Three-page Summary of the World Malaria Report 2009

The 2009 World Malaria Report summarizes information received from 108 malaria endemic countries and other sources and updates the analysis presented in the 2008 Report. It highlights progress made in meeting the World Health Assembly (WHA) targets for malaria to be achieved by 2010 and 2015, and new goals on malaria elimination contained in the Global Malaria Action Plan (2008).

Insecticide-treated nets (ITNs). ITNs are a highly effective means of reducing the transmission of malaria and WHO recommends their use by all age groups. Nearly 140 million long-lasting insecticidal nets (LLINs) were delivered to high-burden countries in the African Region in 2006–2008. An increased percentage of African households (31%) were estimated to own at least one insecticide-treated net (ITN) in 2008 compared to 2006 (17%), and more children under 5 years of age used an ITN in 2008 (24%) compared to previous years, but the percentage of children using a net is still below the WHA target of 80%. These regional averages are affected by low ITN ownership in several large African countries for which resources for scale-up are only now being made available; household ITN ownership reached more than 50% in 13 high burden African countries.

Indoor Residual Spraying (IRS) with WHO-approved chemicals (including DDT) remains one of the main interventions for reducing and interrupting malaria transmission by vector control in all epidemiological settings. In 2008, 44 countries, including 19 in the African Region, reported implementing IRS. The number of people in the WHO African region protected by IRS increased from less than 1 million in 2001 to 59 million in 2008.

Intermittent preventive treatment (IPTp) is recommended for pregnant women in areas of high transmission. Thirty-three countries in the African Region, 3 in the Eastern Mediterranean Region and 1 in Western Pacific Region had adopted an IPTp policy by 2009. Nine household surveys conducted in Africa in 2007–2008 showed that 20% of pregnant women received a second dose of ITP.

Case Management. Prompt parasitological confirmation by microscopy or with a rapid diagnostic test (RDT) is recommended for all patients with suspected malaria, before treatment is started. Treatment solely on the basis of clinical suspicion should be considered only when a parasitological diagnosis is not accessible. Confirmed cases of uncomplicated *Plasmodium falciparum* malaria should be treated with an artemisinin-based combination therapy (ACT) and *P. vivax* malaria with chloroquine where it is effective, or an appropriate ACT in areas where *P. vivax* is resistant to chloroquine. Treatment of *P. vivax* should be combined with 14 days of primaquine to prevent relapse.

In 2008, 20 of 45 malaria-endemic countries in the WHO African Region and 51 of 64 countries outside the African Region reported having a policy of parasitological testing of suspected malaria cases in persons of all ages, and 78 countries reported a policy of treatment with ACT for *P. falciparum* malaria. In 18 high-burden WHO African Region

countries for which data were available, only 22% of the reported suspected malaria cases were confirmed with a parasite-based test in 2008.

Increased numbers of ACTs are being procured, and the percentage of children with fever who are treated with an ACT is rising. Nevertheless, countries received only about 50% of the ACTs needed to treat malaria cases at health facilities in the public sector in 2008 and utilization of ACTs, was very low in African countries. In 11 of 13 countries surveyed during 2007–2008, fewer than 15% of children under 5 years of age with fever had received an ACT, well below the WHA target of 80%.

Confirmation of resistance to artemisnins was reported in 2009, and WHO is leading a major resistance containment effort in South East Asia. Key elements in the global strategy to prevent the spread of drug resistance include: 1) Rapidly reducing the spread of malaria using malaria prevention tools 2) ensuring that all malaria infections are correctly diagnosed, effectively treated and followed-up to ensure that they do not spread the disease to others, 3) halting the marketing and use of oral artemisinin monotherapies and importantly, 4) carefully monitoring the efficacy of medicines to detect early evidence of resistance.

Reduction in malaria cases and deaths The goal established by the Member States at the World Health Assembly and the Roll Back Malaria (RBM) Partnership is to reduce the numbers of malaria cases and deaths recorded in 2000 by 50% or more by the end of 2010 and by 75% or more by 2015. More than one-third of the 108 malarious countries (9 African countries and 29 outside of Africa) documented reductions in malaria cases of > 50% in 2008 compared to 2000, though the number of cases fell least in countries with the highest incidence rates indicating that greater attention should be given to countries that account for most malaria cases and deaths.

In high burden African countries, recorded cases and deaths due to malaria fell by 50% in countries and areas that achieved high coverage with bed nets and treatment programs (e.g. Eritrea, Rwanda, Sao Tome, Zambia and Zanzibar), suggesting that Millennium Development Goal (MDG) targets for malaria can be achieved if there is adequate coverage of key interventions.

There is evidence from Sao Tome and Principe, Zanzibar and Zambia that large decreases in malaria cases and deaths have been mirrored by steep declines in all-cause deaths among children less than 5 years of age, suggesting that intensive efforts at malaria control could help many African countries to reach, by 2015, a two-thirds reduction in child mortality as set forth in the MDGs.

Elimination In September 2008, the RBM Partnership set a target of eliminating malaria in eight to ten countries by 2015 and afterwards in all countries that were in the pre-elimination phase in 2008. Ten countries are now implementing elimination programmes nationwide (six having entered the elimination phase in 2009), and a further eight countries are in the pre-elimination stage of malaria control in 2009. Nine countries (Armenia, Bahamas, Egypt, Jamaica, Morocco, Oman, Russian Federation, Syrian Arab

Republic and Turkmenistan) have interrupted transmission and are in the phase of preventing re-introduction of malaria.

Parasite resistance to antimalarial medicines and mosquito resistance to insecticides are major threats to achieving global malaria control. Well conducted surveillance of drug efficacy in endemic countries with support from WHO has shown early evidence of resistance to artemisinins, and WHO is leading a major resistance containment effort. Continued use of artemisinin monotherapy is a major factor in parasite resistance; yet, despite WHO's call for a halt to their use, marketing of artemisinin monotherapies continues in many countries.

Financing of malaria programs. International disbursements to malaria-endemic countries have increased dramatically from US$ 35 million in 2000 to US$ 652 million in 2007, largely due to the emergence of the Global Fund and increased commitments by the US President's Malaria Initiative, the World Bank and other agencies. However, the funds available for malaria control still fall short of the US$ 5 billion required annually to ensure high coverage and maximal impact world wide. Approximately 80% of external funds were targeted to the WHO African Region. The South-East Asia Region received the least money per person at risk for malaria and saw the lowest increase in external financing between 2000 and 2007. The increased funding is resulting in dramatic scale-up of malaria control interventions in many settings and measurable reductions in malaria burden. However, external funds for malaria control are disproportionately concentrated on smaller countries with lower disease burdens. More attention needs to be given to ensuring success in large countries that account for most malaria cases and deaths, and protecting the gains that have been made.