



NATIONAL MALARIA CONTROL PROGRAMME



Zambia 2010 Malaria Indicator Survey Provides Evidence for Action

Zambia continues making strong progress in its fight against malaria, while also identifying critical areas requiring rapid, intensified focus. Results from the Zambia National Malaria Indicator Survey 2010 (MIS) show that use of Coartem[®], among antimalarials used to treat fever in children under age five years, increased dramatically since 2008; IRS activities have expanded into more rural, malarious areas of the country; and rates of combined ITN and IRS coverage continue to increase. At the same time, a resurgence of malaria and severe anaemia in three of Zambia's nine provinces makes clear the urgent need for timely procurement and distribution of prioritized interventions.

The MIS 2010 builds on more than five years of focused measurement activities to document progress toward the 2006–2010 National Malaria Strategic Plan. These include three national MISs to benchmark the successes and challenges in controlling malaria throughout the country. Based on these findings several conclusions can be drawn.

Progress is being maintained in many areas

The 2010 MIS produced evidence of continued national progress in uptake of interventions (**Table 1**):

- In 2010, 64% of households owned at least one ITN, compared to 62% in 2008; among these households, 42% had members who slept under an ITN the previous night, compared to 34% in 2008; 50% of children under age five years slept under an ITN the night before the survey, compared to 41% of these children in 2008; and 46% of pregnant women reported sleeping under an ITN the previous night, compared to 43% in 2008.
- Thirty-four percent of febrile children took an antimalarial medicine in 2010, compared to 43% in 2008; the percentage of febrile children who took Coartem[®] treatment, more than doubled from 12% in 2008 to 26% in 2010.
- Seventy percent of pregnant women reported taking two doses of IPT during their last pregnancy, compared to 66% in 2008.

- Nationally, nearly a quarter of households in Zambia reported being sprayed, with a ten-fold increase having occurred since 2006 in rural areas.
- Seventy-three percent of households were covered by at least one ITN or recent IRS, compared to 68% in 2008.

New challenges emerge

Resurgences of malaria and/or severe anaemia in three provinces, with corresponding reductions in ITN and IRS coverage were noted in the 2010 MIS.

- In Luapula and Northern provinces, there were marked drops in household ownership of ITNs between 2008 and 2010 (29% and 31% reductions, respectively).
- In the same provinces, ITN use by children under age five years the night before the survey decreased dramatically—dropping by 33% and 25%, respectively; in Luapula only 34% of children under five years of age slept under an ITN the previous night.
- In Luapula and Northern provinces, 2010 rates of malaria were 51% and 24%, respectively, and rates of severe anaemia were 21% and 11%, respectively, compared with 2008 malaria rates of 22% and 12%, respectively, and severe anaemia rates of 7% and 3%, respectively. Steep declines in ITN ownership and use likely can account for much of these increases.
- Eastern Province maintained ITN coverage from 2008 to 2010 but experienced a resurgence in malaria during that interval (from 9% to 22%).

A lack of timely replacement of ITNs hampered malaria control efforts in at least three provinces. ITN replacements are essential for replacing physically damaged nets and those that may have reduced insecticidal efficacy.

Redefining “malaria”

Zambia has made great progress in expanding use of rapid diagnostic tests (RDTs) for diagnostically confirming malaria. In the past, children with fever were presumptively treated for malaria; now they receive parasitological testing

to ensure that appropriate medicines are dispensed. The expanded use of diagnostics such as RDTs means that as malaria cases continue to decline, so will use of antimalarial drugs. This has important implications as efforts to achieve and sustain high intervention coverage rates become more localized. Screening populations with diagnostic confirmation and treating those with infection will be important to further curtail malaria transmission. Such an activity is appropriate in areas with high malaria infection and transmission rates as a supplement to existing malaria prevention interventions.

Sustaining high coverage

Zambia's 2010 MIS results point clearly to the need for anticipating and responding to local needs and potential large-scale bottlenecks that slow or interrupt intervention procurement and delivery. Provinces that experienced considerable increases in malaria and severe anaemia also had corresponding low rates of ITN ownership and use, and ITNs being used were often old and likely less effective.

Table 1. Benchmarking change in Zambia

Indicator	DHS 2001/ 2002 ¹	MIS 2006 ²	DHS 2007 ³	MIS 2008 ⁴	MIS 2010 ⁵
Percentage of households with at least one insecticide-treated net (ITN)	14	38	53	62	64
Percentage of households with at least one ITN per sleeping space	N/A	N/A	N/A	33	34
Percentage of households receiving indoor residual spraying (IRS) in the previous 12 months among all households in Zambia	N/A	10	N/A	15	23
Percentage of households covered by at least one ITN or recent IRS	N/A	43	N/A	68	73
Percentage of children ages 0–59 months who slept under an ITN the previous night	7	24	29	41	50
Percentage of pregnant women (PW) who slept under an ITN the previous night	8	25	33	43	46
Percentage of household members who slept under an ITN the previous night	N/A	19	N/A	34	42
Percentage of PW who took any preventive antimalarial drug during pregnancy	36	85	87	88	89
Percentage of PW who received two doses of intermittent preventive treatment during pregnancy	N/A	59	66	66	70
Percentage of children ages 0–59 months with severe anaemia (Hb<8 g/dl)	N/A	14	N/A	4	9
Percentage of children ages 0–59 months with malaria parasitaemia	N/A	22	N/A	10	16
Percentage of women ages 15–49 years who recognize fever as a symptom of malaria	N/A	65	N/A	71	75
Percentage of women ages 15–49 years who reported mosquito bites as a cause of malaria	N/A	80	N/A	85	85
Percentage of women ages 15–49 years who reported mosquito nets as a prevention method	N/A	78	N/A	81	82

1. Zambia Central Statistical Office, Zambia Central Board of Health, and ORC Macro. 2003. Zambia Demographic and Health Survey 2001–2002. Available at: http://www.measuredhs.com/pubs/pub_details.cfm?ID=403&ctry_id=47&SrchTp=ctry. Calverton, MC, USA: Central Statistical Office, Central Board of Health, and ORC Macro.
2. Zambia Ministry of Health, 2006. Zambia National Malaria Indicator Survey 2006. Lusaka, Zambia: Ministry of Health. Available at: <http://nmcc.org.zm/whsites.net/files>
3. Zambia Central Statistical Office, Zambia Ministry of Health, Tropical Diseases Research Centre, University of Zambia, and Macro International Inc. 2009. Zambia Demographic and Health Survey 2007. Calverton, MD, USA: CSO and Macro International Inc. Available at: http://www.measuredhs.com/countries/country_main.cfm?ctry_id=47&c=Zambia
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5. Zambia Ministry of Health, 2010. Zambia National Malaria Indicator Survey 2010. Lusaka, Zambia: Ministry of Health. Available at: <http://www.nmcc.org.zm>