



Commonwealth Health Ministers' Update 2010



Chapter 4

■ The case for accelerating malaria care: edging closer to the MDGs

Jaya Banerji
Medicines for Malaria Venture

The global community periodically sets itself Herculean tasks, optimistic in the belief that the world can be a better place and that battles against deadly diseases, poverty, malnutrition and illiteracy can and must be won. Some of these heroic challenges were enshrined in the Millennium Development Goals at the turn of the 21st century when 189 countries made a joint promise to steer the world into good health and away from illiteracy and poverty in 15 years.

One of the most obvious ways to pursue these goals was to directly address diseases of poverty, such as malaria, seeking to ease and eliminate the heavy burden it places on health systems in disease-endemic countries.

With the launch of the MDGs, countless new global health initiatives mushroomed on the landscape and work began in earnest to make the goals a reality. The world pulled out all the stops and political will was not in short supply. In 2000, world leaders drafted the Abuja declaration that promised to halve malaria cases and deaths by 2010. In its Global Malaria Action Plan (GMAP) of 2008, Roll Back Malaria, the voice of the malaria community, set the goals of universal coverage (with nets, diagnostics and treatments) by 2010 with more ambitious targets of a 75 per cent reduction in malaria cases and near zero malaria deaths by 2015. These targets, if met, would be key contributing factors to achieving MDGs 1, 4, 5, and 6, which aim to eradicate extreme poverty and hunger, reduce the under-5 mortality rate by two-thirds, improve maternal health, and reverse the incidence of malaria.

All countries, rich and poor, are keen to vanquish malaria, a disease that is both a cause and a consequence of poverty. The statistics continue to beat a sad litany of loss: malaria kills a child in Africa every 40 seconds – that is over 2,000 children lost every day. Of the 880,000 lives lost to malaria each year, 91 per cent are from Africa and 85 per cent are children under 5. Malaria does not just kill, it debilitates and impoverishes – jobs are lost, school days are lost, productivity is lost, and entire communities remain in its stranglehold. Malaria control consumes more than 40 per cent of national health budgets. In fact Africa loses over US\$12 billion in GDP to malaria each year and much more in compromised human potential.

In response to the rising tide of malaria deaths in the 1990s, the new millennium began with a number of ground-breaking initiatives. Several product development partnerships (PDPs) sprang up, with public and private support, to research and develop innovative drugs, diagnostics, insecticides and vaccines; the Bill and Melinda Gates Foundation entered the fray; the Global Fund was established as a new source of funding to assist countries battling with HIV/AIDS, TB and malaria; and WHO set up the Roll Back Malaria Partnership. Initially, external

financial support for malaria control was minimal then rose to around US\$300 million by 2003. By 2009 this figure had jumped to US\$1.6 billion. This dramatic increase was bolstered by a stream of new funds from 40 countries and more than 10 foundations, as well as the World Bank Malaria Booster Program (started in 2004) and the US President's Malaria Initiative (2006).

How far have we come?

At the end of the first decade and with just five years left to reach the MDG deadline, how close are we to achieving the goals? Although half the world's population is still at risk from malaria, fewer people are dying from the disease. Between 2000 and 2009, the *World Malaria Report* notes that the death toll – still horrifically high at over 800,000 deaths per year – is down almost 50 per cent. This considerable reduction has been the result of twice as many people owning and using long-lasting insecticide-treated bed-nets (LLINs), six times as many children with fever treated with artemisinin combination therapies (ACTs), four times as many homes protected by indoor residual spraying and an increase in the use of diagnostic testing.

Some countries in Africa, where the burden of malaria is the highest, have reported promising trends in reducing malaria deaths and cases. Zambia, among others such as Eritrea and Rwanda, has even reached beyond the 2010 target of a more than 50 per cent reduction in malaria mortality thanks to the use of LLINs. Last year, Malawi, Mozambique, Niger and Ethiopia saw a more than 40 per cent decrease in under-5 mortality, while Equatorial Guinea reported a 63 per cent reduction in all-cause mortality in children under 5 since 2004. However, many countries such as Uganda, Nigeria and DRC continue to battle the burden of malaria with less promising results so far. The malaria community would like to ensure that they win.

Miles to go...

As has been reported recently in RBM's Progress & Impact series, 'Malaria Funding and Resource Utilization', much has been achieved. But the road is long. Malaria continues to snatch the lives of children, robbing families and communities of their young and malaria-endemic

countries of their future teachers, doctors, lawyers, and engineers. Given the incredible success in terms of the substantial reduction in morbidity and mortality in some countries by their use of effective health interventions, the other 100 countries should follow suit and ramp up use of preventive and treatment measures.

However, preventive strategies alone cannot guarantee complete protection against malaria, even in the case of full coverage. Hundreds of millions of malaria cases will continue to slip through the net in the coming years. Diagnosis and effective treatment are vital if lives are to be saved. ACTs, as the recommended first-line treatment for malaria, have already been adopted by most disease-endemic countries. We, the global malaria community must ensure this class of medicines is available, affordable and accessible for those who need it most. This ambition requires enormous amounts of financial and human resources in order to succeed. RBM has estimated this need.

In 2008, GMAP was adopted as a roadmap for malaria elimination by the malaria community. It quantified the amount of funds it would take to halve the malaria burden by 2010 and achieve the MDGs for malaria by 2015. It estimated annual programme implementation costs of US\$5 to 6 billion for the next 10 years (2010–2020), with some decline thereafter. Unfortunately, this massive influx of funds is nowhere in sight.

On a positive note, however, globally available external funding for malaria control (not taking into account national spend) has increased substantially since 2003 and almost US\$4.6 billion has been committed over the six years from 2003 to 2009, peaking last year at US\$1.6 billion (see chart below) – still only 25 per cent of the stated need. RBM reports that this external financing is being used well and in a timely manner: 85 per cent of it goes to Africa – the region hardest hit; it supports a good balance of prevention, treatment, systems strengthening and programme support; and is spent relatively effectively and quickly.

The availability of financing is only part of the solution. People living in malaria regions and those susceptible to malaria infection, such as young children and pregnant women, have to be motivated, informed and encouraged to adopt effective prevention and treatment practices. This takes sustained action and advocacy on the part of national malaria programmes, civil society and the global community. Every opportunity is sought to send out the right messages. For instance, at the first ever World Cup to be held in Africa in 2010, the United Against Malaria campaign has persuaded FIFA to include, during the halftime entertainment, a video message about the importance of using bed nets and the need for donations to buy nets and malaria medication for the poorest and most vulnerable.

What are the obstacles along the way?

In 2007, the malaria community, including WHO and several PDPs, came out in support of Bill and Melinda Gates’ rousing call to rid the world of malaria. This is a gigantic task and can only be achieved one step at a time with the

whole of the world’s weight behind it. While the US\$1.6 billion committed in 2009 for the implementation of malaria control measures seems like a lot of money, but it will not go far enough. Although there has been significant progress, as outlined above, 70 per cent of African households still do not own or use insecticide treated bed-nets, 85 per cent of children with fever still do not receive treatment with ACTs (see graph below), 80 per cent of reported cases are still not tested for malaria, and over 863,000 people die each year.

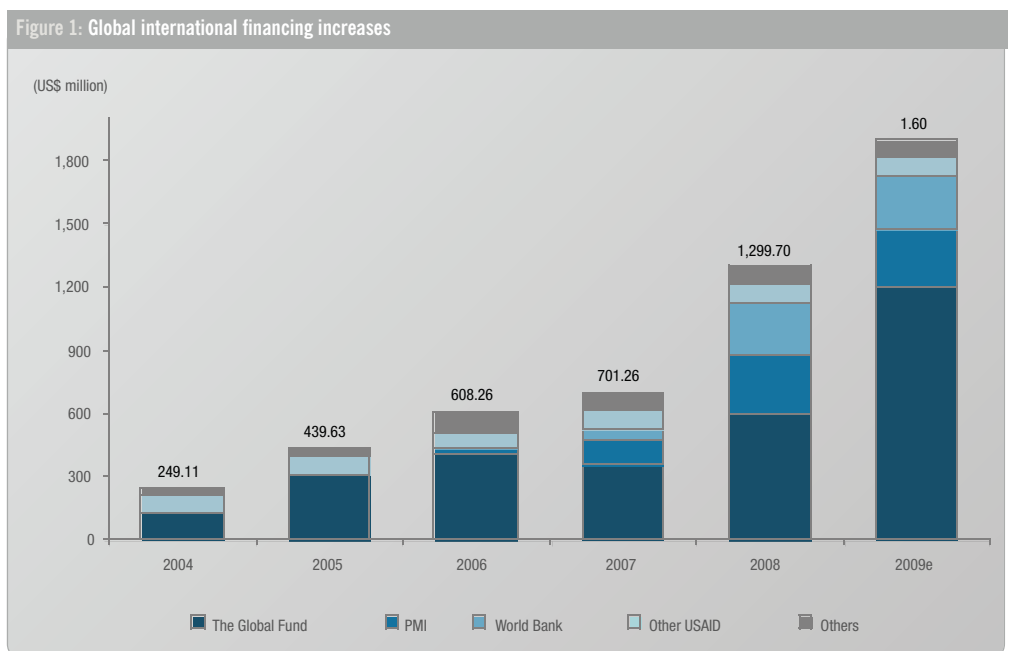
And if this were not enough, implementation of malaria control programmes is hampered by under-resourced health systems, inadequate programme management capability and distribution systems, as well as poorly regulated markets that allow in sub-standard drugs, insecticides and diagnostics. The strategic challenges facing the international malaria community are manifold. We need to:

- ◆ continue the search for sustainable funding;
- ◆ keep malaria high on the global agenda;
- ◆ ensure harmonisation and alignment of the numerous malaria control initiatives;
- ◆ ensure community ownership of malaria programmes;
- ◆ work towards universal coverage of vector control interventions, ACT treatments and nets;
- ◆ prepare for the eventuality of ACT and insecticide resistance;
- ◆ and support the continued research and new tools.

The latter is of critical importance, because controlling malaria is not enough. GMAP proposes two courses of action to achieve the goals of malaria control and elimination:

- ◆ Scale-up and sustain the use of existing tools to control the burden of malaria.
- ◆ Reduce to zero the incidence of infection within countries to achieve elimination.

Underlying these is a critical third set of activities if control and elimination of malaria are to be achieved – the continued research and development (R&D) of new tools, a clear understanding of how best to use them, and informed policy changes. The move to eradicate malaria was tried once in the 1950s but was abandoned by the end of the



1960s. It failed due to the campaign's dependence on one drug (chloroquine) and one insecticide (DDT). We cannot allow this blinkered approach to lead us into failure again.

The R&D of new tools such as drugs and vaccines is essential in this war against the resistance-prone malaria parasite. It's not merely the question of man pitted against one deadly parasite, but against at least five of them. And each parasite has the amazing ability to mutate and become resistant to whatever deadly weapon we throw at it. It is widely recognised that we need as many new tools as we can develop until the war is won, tools that can attack the parasite from all sides. A handful of PDPs are working diligently to this end, developing new, potent vaccines, affordable rapid diagnostic tests, and innovative new medicines. For instance, Medicines for Malaria Venture (MMV), a not-for-profit foundation based in Geneva, is committed to the discovery, development and delivery of new, affordable and effective medicines to treat malaria and has developed the largest-ever pipeline of antimalarials in history. It considers medicines the tip of the spear in the fight against malaria and envisions a world in which these innovative medicines will cure and protect vulnerable and under-served populations at risk of malaria, helping to ultimately eradicate this terrible disease.

Given that some of the currently available medicines can adequately and effectively treat malaria it is often asked why new ones need to be developed at all – why do not we just ensure that the ones we have are made accessible to all? Is not R&D a drain on precious resources that could best be spent on assuring access to ACTs?

While it is true that access to essential life-saving medicines remains a burning issue, there are several sound reasons why we must continue to support the development of new medicines:

- ◆ First and foremost, the need to counter the inevitable emergence of drug resistance in the parasite. The first signs of resistance to ACTs, the current gold standard for malaria treatment, are emerging near the Thai/Cambodian border – where other malaria drugs in the past also first started to fail. To address this imminent danger, the malaria community is making every possible effort to halt the marketing and use of oral artemisinin monotherapies, monitor drug efficacy in the field and contain the imminent spread of resistance. In addition, it is supporting, as best it can, the vital research needed

to develop a range of medicines with varying mechanisms of action, which will fill the void in the treatment arsenal when resistance does take hold and ACTs lose their potency.

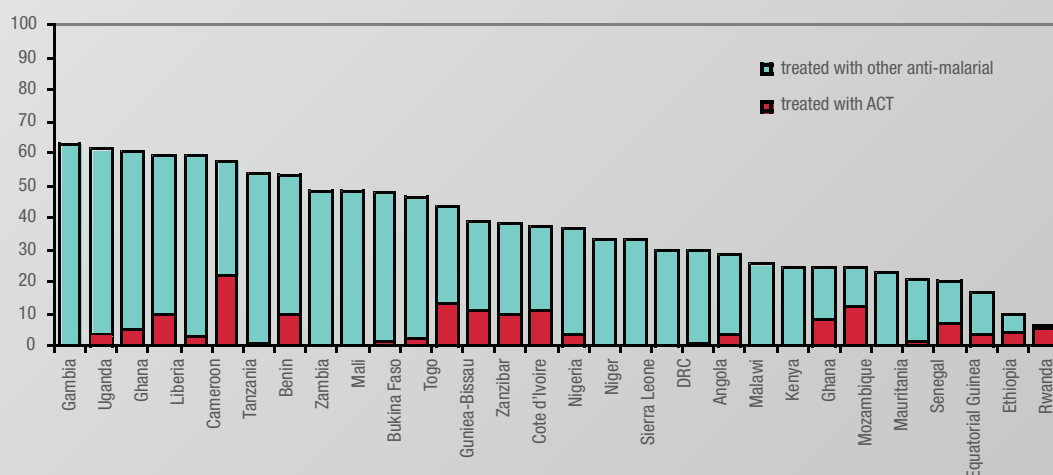
- ◆ Second, the need for drugs for specific patient groups. Malaria is a disease predominantly of children and pregnant women. These two vulnerable patient groups require safe medicines tailored to their needs.
- ◆ Third, the need for medicines for all species of malaria. Of the five species that infect humans, two can relapse, and there is currently no safe easily dosed medicine to combat this relapse.
- ◆ Finally, the need for drugs that can stop transmission of malaria. If malaria is to be defeated, medicines are needed that go a step beyond simple treatment and break the transmission cycle that passes the parasite from patient to patient. These reasons also apply to research into effective insecticides.

Well aware of these needs, MMV has reprioritised its R&D strategy away from cures for falciparum malaria alone. MMV's drug portfolio now has projects that address resistance issues, potentially cure vivax malaria and block transmission. Researchers are working against the clock to meet their milestones so that promising projects can emerge from the pipeline as effective new antimalarials, each seeking to contribute to the global goal to defeat malaria. However, this kind of research takes not only time, but money. GMAP has estimated that the R&D of new drugs, vaccines, diagnostics and insecticides will require around US\$750–900 million a year over and above the predicted US\$5–6 billion for implementation of malaria control programmes. (See chart below) At present the R&D of all health tools for malaria has only around half of this amount.

In addition to scientific research for new health tools, the malaria community recognises that the effort to eliminate malaria will only be effective if all vulnerable populations in disease-endemic countries have access to the products of this research. Ensuring that new breakthrough technologies and well-established interventions can have maximum effect means we also have to keep an eye on the last mile of delivery, where the most hard-pressed patients suffer the most.

A keen focus on access and delivery embraces the strengthening of health system management and delivery of diagnosis, treatment and

Figure 2: Use of anti-malarial drugs in children <5



Source: DHS, MICS and MIS surveys conducted 2006-2008



Giving Them Back Their Future

This year, 2,000 young children will die daily from malaria unless they receive treatment that can cure them. By developing new effective and affordable anti-malarials, Medicines for Malaria Venture is working to give these children a better chance of survival.

Medicines for Malaria Venture (MMV), a leading public-private partnership, is dedicated to the discovery, development and delivery of innovative treatments for malaria.

Effective, high-quality medicines are an essential weapon, which, with preventive measures such as insecticide-treated bed nets, indoor-residual spraying and a future vaccine, will help to ultimately defeat malaria.

MMV has more than 130 partnerships in 44 countries, and now manages over 50 projects in the world's largest antimalarial research portfolio. Its research aims not only to treat malaria, but also to tackle emerging resistance and stop transmission of infection, with a view to eventual malaria eradication.

MMV's vision is a world in which innovative medicines will cure and protect the vulnerable and under-served populations at risk of malaria, and help to ultimately eradicate this terrible disease. www.mmv.org | info@mmv.org

Defeating malaria together

In early 2009, with Novartis, MMV launched its first product – a child-friendly antimalarial: Coartem® Dispersible. The registration of two more products is expected in 2011.

To ensure access to these new life-saving products MMV is helping to design and implement innovative strategies and is also helping to build an evidence base on the antimalarials' market in several African countries.

MMV's work is possible thanks to the support of governments, foundations, corporations and individual donors. We are actively striving to expand and develop current and new donor partnerships, solicit more in-kind input from partners and build MMV's global network to achieve our mission.

Help us discover, develop and deliver new medicines that will cure and protect vulnerable children and neglected populations. Please contact Julia Engelking at engelkingj@mmv.org with any ideas or philanthropic investment queries.

prevention tools. It also must address issues of private sector affordability of malaria drugs, since vast numbers of patients access treatment primarily through the 'non-premium' private sector where prices are high. And lastly, it must remain open to new innovations to improve delivery of care, including the use of rural-based health workers selected from within their communities and home-based management of malaria programmes to diagnose and treat malaria and other childhood illnesses. This would empower communities – particularly mothers – and strengthen their ability to protect the lives of their children.

Dedicated to ensuring public health impact, MMV is committed to ensuring the acceptance, expansion, and documented impact of new products that it helps bring to market. It is building a credible evidence base through its work in Uganda to support arguments in favour of the Affordable Medicines Facility-malaria (AMFm), which aims to dramatically reduce the price of ACTs.

How can the Commonwealth help?

The 54 countries of the Commonwealth work towards shared goals in democracy and development. Malaria weighs heavy on over half of these nations where the disease is endemic and whose economies are locked into a cycle of poverty in part due to the presence of malaria. Many of these countries have spent their own government resources or received external financial support from the global community for malaria control.

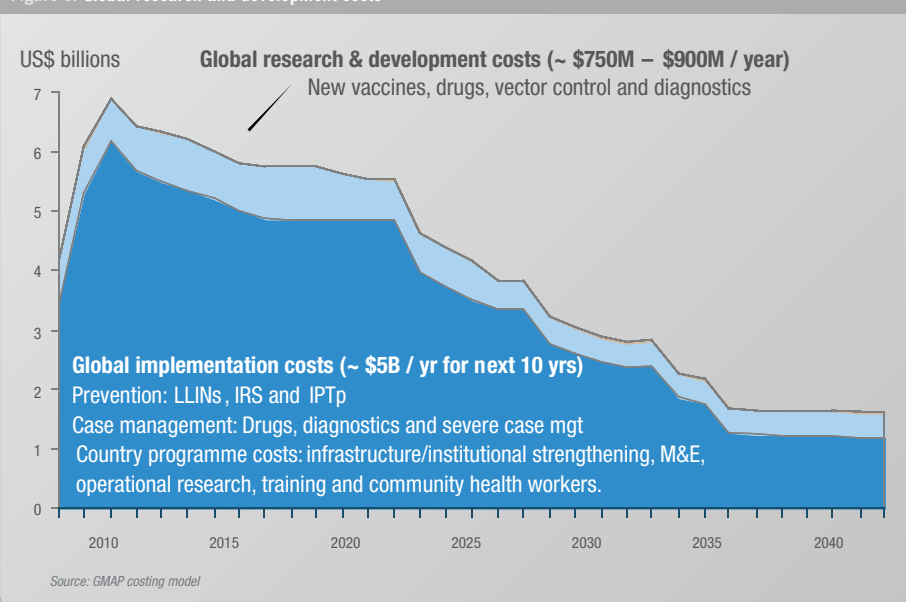
Of the Commonwealth countries untouched by the scourge of malaria, the United Kingdom stands out as a champion of the global effort to defeat this disease. The United Kingdom has been supporting several initiatives, NGOs and PDPs to this end via its Department for International Development, the All Party Parliamentary Group on Malaria and Neglected Tropical Diseases and the Wellcome Trust. It has also given generously to the UNITAID programme, another innovative financing tool that uses the money collected from an air-fare supplement to fund scaling up of access to treatments for HIV/AIDS, TB and malaria in low-income countries.

The target year for the MDGs is virtually here and efforts must be accelerated if we are to stand a chance of achieving the goals, especially with respect to malaria. The financial turbulence of 2009 rocked the funding for malaria for a while, but the malaria community is relying on donors to stay fast to their promise to support malaria control and elimination until the disease is wiped off the face of the earth.

The case for sustained investment in malaria control could not be clearer. Malaria is a killer disease but there is hope on the horizon. Success stories abound. It is evident that a rapid increase in funding has resulted in a simultaneous scale-up in distribution and use of today's available tools. Where scale-up has occurred, malaria cases and malaria-related deaths have fallen, as has all-cause child mortality, making this the quickest route to achieving MDG 4 in many countries, especially those in Africa.

In spite of proof that supporting malaria control and elimination has quick and gratifying wins in terms of young lives saved, the greatest risk to continued success is unstable financing. Countries and foundations,

Figure 3: Global research and development costs



public and private entities need to come forward to fully fund RBM's Global Malaria Action Plan as well as to fund R&D for development of new antimalarials and other health tools. No one sector alone can win the fight against malaria – all sectors have joined forces to keep the pressure up on the malaria parasite. Product Development Partnerships such as Medicines for Malaria Venture, Malaria Vaccine Initiative (MVI), Drugs for Neglected Diseases initiative (DNDi) and Innovative Vector Control Consortium (IVCC) must continue their vital work if we are to sustain the momentum and edge closer to achieving the MDGs.

All nations, especially those in the Commonwealth, should join the worldwide network of countries supporting the ultimate defeat of malaria. If malaria can be controlled with universal coverage of health tools by 2015 we will simultaneously achieve the MDGs. Commonwealth countries have the power to make the Commonwealth an instrument of Common Health. ♦