

## Case Studies: Malaria in East Africa

### Tanzania:

- Strong leadership from HE Jakaya Mrisho Kikwete, President of Tanzania, in the fight against malaria
- Critical infrastructure support to Olyset manufacturing joint venture, including the creation of new jobs, roads, and water access. Olyset, manufactured in Tanzania, is the only WHOPEs-recommended bednet manufactured in Africa.
- ACT initiative with Clinton Foundation
  - President Clinton and Tanzanian Minister of Health, David Mwakyausa, launched a pilot ACT subsidy in July 2007 to scale-up availability and access to subsidized malaria drugs, or artemisinin-based combination therapies (ACTs) in Tanzania.
  - Project partners include Clinton Foundation HIV/AIDS Initiative (CHAI), the Government of Tanzania, Population Services International (PSI) and the Bill and Melinda Gates Foundation.
  - Launched in two areas in central Tanzania; targets 450,000 people in the first year. Designed to serve as a blueprint in Africa for future initiatives.
  - Half of malaria patients in the country seek treatment through private drug shops instead of public health facilities. The initiative will lower ACT drug prices through a subsidy, placing the cost at 90 percent less than the market price. The drugs will be distributed through existing systems, including to private shops.

### Kenya:

- In 2005, the Kenyan government launched a malaria prevention campaign, with mass distribution of insecticide treated nets, targeting children under the age of five and expectant mothers.
- Between campaign roll-out in 2005 and the end of 2006, malarial deaths of children under five were nearly halved.
- 3.4 million insecticide treated nets have been provided and 2 million additional nets are planned for future distribution.
- The Health Ministry reports for every 1000 mosquito nets being used 7 children's lives are saved.
- Partners include DFID, USAID, Global Fund, the Kemri/Welcome Trust programme, Kenya Red Cross, PSI, UNICEF, and WHO.
- Study: "The decline in paediatric malaria admissions on the coast of Kenya<sup>1</sup>":
  - Since January 1999, malaria admissions have significantly declined in hospitals in coastal Kenya. Models strongly suggest that the decline in malaria admissions was a result of malaria-specific control efforts in the hospital catchment areas, namely ITN interventions.
  - By March 2007 the estimated proportional decline in malaria cases was 63% in Kilifi, 53% in Kwale and 28% in Malindi.

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<sup>1</sup> Okiro, Emelda Al, et. al., November 2007. "The decline in paediatric malaria admissions on the coast of Kenya." *Malaria Journal* 2007, 6:151.

## Millennium Village Malaria Reduction, Sauri Cluster:

- Sauri, located in Kenya's Nyanza Province, is part of the Millennium Research Villages project conducted by The Earth Institute. Distribution of LLINs are part of a comprehensive malaria prevention, training, and treatment approach including improved health facilities, better nutrition, and clean up of stagnant water sources.
- 32,000 long-lasting, insecticide-treated bed nets were distributed in August 2006.
- The Earth Institute has shown a 75% reduction of malaria with the use of LLINs. Detailing the 75% reduction, in 2005, prior to the distribution of Olyset nets to all households, malaria parasitemia was measured at 55%. In December 2006 malaria parasitemia was measured at 13%.

## Zanzibar:

In Zanzibar, malaria was greatly reduced among children under age five after new U.S. and other assistance began. As part of the programme, the President's Malaria Initiative and the Global Fund distributed more than 230,000 insecticide-treated bed nets in Zanzibar in early 2006, increasing ITN coverage from about 10% to 90%. Interventions also included the replacement of chloroquine with free ACTs for all malaria patients nationwide in 2003.

- From 2003-2006 the Zanzibar Ministry of Health and Social Welfare (ZMoHSW) conducted a malaria intervention programme in the North A district, of Zanzibar, in a rural population of 85,000<sup>2</sup>.
- The government conducted wide-scale deployment of LLINs in 2006 to all children under five and pregnant women as a subsequent step to earlier provision of ACTs as a combined intervention recommended by the Roll Back Malaria Partnership.
- Prevalence of *P. falciparum* in under five population dramatically reduced between 2003 and 2006<sup>3</sup>
  - 2003 = 9 percent
  - 2005 = 5.3 percent
  - 2006 = .3 percent
- It was concluded that reaching the Millennium Development Goal "to halt and begin to reverse malaria incidence" may be achievable in Africa with combined interventions utilizing LLINs.

<sup>2</sup> Bhattaria, Achuyt (Corresponding Author), MD, MSC DTM&H, *et al.*: "Impact of Artemisinin-based Combination Therapy And Insecticide Treated Nets on Malaria Burden in Zanzibar." Unit of Infectious Diseases, Department of Medicine, Karolinska University Hospital, Stockholm, Sweden; Zanzibar Malaria Control Programme, Zanzibar, Tanzania.

<sup>3</sup> Bhattarai A, Ali AS, Kachur SP, Mårtensson A, Abbas AK, *et al.* (2007) "Impact of Artemisinin-Based Combination Therapy and Insecticide-Treated Nets on Malaria Burden in Zanzibar." *PLoS Med* 4(11): e309 doi:10.1371/journal.pmed.0040309.