

Malaria

Report by the Secretariat

1. At its 132nd session in January 2013, the Executive Board considered a progress report on malaria.¹ Although the Board noted that report,² it agreed, in the light of the serious and growing threat to global malaria control and treatment programmes, to elevate the subject to a full technical item for consideration by the Health Assembly and to amend the provisional agenda accordingly.³ Accordingly, the progress report has been updated and expanded into the present report. In addition to reviewing progress in the implementation of resolution WHA64.17, it presents a detailed update on global efforts to prevent, control and eliminate malaria, and provides information on the status of parasite resistance to artemisinin, the key compound in the WHO-recommended first-line treatment for uncomplicated malaria due to *Plasmodium falciparum*, and steps being taken to contain that resistance.

THE CURRENT SITUATION

2. Owing to an unprecedented international effort to combat malaria, mortality rates decreased by more than 25% worldwide between 2000 and 2010. The decline was 33% during the same period in the African Region, where the disease burden is the greatest. Between 2004 and 2010, the annual number of global malaria deaths dropped from an estimated 810 000⁴ to 660 000.⁵ Malaria transmission continues, however, in 99 countries and territories around the world, affecting all WHO regions. In 2010, about 3300 million people were at risk of malaria, and 90% of all malaria-related deaths occurred in sub-Saharan Africa, mainly among children under five years of age.

3. Further progress is imperilled by a substantial funding shortfall. International disbursements for malaria prevention and control rose steeply during the past eight years and were estimated to be US\$ 1660 million in 2011 and US\$ 1840 million in 2012. National government funding for malaria programmes has also increased in recent years. Despite these increases, currently available funding falls far below the resources required to reach global malaria targets. An estimated US\$ 5100 million is needed every year between 2011 and 2020 in order to enable universal access to malaria interventions worldwide. According to estimates produced by the Roll Back Malaria Partnership, the funding shortfall for the period 2013–2015 for sub-Saharan Africa alone is US\$ 3600 million. Replenishment of the Global Fund to Fight AIDS, Tuberculosis and Malaria is essential for continued

¹ See document EB132/42 Add.1, section F.

² See the summary record of the Executive Board's discussion at its fifteenth meeting, section 2.

³ Decision EB132(17).

⁴ Range 603 000–1 029 000 deaths.

⁵ Range 490 000–836 000 deaths.

progress towards achieving Millennium Development Goal 6. Co-financing mechanisms, such as bonds and specialized taxes are also being investigated, under the leadership of the United Nations Secretary-General's Special Envoy for Malaria.

4. The plateauing of international funding in recent years has triggered a slowdown in both the delivery of malaria commodities and the expansion of interventions. The number of long-lasting insecticidal nets delivered to countries in sub-Saharan Africa where malaria is endemic dropped from a peak of 145 million in 2010 to an estimated 66 million in 2012. In December 2012, the Secretariat warned that this decline may lead to major resurgences of malaria in areas where bed nets cannot be replaced in time.¹ The Secretariat is working with countries endemic for malaria and global partners to mobilize resources, to improve existing resource allocation for vector control interventions, to establish a framework for distribution of long-lasting insecticidal nets, and to improve the durability of such nets. Progress has also slowed in efforts to expand indoor residual spraying coverage of dwellings of people at risk, and to increase the number of artemisinin-based combination therapies that are procured by the public sector. Meanwhile, the uptake of recommended preventive chemotherapies for infants, children and pregnant women also remains low.

PROGRESS IN IMPLEMENTING RESOLUTION WHA64.17

5. The Organization has been monitoring the implementation of recent Health Assembly resolutions on malaria (including resolution WHA64.17) and relevant regional committee resolutions, including progress in implementing regional strategies, achievement of targets for malaria, and work to halt the use of oral artemisinin-based monotherapies. WHO's *World malaria report 2012* contains the latest available data from WHO's regions, and a comprehensive and up-to-date assessment of the impact of malaria interventions around the world.

6. According to the *World malaria report 2012*, 50 countries are on track to reduce their malaria case incidence rates by 75%, in line with Health Assembly and Roll Back Malaria targets for 2015. Nine of these countries are in the African Region. A further four countries are projected to achieve reductions of 50% to 75%. Progress in reducing malaria case incidence and mortality has been faster in countries with lower numbers of cases and deaths, but malaria interventions have saved more lives in countries where the malaria burden is greatest.

7. Progress towards the Health Assembly target set in resolution WHA58.2 is challenging to measure as surveillance systems in countries where malaria is endemic detect only around one-tenth of the estimated global case count. In 41 such countries, an assessment of malaria trends can only be made with case and mortality estimates, using a modelled relationship between malaria transmission, case incidence or mortality, and intervention coverage. Further progress in tackling the disease can be made only if surveillance systems are improved and malaria interventions are substantially expanded in the 17 most affected countries, which account for an estimated 80% of malaria cases.

8. In 2011, the Director-General established the Malaria Policy Advisory Committee, an independent advisory group, which met for the first time in January 2012. Its creation has allowed the Secretariat to strengthen its policy-setting process for malaria control and elimination, and to make it more transparent and responsive to the needs of Member States. At its September 2012 meeting, the Committee asked the Global Malaria Programme to prepare a global technical strategy for malaria

¹ *World malaria report 2012*. Geneva, World Health Organization, 2012.

control and elimination for the period 2016–2025. The third meeting of the Committee was held in March 2013.

9. Several new strategies and policies have been issued, including the Global plan for insecticide resistance management in malaria vectors (2012);¹ a recommendation on seasonal malaria chemoprevention for control of *P. falciparum* malaria in highly seasonal transmission areas of the Sahel subregion of Africa (2012); and a position statement on the role of larviciding for malaria control in sub-Saharan Africa (2012). The Secretariat has also issued updated recommendations on intermittent preventive treatment of malaria in pregnancy using sulfadoxine-pyrimethamine, and the use of primaquine in a single dose as a gametocytocide in *P. falciparum* malaria.

10. In April 2012, the Director-General launched new surveillance manuals for malaria control and elimination, together with the T3: Test. Treat. Track initiative, urging an expansion of diagnostic testing, treatment and surveillance of malaria. The initiative is now being introduced throughout WHO's regions, focusing the attention of policy-makers on the importance of testing every *suspected* malaria case, treating every *confirmed* case with a quality-assured antimalarial, and tracking the disease through a timely and accurate surveillance system.

11. At the regional and country levels, the Secretariat has provided support to Member States in implementing malaria control and elimination programmes – including the conduct of national programme reviews and updating of national malaria policies and strategies – and with resource mobilization and coordination of partners. During 2011 and 2012, WHO facilitated malaria programme reviews in 27 countries. It has also issued region-specific technical guidance, including a new manual in the African Region for the development of national malaria strategic plans.

12. The Secretariat has launched a programme to support the expansion of integrated community case management of childhood illnesses, which facilitates the diagnosis and treatment of malaria, pneumonia and diarrhoea by community health workers. The Rapid Access Expansion 2015 Programme is being initiated in five countries in sub-Saharan Africa: the Democratic Republic of the Congo, Malawi, Mozambique, Niger and Nigeria. These efforts are essential for ensuring universal access to health services for the most vulnerable, and for the achievement of Millennium Development Goal 4 (Reduce child mortality).

13. Given that mosquito resistance to insecticides had been detected in 64 countries, and in response to the request in resolution WHA64.17, the Secretariat held a broad-based consultation with more than 130 stakeholders in the global malaria community as the basis for the development of the global plan for insecticide resistance management in malaria vectors, which was issued in May 2012. The global plan calls on governments, donor organizations, bodies in the United Nations system, as well as research and industry partners to implement a five-pillar strategy to tackle this growing threat, including the development of innovative vector-control tools and the planning and implementation of strategies for managing insecticide resistance.

14. The Secretariat has run several international and regional malaria training courses for programme managers and staff in national and subnational malaria control programmes, on topics that include: the planning and management of malaria control interventions; malaria surveillance, monitoring and evaluation; malaria elimination; and monitoring antimalarial drug resistance. Through WHO training courses in 2011 and 2012, more than 230 malaria programme managers and health

¹ *Global plan for insecticide resistance management in malaria vectors*. Geneva, World Health Organization, 2012.

professionals were trained in the African, Eastern Mediterranean and European regions. The Secretariat is developing a series of new training materials, tailored to the needs of countries with varying degrees of malaria endemicity.

15. The Secretariat has continued to provide tailored support to countries that are nearing elimination of malaria. At present, 10 of the 99 countries with continuing malaria transmission are classified by WHO as being in pre-elimination phase, and 10 countries are in the elimination phase. An additional five countries are in the prevention of re-introduction phase. Cross-border collaboration, the sharing of best practices, strong regional, intercountry and district-level efforts, and improvements in diagnostic tools will be essential to sustaining progress in countries advancing towards elimination, such as the signatories of the Tashkent Declaration (2005) in the European Region, as well as the countries of the Southern African Development Community, the Asia-Pacific region, the Arabian Peninsula and Mesoamerica. Investments in these efforts have resulted in an accelerated decline in malaria burden and increased capacity to prevent the reintroduction of malaria into areas where transmission has been interrupted.

16. The Secretariat has issued guidelines on transfer of technology in pharmaceutical manufacturing, and held technical seminars in several WHO regions for interested manufacturers of medicines against HIV/AIDS, tuberculosis and malaria. Through the Prequalification of Medicines Programme, the Secretariat has continued to provide technical support to manufacturers, which are making significant progress in meeting prequalification requirements. In June 2012, the Secretariat launched a pilot project to test a new collaborative procedure for sharing with interested national medicine regulatory authorities the outcomes of assessments and inspections organized by WHO and to accelerate national registrations of antimalarials and other prequalified medicines.

17. In September 2011, WHO established an interagency taskforce to identify the potential causes of stock-outs of artemisinin-based combination therapy in the public sector and to promote mitigating actions. The taskforce monitored central-level stocks of medicines in order to predict supplies over subsequent six-month periods, considering expected levels of consumption and orders. In February 2012, the taskforce began monitoring stocks of rapid diagnostic tests as well. As a result of the interagency effort, stock-outs of artemisinin-based combination therapy were averted in 17 countries during 2012. In early 2013, based on country feedback and situation analysis, the taskforce's focus was shifted to the 10 countries in Africa with the highest burden of malaria: Burkina Faso, Cameroon, Côte d'Ivoire, Democratic Republic of the Congo, Ghana, Mozambique, Niger, Nigeria, Uganda and United Republic of Tanzania.

CONTAINING ARTEMISININ RESISTANCE

18. The emergence of artemisinin resistance in the Greater Mekong subregion of South-East Asia has presented a significant challenge to efforts to prevent, control and eliminate malaria in recent years. Parasite resistance to artemisinin was first confirmed in Cambodia in 2008. Artemisinin-resistant parasites have since been detected also in Myanmar, Thailand and Viet Nam. A further spread of resistant strains of malaria parasites, or the independent emergence of artemisinin resistance in other regions, could disrupt global malaria control efforts and lead to unforeseeable consequences.

19. In 2011, the Director-General launched the Global plan for artemisinin resistance containment, calling on countries to implement a five-pillar strategy to prevent and contain artemisinin resistance. The Secretariat has provided support for containment programmes in the four affected countries of the

Greater Mekong subregion and has issued regular updates on the status of artemisinin resistance.¹ The Secretariat has also provided support to countries endemic for malaria in the African and other regions for improving therapeutic efficacy monitoring for antimalarial medicines.

Emergency response plan to contain artemisinin resistance

20. The Secretariat plans to issue in the second quarter of 2013 an emergency response plan to contain artemisinin resistance in the Greater Mekong subregion in order to guide the vigorous multi-stakeholder expansion of efforts to contain that resistance. A regional hub was established in Phnom Penh to coordinate optimum delivery of targeted programmes in response to countries' needs. Beyond a rapid expansion of prevention, diagnostic testing and treatment interventions to cover all at-risk groups, including migrants and mobile populations, the emergency response plan calls for a tighter coordination and management of field operations, a strengthening of drug-efficacy and insecticide-resistance monitoring, and improved malaria surveillance. Countries are also urged to accelerate research regarding artemisinin resistance, improve regulation of pharmaceuticals, strengthen cross-border collaboration, and build political commitment across different sectors of government.

21. The emergency response plan is being implemented by a consortium of countries in which malaria is endemic, organizations in the United Nations system and country-based partners, in the context of increasing regional political commitment to meet the challenge of drug-resistant malaria. Participants at a recent regional conference, "Malaria 2012: Saving lives in the Asia-Pacific" (Sydney, Australia, 31 October–2 November 2012) adopted a consensus document, pledging to accelerate efforts to control and eliminate malaria in the Asia-Pacific region. This text included a call for the establishment of an Asia-Pacific Leaders Malaria Alliance. This accord was followed by the adoption of the Declaration of the 7th East Asia Summit on Regional Responses to Malaria Control and Addressing Resistance to Antimalarial Medicines (Phnom Penh, 20 November 2012), reaffirming political commitment at the highest level, agreeing on a comprehensive approach, and supporting WHO's roles and actions.

POST-2015 DEVELOPMENT AGENDA

22. Malaria prevention and control has formed part of Millennium Development Goal 6, Target 6.C: to have halted by 2015 and begun to reverse the incidence of malaria and other major diseases. Even though the world is on track to achieve this target, it is imperative to maintain a high level of global commitment to reducing the suffering and loss of life caused by malaria. Malaria control should remain a key priority for global health and development efforts beyond 2015, with more focused attention on health system strengthening, which will enable countries where the disease is endemic to improve significantly their response to the challenges posed by malaria and other infectious diseases. Strong multisectoral collaboration and an effective global partnership under the umbrella of the Roll Back Malaria Partnership will be fundamental to making further progress, as will be predictable international donor funding and new, innovative financing mechanisms. Sustained political commitment on the national level, increased domestic funding and coordinated action by regional intergovernmental mechanisms are essential foundations on which future efforts to prevent, control and eliminate malaria can be built.

¹ Available on the Global Malaria Programme pages of the WHO web site: <http://www.who.int/malaria/en>.

ACTION BY THE HEALTH ASSEMBLY

23. The Health Assembly is invited to note the report.

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