

CHANGES IN MALARIA TEST POSITIVITY RATE FOLLOWING SCALE UP OF LIFE-SAVING MALARIA CONTROL INTERVENTION IN EBONYI STATE, SOUTH EAST NIGERIA

Grace Nwankwo¹, Chinwe Nweze², Chinedu Egwuonwu¹, Onyinye Udenze¹, Jonathan Igboji¹, Abimbola Olayemi³, Olatayo Abikoye³, IniAbasi Inglass³, Uchenna Nwokenna³, Lawrence Nwankwo⁴, Arja Huestis⁵, Thomas Hall⁵, Allan Were⁵, Olugbenga Mokuolu⁵, Erkwagh Dagba⁶, Veronica Momoh⁶, Jules Mihigo⁶

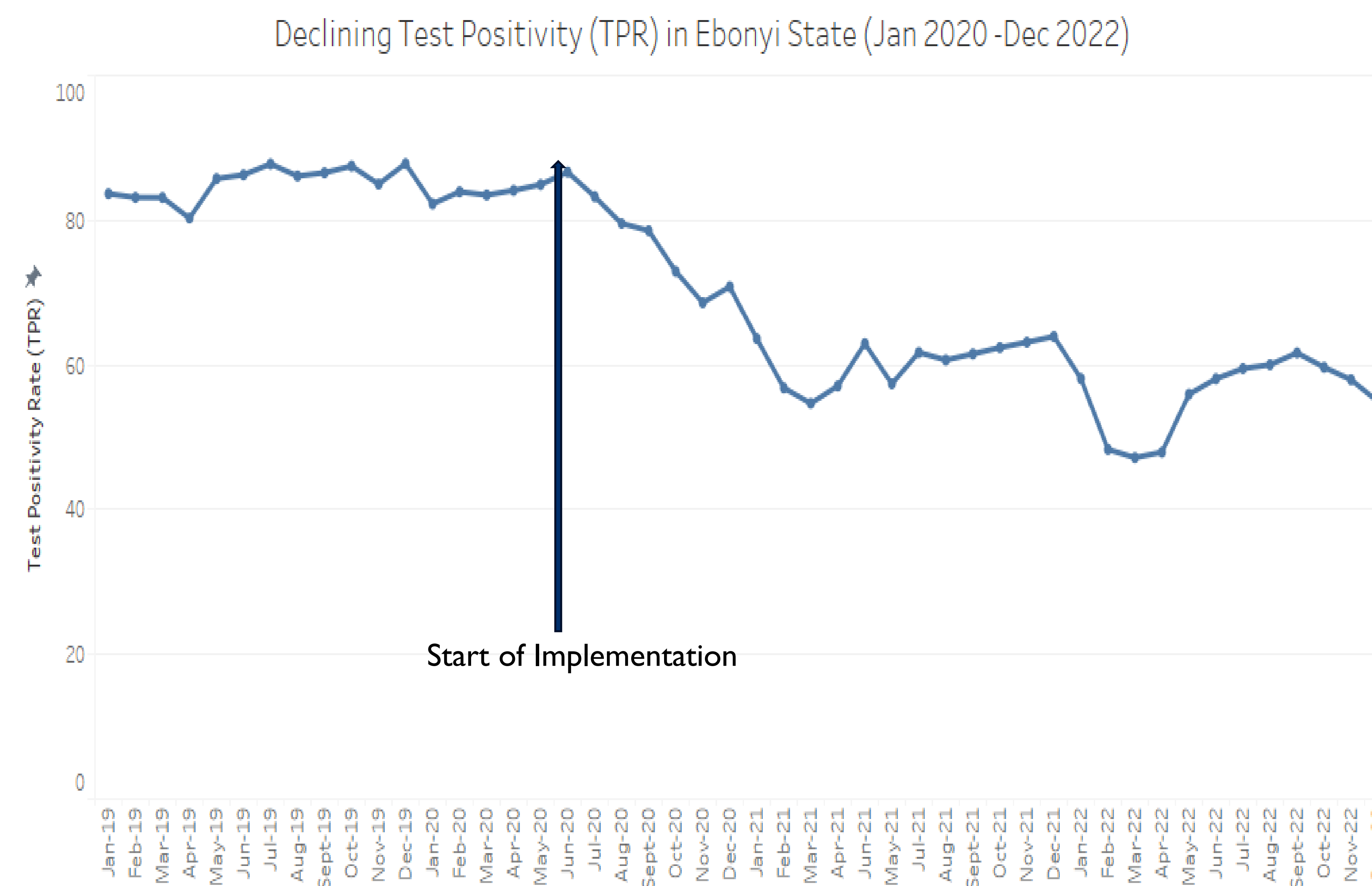
Introduction

Nigeria accounts for 26.6% of global malaria cases according to the 2022 World Malaria Report. Surveillance is paramount to track malaria morbidity and guide decision-making for appropriate transmission-reducing responses. One tracking measure is the malaria test positivity rate (TPR) which is used as an alternate indicator of malaria morbidity since it is based on parasitological confirmation. Over the years, TPR remained high regardless of season possibly due to poor quality of fever testing and documentation. This study investigates the changes in TPR observed in Ebonyi State Nigeria.

Methods

This study investigates the correlation between the observed positive change in TPR and the interventions implemented to support the Ebonyi State Malaria Elimination Program (SMEP). These efforts include case and data management training, implementation of Behavior Economics (BE) to improve fever case management, supportive supervision, triangulation of service and logistic data, and the archiving of used rapid diagnostic test (RDT) cassettes to increase health provider adherence to national guidelines for fever management.

Figures and Results



- This analysis consisted of a pre-post intervention comparison of TPR in similar periods over 4 years using secondary routine data from the National Health Management Information System across the 762 health facilities of the state.
- The data found that the pre-intervention TPR from January to March 2019 was 71% and remained high at 68% from January to March 2020.
- The intervention commenced in July 2020, and six months post-intervention (January-March 2021), the TPR declined to 54% and further reduced to 50% from January to March 2022.
- Also, the seasonality trend was not seen pre-intervention (January 2019-June 2020) but became obvious during the intervention (July 2020-December 2022).



Health worker conducting mRDT in a PMI-S-supported facility in Ebonyi State

Discussion

- It is worth noting that COVID did not affect the TPR as only a total of 2,064 confirmed cases were reported in the state from 2020 to 2023.
- While the reduction in TPR is promising, other factors such as bed net use can highly affect it. Nevertheless, it remains one measure of the effectiveness of the support to Ebonyi SMEP on malaria program implementation and suggests that training, supervision, archiving of RDT cassettes, and BE prototypes implementation can influence the quality of malaria case management.
- These findings strongly present the opportunity to scale up our efforts in other states.

References

World Health Organization, World malaria report 2022

¹Management Sciences for Health, Abuja, Nigeria; ²Management Sciences for Health, Arlington, USA; ³National Malaria Elimination Program, Nigeria