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Quality of Diagnostic Services for Non-Severe Suspected Malaria Cases: an analysis of national health facility surveys from Malawi and Tanzania (AS70)

An Analysis Brief from The DHS Program

Why study diagnosis of non-severe malaria cases?

Malaria is an acute febrile illness. Early diagnosis of malaria prevents deaths and reduces malaria transmission. Current malaria diagnosis guidelines recommend that a malaria test be done for all children in a high-malaria-risk area presenting with fever or a history of fever (but do not have general danger signs or stiff neck). While there is clear guidance for the diagnosis of a non-severe suspected malaria cases, providers at health facilities do not always follow these recommended steps. A better understanding of the factors influencing health provider's performance can inform strategies to improve quality of diagnostic services for malaria.

Which countries and data were included in the study?

The Service Provision Assessment (SPA) surveys are conducted among the formal-sector health facilities in a country. This study used SPA data from Malawi (2013-14 SPA) and Tanzania (2014-15 SPA).

Who was included in this analysis?

Data from the observation of sick child consultations and the exit interview of caretakers from the SPAs were used to measure factors at the child level. Data from facility inventory and provider interviews were used to measure factors at the provider and facility level. Children were classified as having non-severe suspected malaria if 1) the caretaker cited that the child had a fever in the two days before the visit; 2) the child did not present at a hospital; and 3) the child was not referred/admitted at the end of the consultation.

What is the definition of diagnostic quality?

Among non-severe suspected malaria cases, we identified three essential clinical care elements that should be performed for all non-severe suspected malaria cases according to guidelines:



1) Provider asked about fever;



2) Child was felt for temperature, had temperature taken with a thermometer, or checked for pallor by looking at palms; and



3) Provider instructed child to see another provider or laboratory for a finger or heel stick for blood testing.

A child was considered to have received quality services only if all three elements were performed.

Malawi

What are the key results for Malawi?

- In the majority non-severe suspected malaria cases, the provider asked about fever (84%) and checked for temperature or palmar pallor (69%).
- Only half of children with suspected non-severe malaria were sent for diagnostic testing.
- All 3 clinical care elements were performed in only 34% of cases.

Results of regression analysis at the client, provider, and facility level include:



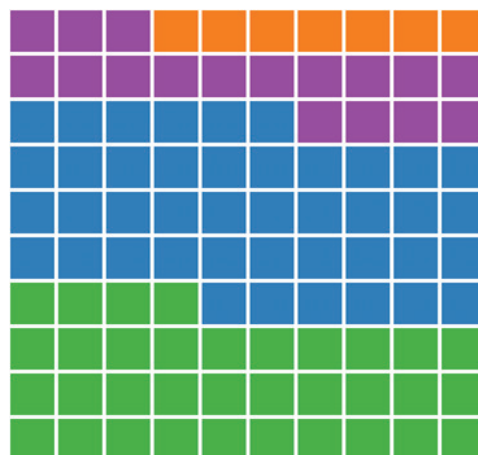
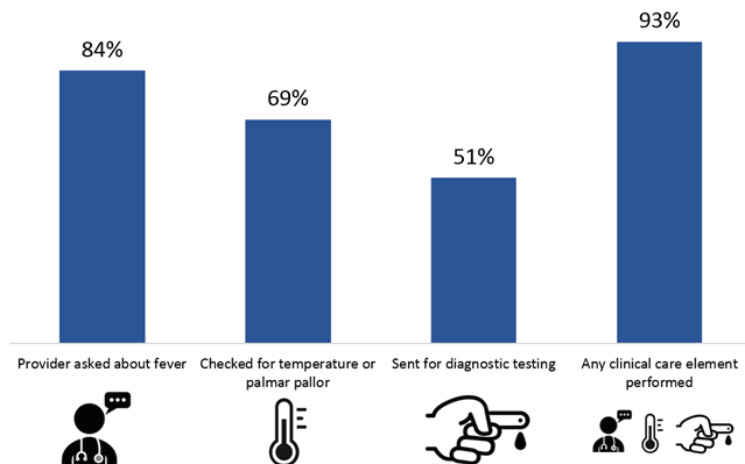
- Children age 12-59 months were more likely to receive all 3 clinical care elements than children under 12 months.
- Receipt of all 3 clinical care elements was higher among children who received care during peak transmission season than those who sought treatment during the off-peak season.



- Cases that were seen by a physician or clinical care officer were more likely to receive all 3 clinical care elements than those seen by a nurse or medical assistant.



- Cases seen by a provider with recent training in malaria related topics were more likely to receive all 3 clinical care elements than those seen by providers without recent training.
- Children observed at private/mission/other facilities were more likely to receive all 3 elements of clinical care than those seen at government/public facilities.
- Receipt of all 3 clinical care elements was more likely in facilities located in higher endemic areas.
- Cases being seen at facilities with testing supplies and ACTs were more likely to receive all 3 elements than those at facilities without these supplies.



Malawi's national malaria policy

states that mRDTs should be performed on all patients suspected of having uncomplicated malaria in order to obtain parasitological confirmation before beginning treatment. Since the policy was adopted in 2010, mRDTs have been distributed to all facilities.



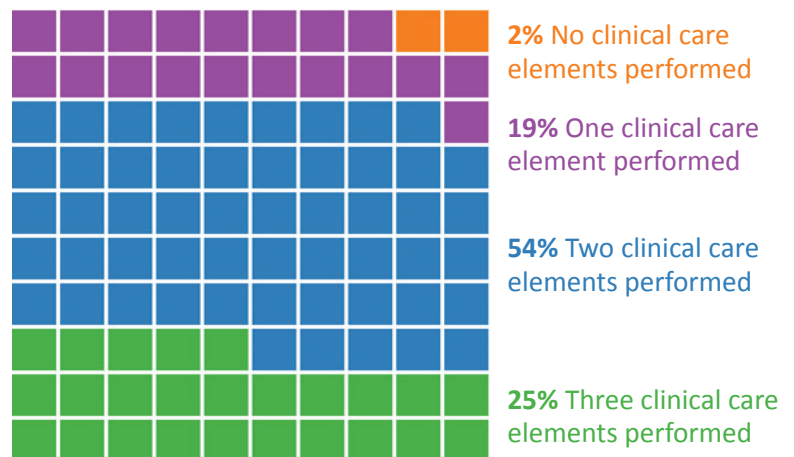
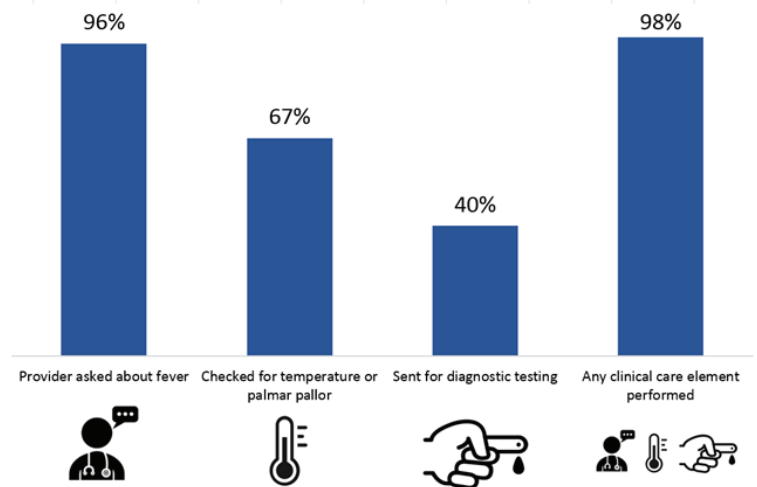
Tanzania

What are the key results for Tanzania?

- In almost all non-severe suspected malaria cases, the provider asked about fever (96%) and 2/3 checked for temperature or palmar pallor (67%).
- Only 40% of children with suspected non-severe malaria were sent for diagnostic testing.
- All 3 clinical care elements were performed in only 25% of cases.

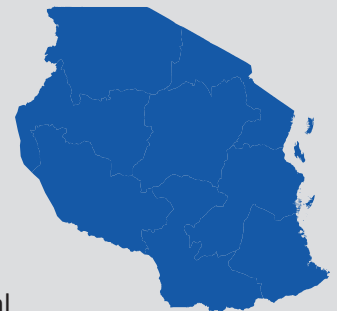
Results of regression analysis at the client, provider, and facility level include:

- Children age 12-59 months are more likely to receive all 3 clinical care elements than children under 12 months.
- Receipt of all 3 clinical care elements was higher among children who received care during peak transmission season than those who sought treatment during the off-peak season.
- Cases that were seen by a physician or clinical care officer were more likely to receive all 3 clinical care elements than those seen by a nurse or medical assistant.
- Cases seen by a provider with pre-service education after 2010 were more likely to receive all 3 clinical care elements than those seen by providers with earlier education.
- Children observed at private/mission/other facilities were more likely to receive all 3 elements of clinical care than those seen at government/public facilities.
- Cases being seen at facilities with testing supplies and ACTs were more likely to receive all 3 elements than those at facilities without these supplies.



Tanzania's national malaria case management policy

states that all patients fever or history of fever is classified as a suspected malaria case. All individuals with signs and symptoms of malaria should have access to appropriate, timely malaria diagnosis and treatment. To ensure universal access, the government policy requires that all suspected cases in both the public and private sectors are confirmed by a diagnostic test. The government seeks to provide quality testing through the public sector, and through the establishment of alternative malaria testing points outside of facilities.





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What does this mean?

Overall adherence to clinical care guidelines for malaria diagnosis is low in Tanzania and Malawi. While most providers ask about fever, only 2/3 check temperature or palmar pallor and only half or less send suspected non-severe cases for diagnostic testing. In both countries, there are client-, provider-, and facility-based factors linked to receipt quality care. The age of the child, type of provider, provider training, seasonality, endemicity, and type of facility are all associated with receipt of the 3 clinical care elements. As expected, clients attending facilities with testing supplies and ACTs available are also more likely to receive the 3 clinical care elements associated with appropriate diagnosis of malaria in non-severe cases.

This brief summarizes The DHS Program's Analytical Studies No 70 by Cameron Taylor, Jehan Ahmed, and Wenjuan Wang of ICF International with funding from The United States Agency for International Development through The DHS Program. For the full report or more information about The DHS Program, please visit www.dhsprogram.com.