A future without malaria

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When I made my first trip to Africa in the mid-1990s working as a paediatrician on maternal-child health in Mozambique, I was stunned by the intolerable burden of malaria, especially on women and children. The experience changed my life. I subsequently completed a master of public health degree and have spent the last 14 years working to help rid the world of this devastating disease.

Over the past decade, we have finally begun to see considerable progress being made in the fight against this ancient scourge. Since 2000, malaria mortality rates have been reduced by over 25% worldwide and by 33% in the World Health Organization (WHO) African Region. Nonetheless, an estimated 655,000 people still die each year. That is 655,000 deaths too many for a preventable and treatable disease. These deaths are tragic and needless. We must pull together and do everything in our power to ensure that the future for today’s children is a future without malaria.

Our immediate goal, in alignment with the Millennium Development Goals (MDGs), is to prevent and treat malaria today and to reverse the incidence of the disease by 2015. Our ultimate aim is to eradicate malaria from the face of the earth. Aiming for eradication, however, is not for the faint-hearted. It is a highly ambitious goal, and we cannot rely on one single tool. We need an arsenal of tools. We need robust vector control (insecticides to use for indoor residual spraying and on long-lasting insecticide-treated nets); accurate and field-friendly diagnostic tests for those with suspected malaria; antimalarial medicines to treat confirmed malaria cases; and ideally, a vaccine to protect people from actually becoming infected.

Sustaining the innovation

While it is true that we already have a number of effective tools – the result of major investments in basic research that have been successfully translated into vibrant product development – we cannot stand still. We must stay at least one step ahead of this stubborn foe.

If we look back at history, the malaria parasite has become resistant to each antimalarial medicine developed against it over time. Early signs of resistance to artemisinins have been reported in four south-east Asian countries to date; artemisinin is the key component of the current cornerstone of malaria treatment – artemisinin-based combination therapies (ACTs). WHO, ministries of health and implementing partners in these countries, are doing their utmost to prevent artemisinin resistance from spreading. At the beginning of 2011, WHO’s Director-General, Margaret Chan, launched the Global Plan for Artemisinin Resistance Containment (GPARC) – a high-level plan to protect ACTs as an effective treatment for malaria.

Thankfully, today ACTs do still cure patients, but they are unlikely to do so forever. Therefore, staying a step ahead of the parasite by developing new medicines ready to be deployed in the field as soon as they are needed, is a critical part of the long-term fight against malaria.

Another big challenge we face in the treatment of malaria is having medicines that are appropriate for the populations that need them. Since a staggering 86% of total malaria deaths are among those less than 5 years of age, it was critical to find an antimalarial formulation that can be easily taken by children. The availability of a child-friendly ACT formulation – of which Coartem® Dispersible, developed by Novartis and Medicines for Malaria Venture (MMV) was the first example – has been a big step forward. A formulation that is acceptable and easy to administer makes it more likely that patients will complete the prescribed treatment; this is essential for complete cure, and in the long run, for the prevention of drug resistance.
Partnerships – from innovation to access

New tools, including antimalarial medicines, are likely to be developed most quickly not by the private or public sectors alone, but in partnership. Product development partnerships (PDPs) like MMV, that engage the right partners at the right time throughout the whole process of development and delivery of new tools, have been, and will continue to be critical in the fight against malaria.

Once such tools are to hand, the hard work of access then begins. There is no use in developing a fabulous antimalarial if it does not reach the people who need it. Ensuring access to new tools involves many important steps including: evidence review and global policy setting; adoption as national guidelines; training and capacity building; procurement and supply-chain management; quality assurance; consumer education and community mobilization; and surveillance, monitoring and evaluation. The information that emerges from the experience of scaling-up these interventions then needs to be captured and analysed to inform the development of the next generation of new tools.

In all these steps, the role of partnerships is critical. We need multilateral and bilateral organizations, major foundations and other donors, academia, the private sector, faith-based entities, and civil society organizations to come together to support malaria-endemic countries in their efforts to reach the ambitious MDGs and ultimately to eliminate this disease from their borders. Human beings are capable of amazing things. Together, we can work towards achieving the dream of a future without malaria.

Since 2000, malaria mortality rates have been reduced by over 25% worldwide.