Abstract No: 23-A-6792

PRACTICAL FACILITY LEVEL APPROACHES TO REDUCE MALARIA TEST POSITIVITY RATE IN OYO STATE, NIGERIA

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Introduction

Malaria remains a major public health problem in Nigeria. Prompt and accurate diagnosis of malaria is required for effective malaria case management. Diagnosis based on clinical suspicion only results in overdiagnosis; therefore, parasitological confirmation of malaria parasites in the blood is essential for diagnosis of malaria. Malaria test positivity rate (TPR) is used to assess the effectiveness of malaria interventions. However, over the years, this rate has remained high in routine data across Nigeria, including Oyo State. The high TPR has been inconsistent with other data triangulated from therapeutic efficacy studies and fever monitoring exercises reporting a national TPR average of 49-52%, suggesting that the high TPR may reflect poor quality data and conduct of malaria diagnosis.

Methods

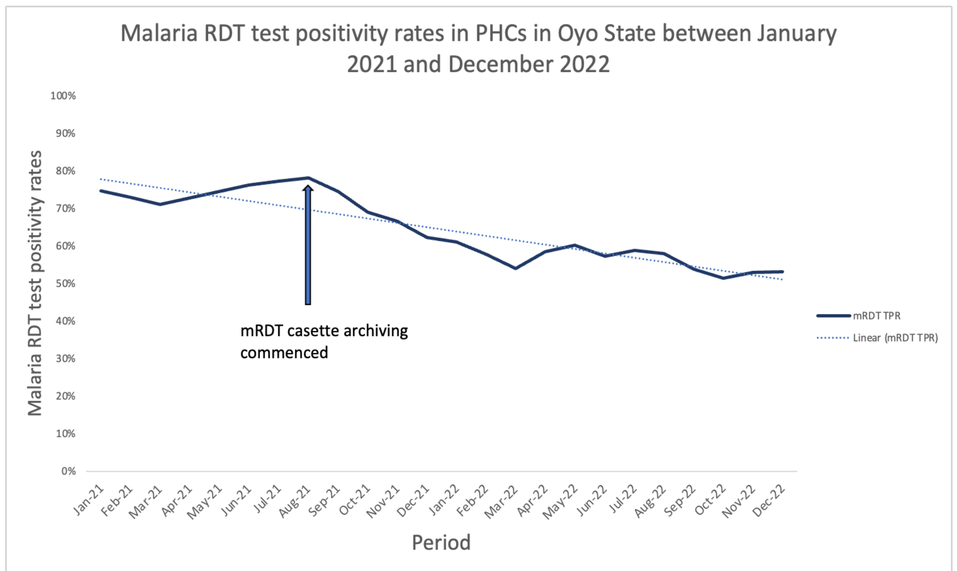
This study reports on the effect of the two measures introduced to improve the accuracy of TPR data using secondary quantitative data from the National District Health Information System (DHIS) for both primary health care centers (PHCs) and secondary health facilities (SHFs). The two measures were facility-level audits of archived used RDT cassettes at 733 PHCs introduced in August 2021 and a 12-day basic malaria microscopy training (BMMT) at 17 SHFs which was completed in June 2021.

References

1. DHIS 2 data (Nigeria)- February 2023

Results

There was a sustained decline in state malaria RDT test positivity rate from 69% in October 2021 to 53% in October 2022 at PHCs. Furthermore, a period review of January-September 2022 showed TPR decline from 61% to 54% when compared to January-September 2021 with a TPR range of 72%-76%. An independent T-test was done to compare the mean TPR for each year with a statistically significant decline (t= 14.857, p=0.02). At SHFs, following the BMMT in June 2021, the microscopy-based TPR declined from 60% in July 2021 to 37% in July 2022. Period review done from July 2020 to June 2021 shows TPR decline from 62% to 52%, respectively, compared to TPR 60%-39% in July 2021-June 2022, respectively. An independent T-test was done to compare the mean TPR for each year in the SHFs with a statistically significant decline (t= 3.622, p 0.02).



Discussion

Supervised archiving and auditing of cassettes is a model that can be considered for future scale-up to continue the positive trend at PHCs, while BMMT should be further encouraged for accurate microscopy-based diagnosis. The findings reinforce the critical role of capacity building of human resources and the influence of audits on increasing the accuracy of malaria diagnosis and data reporting.

Introducing an auditing system with archiving and auditing of RDT cassettes **improves data reliability** and therefore can better support data-based decision-making around malaria control.

Health workers during RDT QA/QC at a PMI-S-supported health facility

Medical lab scientists during the BMMT

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This document was produced for review by the United States Agency for International Development Nigeria Mission (USAID/Nigeria).