fluid counts	D33	Microscope	
REFERENCES:				
Consultation on technical and operation recommendations for clinical laboratory testing harmonization and standardization http://www.who.int/healthsystems/round9_9.pdf				
25. High level diagnostic equipment DO76				
SERVICE AVAILABILITY % of facilities offering:				
	X-ray	E33		Observed availability, reported functionality, anywhere in the facility.
	ECG	E34		
	Ultrasound	E35		
	CT scan	E36		

NOTES :

Malaria :

* Only for high prevalence regions.

Adolescent health :

‡ This is an optional indicator. In countries with adolescent health programs, definitions need to be further refined to reflect country-specific context and content of the programs. Indicators may not be comparable across countries.

Staff training :

† During a pretest of the core SARA questionnaire, it was suggested that indicators regarding trained staff may be subject to data quality issues given the current methodology i.e., the phrasing of the questionnaire, and the respondent of the questions on trained staff. Results should be interpreted with caution. Alternate questions are being planned to be tested, and the definition will be updated accordingly.

