



NATIONAL MALARIA CONTROL PROGRAMME



Scaling Up Malaria Control in Zambia: Using Results to Inform Actions

Introduction

Reducing the burden of malaria is a national health priority in Zambia, where each year nearly four million clinical cases are diagnosed and 50,000 deaths are attributed to the disease.¹ The Zambian Ministry of Health is implementing an ambitious six-year national strategic plan to reduce malaria incidence by 75% by 2011² by aggressively scaling up nationwide coverage of the core malaria interventions: use of insecticide-treated nets (ITNs), indoor residual spraying (IRS), prompt effective case management, and intermittent preventive treatment during pregnancy (IPTp). We have made considerable progress, having already achieved national targets for IRS and Roll Back Malaria (RBM) Abuja targets for IPTp, and we are well on our way to achieving targets for ITN coverage and case management.

Zambia was an early participant in the launch of the 1999 RBM Partnership, at which time the country's Minister of Health was one of the initial national delegates to the RBM Board. We brought to the table a strategic plan that was consistent with expectations for deployment of proven malaria interventions, and we shared a great deal of motivation with several other African countries. But initial surveys in 2001 and 2004 showed relatively low national population coverage with the key interventions.^{3,4} In addition, we severely lacked the resources, in terms of money or people, to deliver on the strategic plan.

Today, the malaria control landscape is transformed. As a recipient of grants in Rounds 1 and 4 from the Global Fund to Fight AIDS, Tuberculosis and Malaria, resources increased dramatically. Longstanding partners such as UNICEF, WHO, and USAID continued their support specifically to malaria. Other partners sustained their support into district health funds which included malaria work. New partners have also helped: the World Bank Malaria Booster Program; the Bill & Melinda Gates Foundation via the Malaria Control and Evaluation Partnership in Africa (MACEPA), a program at PATH; the Japanese International Cooperation Agency; and additional funding from the US President's Malaria Initiative (beginning in 2008) have all added substantially to the resource base, strongly positioning us to achieve our goals.

2006 Malaria Indicator Survey

Recognizing that robust monitoring and evaluation are essential to understanding impact and improving programme performance, Zambia, together with key partners, conducted a malaria indicator survey⁴ (MIS) in May and June 2006. The findings showed that significant progress had been made

toward national malaria programme coverage goals and also helped identify actions critically needed to achieve impact.

Methodology

Zambia was the first country to use an MIS survey package developed by the RBM Monitoring and Evaluation Reference Group which provided standardized household survey methods, questionnaires, and materials.⁵ Three thousand randomly selected households in all nine provinces were surveyed, providing representative national, urban, and rural estimates, as well as estimates for the ten RBM sentinel districts. Field teams used standardized questionnaires that had been preprogrammed onto hand-held personal digital assistants to facilitate data entry, extraction, and analysis. In addition to answering questions, survey subjects were tested for malaria parasites and anaemia.

Findings

ITN coverage

In our national malaria strategic plan for 2006-2011, we aimed to have 80% of the population sleeping under an ITN, with an ITN ownership rate of three nets per household, by the end of 2008. At the time of the 2006 MIS, the coverage rate for ITNs was 44%—nearly triple what it had been five years before.⁶ This was found to have especially important implications for child health: compared to children in households without ITNs or IRS, those with ITNs had approximately 38% less fever illness, 51% less malaria infection, and 56% less severe anaemia.

The study also showed that ITN *usage* rates—though they had doubled since 2001—were still low. In 2006 among households with at least one ITN, less than 50% of children under age six slept under the ITN the night preceding the survey.

IPTp coverage

Our goal for IPTp is to provide access to three doses of IPTp to at least 80% of pregnant women through antenatal care clinics by the end of 2008. The 2006 MIS showed that over 60% of pregnant women in Zambia were already receiving 2 or more doses of IPTp, exceeding the RBM Abuja target.

IRS coverage

In 2004, Zambia began to scale up IRS in 15 of the country's most urban districts, with a goal of reaching more than 85% of the households with IRS by 2008. Efforts to scale up IRS spraying before the 2005-2006 rainy season met delays and challenges. At the time of the 2006 MIS (reflecting the 2005-2006 spraying effort), 34% of targeted households were sprayed, with some areas reaching 77%.

Case management

The national goal in this area is to diagnose and treat 80% of malaria patients with artemisinin-based combination therapy (ACT) within 24 hours of the onset of fever. ACTs became the first-line malaria treatment in 2003, and there have been many challenges in the transition to Coartem[®], including supply shortages, distribution system issues, increased cost of treatment, and health worker training. In 2006, approximately 58% of febrile children were treated with an antimalarial drug and 13% received an ACT within 24 hours of onset of illness.

What We Have Learned, Where We Are Going

The 2006 MIS provided vital information that has helped guide our 2007 activities, intensifying our efforts in areas needing more work and celebrating the gains we have made to date. Key lessons and activities in 2007 include:

- **Remarkable strides have been made in increasing IRS coverage.** In 2007, Zambia employed innovative approaches in its IRS activities, including use of handheld computers and digital satellite mapping to enumerate targeted households and plan annual spraying efforts. With insecticides and equipment in place and team trainings completed, Zambia recently achieved its goal of exceeding 85% coverage in 15 targeted districts.
- **ITN coverage rates are high and increasing.** During an intense week-long ITN mass distribution and retreatment campaign in August, over 1.3 million ITNs were supplied to districts in three provinces. We are on track to distribute more than 3.4 million ITNs this year—a remarkable accomplishment reflecting coordinated partner planning, procurement, and distribution (Figure 1).
- **ITN coverage does not guarantee use.** Behaviour change communication is an intense area of focus. Educating mothers, engaging community leaders, and accompanying net distribution campaigns with public information are central to ensuring that those most vulnerable to malaria are protected.
- **Prompt, effective case management is strengthening.** The 2006 MIS data suggested an urgent need to focus on this

area, and today Coartem[®] supplies are adequate, distribution to districts is more even, policy has evolved to allow further outreach, and community health workers are being trained to better diagnose and treat malaria with ACTs.

- **Reductions in fever, malaria infection, and severe anaemia are consistent with what the ITN scientific studies showed for these outcomes.** Because those studies also showed reductions in child deaths, we believe that our findings are consistent with our having saved child lives. A demographic and health survey currently under way in Zambia will help us explore this further.

With each year, we have improved our partnership, improved our planning, and secured additional resources. There remains a distance to go to achieve our targets for national coverage of all of the interventions, but 2007 has been our strongest year yet in terms of prevention services delivered, and we look forward to a safer rainy season this coming year.

1. Ministry of Health Zambia, Health Management Information System (HMIS) Unit. Lusaka: HMIS; 2004.
2. Ministry of Health Zambia. *A Road Map for Impact on Malaria in Zambia, a 6-Year Strategic Plan, 2006-2011*. Lusaka: National Malaria Control Centre, RBM Task Force; 2006. <http://www.nmcc.org.zm/files/6NMCPStrategicPlanZMOH.doc>
3. Central Statistical Office [Zambia], Central Board of Health [Zambia], and ORC Macro. 2003. *Zambia Demographic and Health Survey 2001 – 2002*. http://www.measuredhs.com/pubs/pub_details.cfm?ID=403&srchTp=advanced
4. Ministry of Health Zambia, *RBM Baseline and Follow-up Report, 2004*. Lusaka: National Malaria Control Centre, 2004.
5. Zambia Ministry of Health. *Zambia National Malaria Indicator Survey 2006*. Lusaka: Ministry of Health; 2006. http://www.nmcc.org.zm/files/2006_Zambia_Malaria_Indicator_Survey.pdf
6. Roll Back Malaria Monitoring and Evaluation Reference Group, World Health Organization, United Nations Children's Fund, MEASURE DHS, MEASURE Evaluation, and U.S. Centers for Disease Control and Prevention, 2005. *Malaria Indicator Survey: Basic documentation for survey design and implementation*. Calverton, Maryland: MEASURE Evaluation; July 2005. http://www.rollbackmalaria.org/partnership/wg/wg_monitoring/docs/mis2005/misintro.pdf
7. *Zambia Demographic and Health Survey 2001 – 2002*.

