

Zambia National Malaria Indicator Survey 2015: Data collection, processing, and results



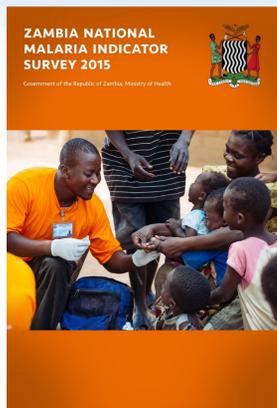
Government of the
Republic of Zambia

MACEPA PATH
Malaria Control and Elimination Partnership in Africa



Ruben Conner¹, Mulakwa Kamuliwo², Mutinta Mudenda², Mercy Mwanza Ingwe², Hawela Moonga², Busiku Hamainza², Christopher Lungu³, Kafula Silumbe³, Duncan Earle³, Elizabeth Chizema Kawesha⁴, John M. Miller³

¹PATH Malaria Control and Elimination Partnership in Africa (MACEPA), Seattle, WA, USA; ²National Malaria Elimination Centre, Ministry of Health, Lusaka, Zambia; ³PATH MACEPA, Lusaka, Zambia; ⁴Ministry of Health, Lusaka, Zambia



Objectives

The specific objectives of the 2015 Zambia National Malaria Indicator Survey (MIS) were:

- To collect up-to-date information, building on the experience of the previous MISs (2006, 2008, 2010, and 2012) on **coverage of the core malaria interventions** included in the National Malaria Strategic Plan 2011–2016.
- To assess **malaria parasite prevalence among children under five years of age**.
- To assess the status of **anaemia** among the target populations (in particular, **children 6–36 months and women 15–49 years**).
- To assess **disparities in malaria intervention coverage**, malaria parasite prevalence, and anaemia prevalence among the surveyed population by location and other background characteristics.

Sampling plan

- Two-stage stratified cluster sampling was used to select the sample.
- Clusters from the 2010 Census selected by design characteristics.
- Rural/urban strata with an oversample in Luapula Province.
- Households in selected clusters were listed and then randomly selected.
- Total sample size ~3,875 households.

Findings

Figure 3. Summary of intervention indicators

Notable progress has been made in the distribution and use of ITNs, as well as the scale-up of IRS and IPTp. As malaria has become a lesser contributor to fevers, the use of anti-malarials has declined slightly.

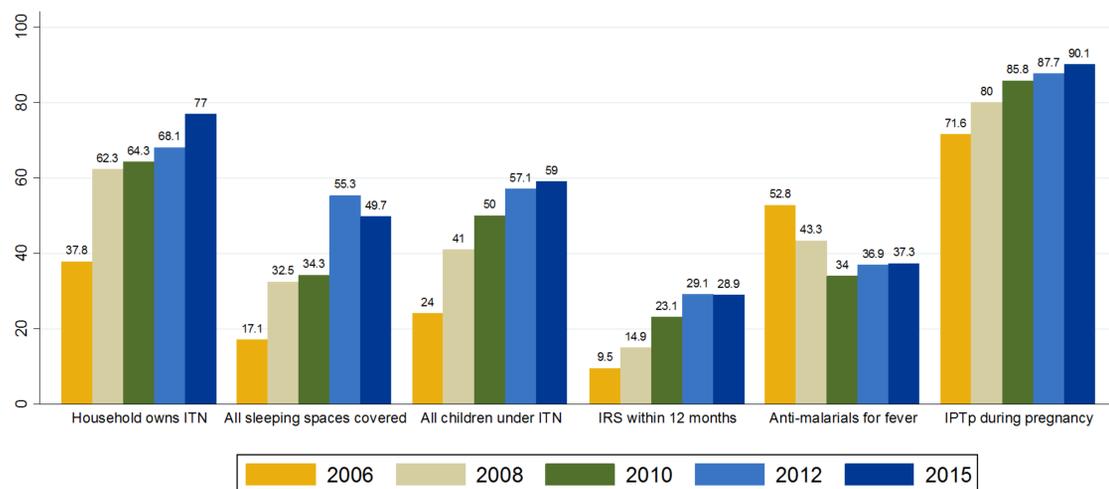


Figure 4. Malaria parasite prevalence in children under age five years

Despite the progress in intervention coverage, malaria prevalence has risen slightly in the most recent MIS. Fever rates have declined and severe anaemia has generally declined since its peak in 2006.

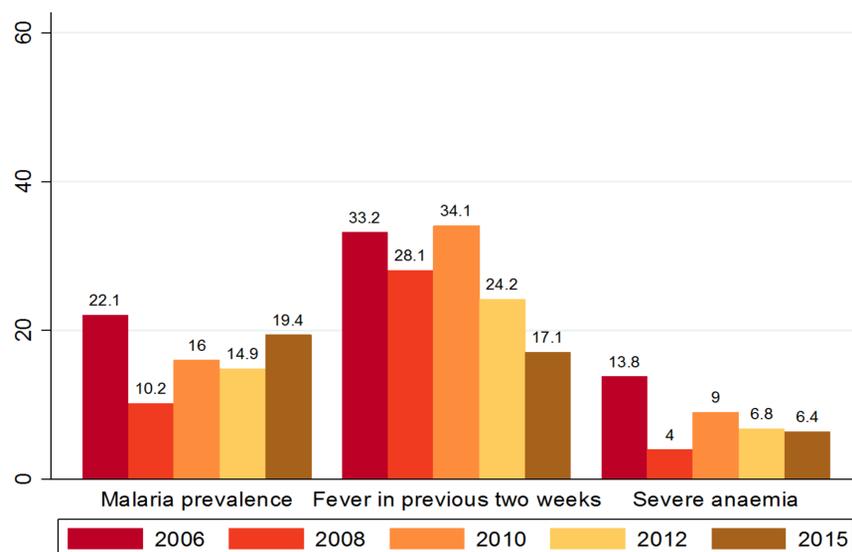


Figure 1. Malaria parasite prevalence among children under five years of age by province, 2015

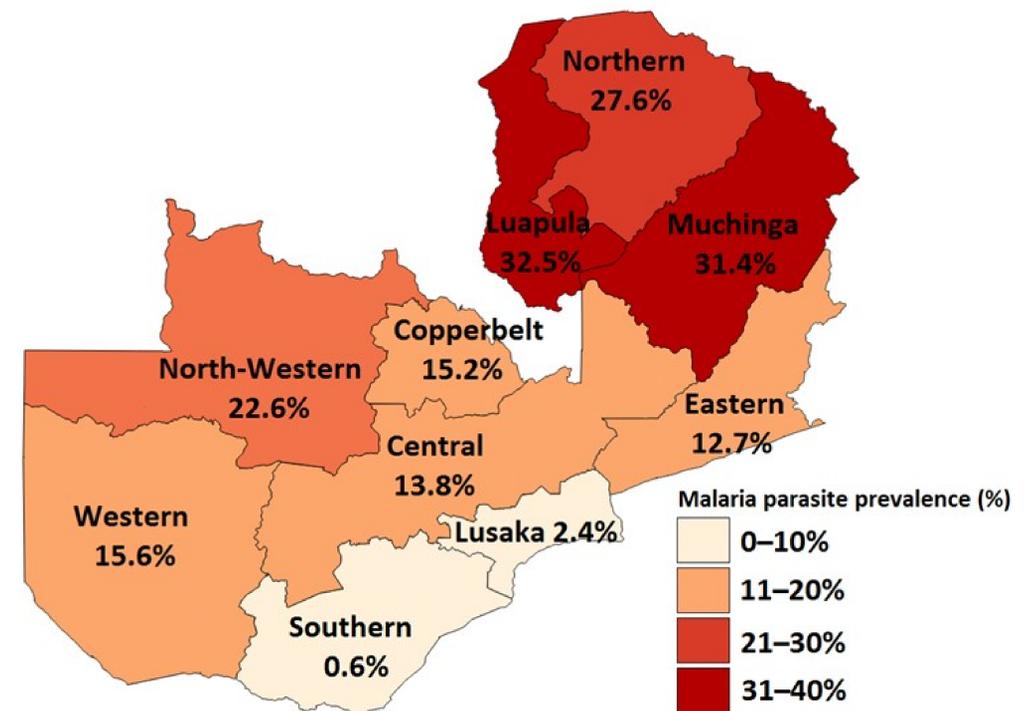


Figure 2. Distribution of sampled clusters

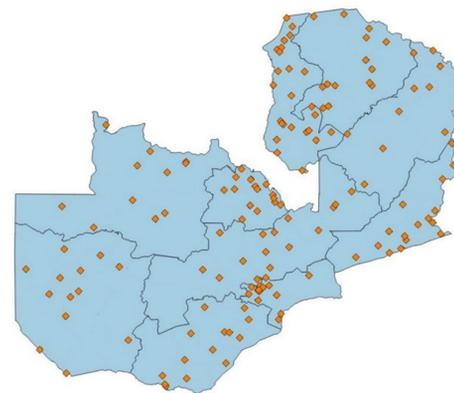


Figure 5. Percentage of households with at least one ITN and/or IRS

Nationally, 80.6% of houses either own an ITN or have been sprayed by IRS. Double coverage is reported in 25.3% of houses.

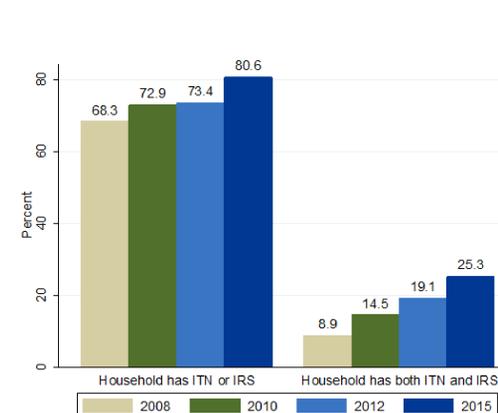


Figure 6. Households sprayed within the previous 12 months by urban/rural (2008–2015)

There has been a national shift towards spraying in more rural areas. In the most recent MIS, spraying rates were almost even between rural and urban areas.

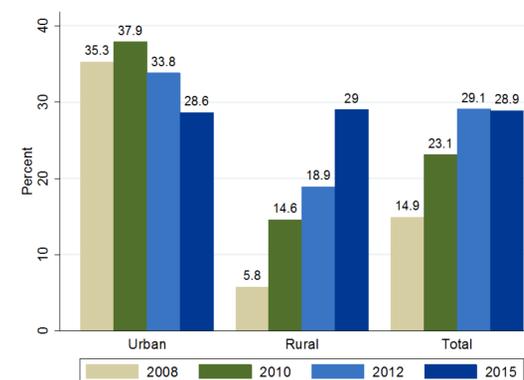
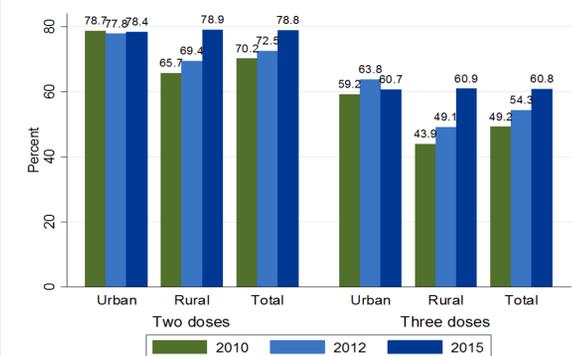


Figure 7. Women with recent births reporting coverage of intermittent preventive treatment during pregnancy (IPTp)

Zambia has consistently had high reported use of IPTp with SP for malaria prevention in pregnancy in both urban and rural areas.



Conclusions

- The 2015 MIS reflected the benefits of the 2014 mass distribution of ITNs. However, sufficient ITNs were still not available to ensure full coverage of all sleeping spaces.
- Despite the high coverage of ITNs, there was not a drop in malaria prevalence by microscopy.
- Most provinces could further expand IRS and successes in Eastern and Southern Province show the advantage of this strategy.
- IPTp coverage of two and three doses continued to improve between 2012 and 2015 and Zambia remains exceptional in this area.
- More nuanced, informative, and appealing messaging is needed to communicate the advantages of sleeping under nets.
- Further interventions are needed to reduce prevalence in the highest burden areas and drive towards elimination in other areas.