



# AMP 2025 Annual Partners' Meeting

## *Implementation performance of ITN distribution through the Health Facilities in Tanzania: five years (2018-2022) experience*

Mövenpick Hotel & Residences Nairobi  
Sarit Centre | Nairobi | Kenya

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# Presentation outline

- ❖ Overview
  - ✓ National ITN strategic approach
  - ✓ Background
- ❖ Methodology
- ❖ Results
- ❖ Discussion /conclusion
- ❖ Recommendation

# National ITN strategic approach



## The strategy

### Goal

Deploy vector control interventions (ITNs) aimed at contributing towards the reduction of malaria disease burden (NMCP 2021-2025)

### Strategy

Ensure universal access (>80%) ITNs according to malaria transmission settings via; (Health facilities (ANC & EPI), school net programs, and mass campaign) ITN distribution channels.

### Aim

- Reduce prevalence from 8.1% settings to <3.5% by 2025 (TDHS 2022)
- Eliminate Malaria by 2030



# Background

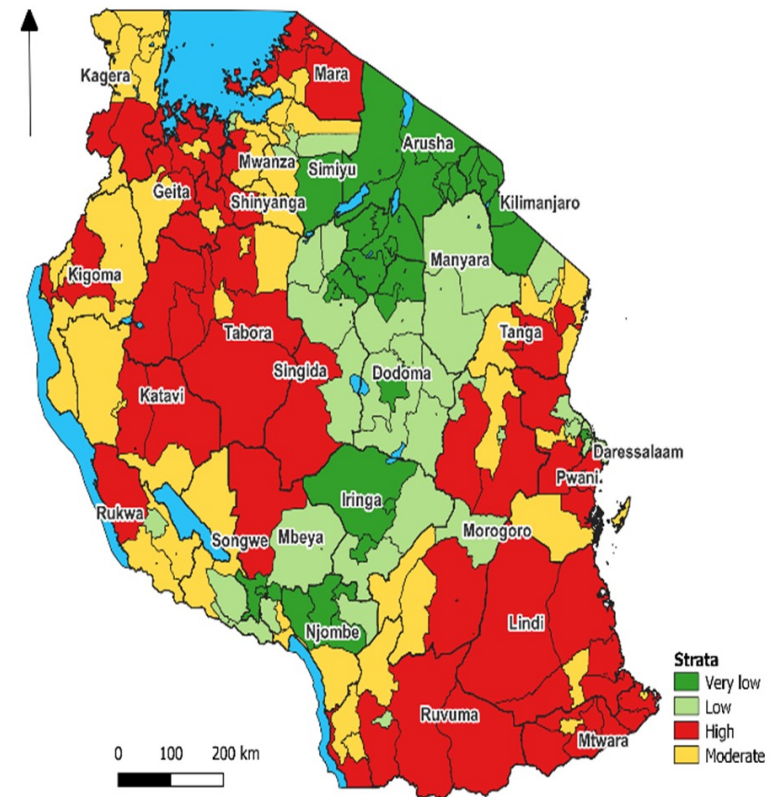


- Global efforts to lessen the malaria burden in low-income countries include the distribution of Insecticide-treated nets (ITNs) (*Bhatt S, et al. 2015.*)
- Routine ITN distribution through reproductive and child health services (RCH) at health facilities helps to increase and sustain optimal ITN access (at least 80%) (*Miller JE, et al.. 2022*)
- Routine ITN distribution targets vulnerable populations: pregnant women (PW) during their 1st antenatal clinic (ANC) and infants during their 1st dose of measles-rubella vaccination at the Expanded Program for Immunization (EPI)
- Re-introduced in the year 2016 in mainland Tanzania
- All HFs with RCH services issue ITNs to all PW and infants (100%)



## Background ...

- The effectiveness of ANC and EPI ITN distribution channels in issuance rates has yet to be assessed and documented for publication over time in mainland Tanzania.
- Aim of the study
  - Analyzed the historical rates of ITNs' issuing through HFs at ANC and EPI from January 2018 to December 2022
- *On the right, Tanzania malaria burden stratification map-2023*



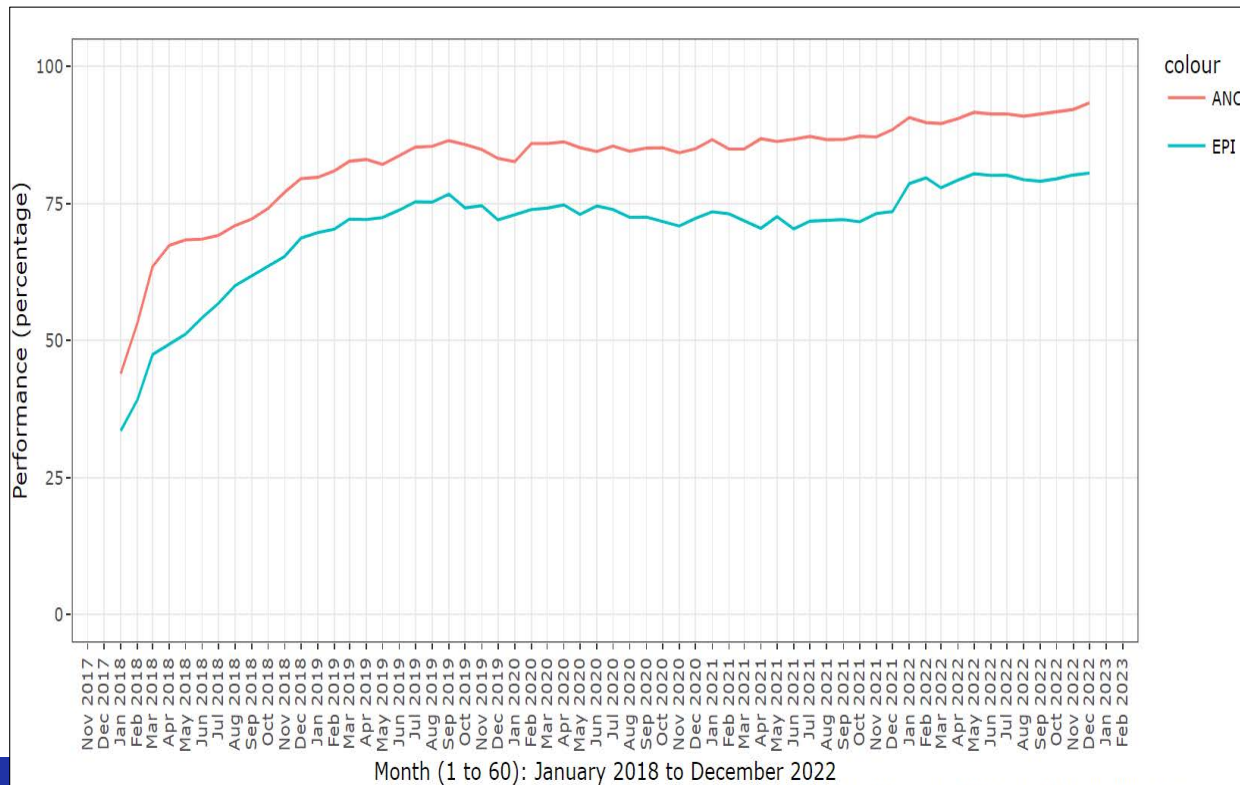


# Methodology

- Monthly health facility data on routine ITN health facility distribution was retrospectively extracted from DHIS-2 for all 26 regions of mainland Tanzania
- A total of 6790 health facilities were included in the analysis
- Performance was categorized as “good” if all (100%) women or infants at a particular health facility who attend ANC or EPI received ITNs, or “poor” if some or all women or infants did not receive ITNs in a given month separately
- Descriptive and inferential statistical analyses were conducted to assess the health facilities' performance (issuing rate) on ITN distribution at ANC and EPI across;
  - times, regions, facility level, facility ownership (public/private), settings (rural/urban), and malaria transmission strata over the five years.
- Using “R” a generalized estimating equation was used to model the marginal performance trend over time for ANC and EPI separately

# Results

General trend for ANC and EPI issuance rate from January 2018 up to December 2022



- In most regions, performance improved markedly in the first year but later gradually increased
- Region-wise, Ruvuma region had the best performance across the years, almost 100%, while the Dar es Salaam region had the lowest performance for both ANC and EPI respectively.
- Significant increase in the performance of ITN distribution, however with variation between ANC and EPI
- Issuing rates started at 44% and 34% in 2018 and increased to 93% and 80% in 2022 for ANC and EPI, respectively
- Average issuance rate of 83% and 70% ( $p < 0.001$ ) for ANC and EPI respectively



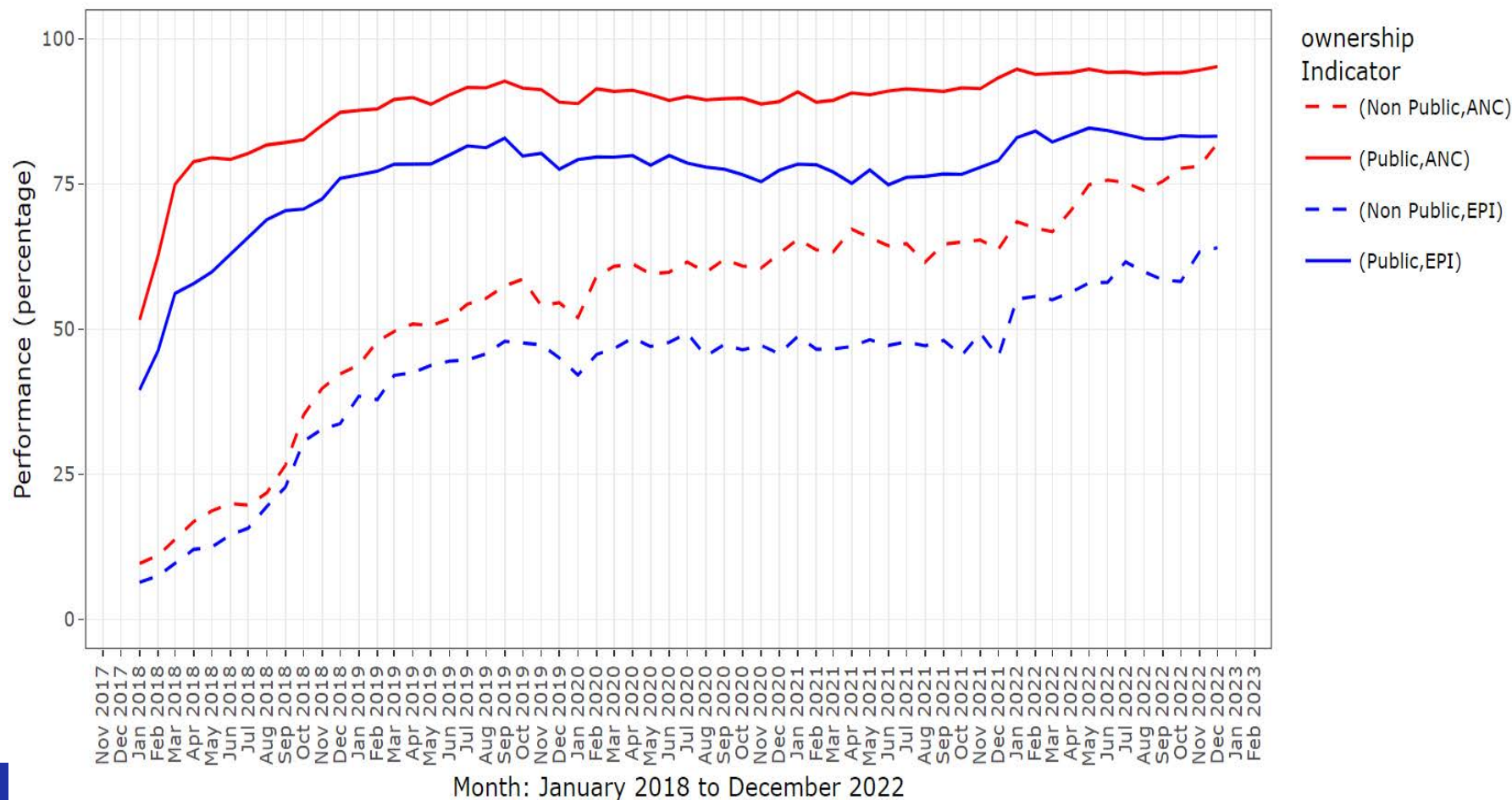


## Results...

- Surprisingly, rural areas had higher performance (72%) during ANC visits compared to urban areas (51%) ( $p < 0.001$ )
- Across epidemiological strata, ITN issuing rates during EPI activities were notably higher in high (79%), moderate (76%), and very low (65%) compared to low (54%) transmission epidemic strata ( $p < 0.001$ )
- Dispensaries and health centers performed better than hospitals and clinics for ANC and EPI issuance ( $p < 0.001$ )
- Over the five-year average, the public facilities performed better for both ANC (88%) and EPI (76%) compared to private facilities (53% and 42%, respectively;  $p < 0.001$ )



## Monthly trend of ANC and EPI ITN issuance rate by facility ownership (public and private) from January 2018 to December 2022





# Discussion/conclusion



By 2022, Tanzania substantially improved the ITN issuance rate via ANC and EPI in all health facilities compared to 2018



There was an increase in ITN issuing rates over five years for both ANC and EPI, with strong acceleration in 2018, followed by more gradual improvements until reaching 93% and 80% in 2022 for ANC and EPI, respectively



Further efforts are needed to achieve 100% performance across the regions



Future studies to explore the reasons for differences among analyzed variables in ITN issuing rates will help to understand additional characteristics of high-performing facilities



## Discussion/conclusion...

- However, the observed ANC and EPI ITN distribution did not achieve the set National (NMCP) goal of 100% ITN issuance rate, because of various factors, similar to other studies (*Nuñez L, et al 2023*), that impeded optimal ITN distribution performance at facilities, such as:
  - Inadequate data documentation
  - Facility ITN stockouts
  - Health facility ownership (public & private)
  - Facility-level i.e. hospitals, health centres, dispensaries, and clinics
  - Facility settings (urban & rural), and
  - Malaria risk epidemiological strata

# Recommendations

1

## Mentorship and orientation

Region and council health teams should regularly conduct mentorship and orientation to the health facility providers and facilitate the logistics management process

2

## Quarterly data review

Quarterly data review should be an ongoing activity to strengthen stock management and improve data quality

3

## Further studies

To identify the facilitators and barriers to ITN issuance rate and use that would provide valuable contributions of ITNs in malaria control



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