Raising the bar to defeat malaria

A 2,500 word non-fiction article highlighting recent successes in the fight against malaria and Ministerial action necessary to achieve 100% coverage of anti-malarial commodities by 2010

by

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In his video message on the first ever World Malaria Day, 25 April 2008, UN Secretary-General Ban Ki-moon expressed his dismay that malaria, a preventable and treatable disease, still caused more than 1 million deaths annually.[1] With less than 1,000 days until the end of 2010 deadline for the Roll Back Malaria (RBM) targets, he stressed that efforts to combat malaria needed to be drastically stepped up. He then proposed a halt to malaria deaths by ensuring the 100% coverage of anti-malarial commodities.

This new initiative will offer indoor residual spraying and bed-nets treated with long-lasting insecticide (LLINs) to all people at risk, especially women and children in Africa. It will also ensure that all public health facilities have access to effective malaria treatment and diagnosis; provide ways to train, and retain, community health workers dealing with malaria; and encourage research and development for longer-term efforts to control, eliminate and eradicate malaria.

Mr. Ban's ambitious proposal follows the revelation that, despite several African countries' recent dramatic advances in malaria control, the most affected nations are nowhere near reaching the goal of halting and reversing the incidence of malaria. Neither may they attain the original 2010 RBM 80% coverage goals at their current pace of less than 25% coverage with the targeted interventions.[1] The fact that the UN Secretary-General's Special Envoy for Malaria, Ray Chambers, believes that malaria is stalling the broader UN Millennium Development Goals (MDGs) is equally significant.

As an estimated three billion people, nearly half of the world's population, live in areas of malaria transmission,[2] and this disease also consumes up to 40% of health expenditures of endemic African countries,[3] the importance of slashing the incidence and burden of malaria cannot be underestimated. Furthermore, combining local effects - a high malaria incidence limits industry in villages and districts to low productivity through absenteeism – with larger macroeconomic factors such as weakened tourism and depressed trade, then the total cost to Africa is estimated at a mammoth US$12 billion annually[4] or 1.3 % of growth.[1]

Reasons for rapid scale-up

Globally, the exponential growth in both the production and procurement of artemisinin-based combination therapies (ACTs) since 2003, policy change from the use of ineffective monotherapies, such as chloroquine, to ACTs, and move from untreated bed-nets to insecticide-treated nets (ITNs) or LLINs since 2004 have all boosted efforts in the fight against malaria.[5]

Recent country successes demonstrate the advantages of scaling-up these new anti-malarial interventions. In 2006, three hospitals along the coast of Kenya saw in-patient malaria cases in children fall by an average of 57% [6] after the nationwide distribution of LLINs and ACTs. Kenya's experience with ITN distribution in a three-year period demonstrates how rapid scale-up of activities and increased population coverage can be achieved by mass free distribution. As the country's poorest people now received previously unaffordable ITNs, the figure for under-fives sleeping under any net in the target districts leapt from 13% in 2004-2005 to over 80% in 2006-2007.[7]

Roughly two-thirds of Ethiopia's population lives in malarious areas.[8] From 2004-2007, an integrated approach in Ethiopia boosted malaria prevention and control activities. Since 2005, over 18 million bed-nets have been distributed with a set of key child survival interventions, including vitamin A, supplementary feeding and LLINs, to 7

million children in drought-prone areas.[8] Furthermore, at village level, the Health Extension Programme has trained and deployed 17,500 community health workers (CHWs) to distribute ACTs and ITNs and an additional 12,500 CHWs will be trained by the end of 2008.[8] Almost all households in malarious areas were expected to have at least two bed-nets by the end of 2007.[8]

Experiences in other countries demonstrate that such high ITN coverage can result in sharp declines in malaria cases and mortality in just one malaria season. Within 12-24 months of nationwide distributions of LLINs and ACTs in Ethiopia and in Rwanda, malaria cases and deaths fell by over 50%.[9]

In September 2006, Rwanda's Ministry of Health coordinated the distribution of 1.3 million LLINs to every child under five[10] through a week-long integrated child survival campaign which involved the delivery of measles vaccinations. About 4,000 CHWs, 2,000 local defence force staff and hundreds of local people joined Red Cross community volunteers to distribute nets to all under-fives receiving a vaccination.

For several weeks after this successful campaign, a regular nationwide radio program promoted the importance of sleeping under a bed-net and community health workers held monthly information sessions in which they re-iterated this message. As a result, preliminary data indicate that on average 91% of under-fives[10] in the areas which participated in the national campaign are currently sleeping under LLINs regularly.

So Rwanda is now well placed to substantially reduce its incidence of malaria, which to date has accounted for more than half of health center visits and hospital deaths nationwide.

Since October 2006, the Rwandan government has also been improving the supply and distribution of effective malaria treatments in all of its health facilities. Furthermore,

efforts are underway to improve malaria case management, including increasing diagnostic capacity. The newly-introduced public health insurance system (financed through a Global Fund grant) is also being used to cover the purchase of ACTs from licensed private pharmacies committed to selling these medicines at set prices.

It's evident form the country successes highlighted above, and indeed from recent studies, that provision of malaria control to vulnerable populations can be boosted quickly and sustainably by integrating malaria activities into existing programmes. Delivering LLINs through national vaccination campaigns has also been successful and cost-effective in several other African countries.

Dr Rabinovich of the Gates Foundation recently highlighted another important advantage of scale in the fight against malaria. He believes that wider distribution of ITNs can secure "herd immunity" through knock-on benefits. The ITN protects those sleeping under it and also the neighbour without a net because the insecticide kills mosquitoes that would otherwise fly on to the next hut and spread the infection.[11]

Another reason for rapid scale-up of anti-malarial efforts is due to experts estimating that this could end Africa's malaria crisis. They predict that in the 30 most malaria-endemic African countries, a higher investment of roughly US$2.2 billion a year for five years,[12] compared to current funding levels of US$1 billion per annum,[13] would achieve full coverage of proven prevention and treatment measures. Technically achievable and economically viable, this rapid scale-up would also save 2.5 million additional lives, prevent more than 430 million additional malaria cases, free up 427,000 hospital beds in sub-Saharan Africa and help generate an extra US$50 billion in economic output over five years. In short, every extra dollar spent on expanding malaria efforts would save twice the number of lives.[4]

Challenges

Mass communication and education is needed to ensure that those living in sub-Saharan Africa are aware of prevention and treatment options and know how to use them properly. Stimulating behaviour change – getting people to sleep under a bed-net every night and to seek ACTs soon after malaria symptoms appear - is also crucial to long-term program success.

To avoid duplication, rapid diagnostic tests (RDTs) should be distributed together with ACTs to ensure that vital treatments are given only to those patients needing them. Drugs distributed should also be quality-controlled and monitored to avoid the distribution of expired or counterfeit medicines.

So as to deliver high-quality interventions and build sustainable malaria control systems, investment in support is essential. Countries must enhance their malaria control infrastructures, upgrade commodity storage facilities and engage talented managerial and professional staff to run effective malaria control programs which communicate with local health workers, scientists, officials and the private sector.

As malaria control relies on data analysis, the absence of an adequate data surveillance programme, which would cost only $10 million annually,[14] restricts progress. Reliable, quality data enables the accurate forecasting of needs and resources and timely information flows between producers, suppliers and customers of ACTs. This also boosts the confidence of ACT producers and growers of the vital ingredient, Artemisia, and ensures the long-term availability of anti-malarial commodities to the most vulnerable groups needing these treatments.

So as to improve communication and coordination, health information systems must be upgraded to cope with this new, improved data. A country-based approach alone would be financially and technically inadequate for these purposes. This is because regional laboratory networks that use standardized monitoring techniques, quickly share findings and manage coordinated responses are essential for monitoring drug quality. Monitoring

and evaluation and operational research are also needed to ensure high program performance and to drive evidence-based operational decisions.

At the program level, monitoring systems that track and evaluate the performance of specific malaria control activities e.g. tracking indoor residual spraying performance through programme records and documentation, must also be strengthened. The endemic country's commitment is also imperative in these efforts and more proactive country leadership will be needed over the coming weeks to ascertain specific needs and commitments for achieving the set goals.

Global initiatives for scale-up

The RBM Board recently launched the Malaria Implementation Support Team (MIST). MIST will enable the RBM Partnership to more effectively respond to country needs so as to achieve rapid scale-up by 2010. MIST works in close collaboration with the Partnership Secretariat and RBM Sub Regional Networks (SRNs).

Expensive anti-malarial treatment is a primary cause of low uptake rates. Alarmingly, only 1-3% of febrile children under five receive ACTs in almost two-thirds of the fourteen African countries sampled.[15] So the Affordable Medicines Facility for malaria (AMFm), which cuts the cost of ACTs to affordable prices, is a timely lifeline. AMFm will also ensure that the cheaper Artemisinin monotherapies, which can increase the parasite's resistance to the therapy, cannot enter the market.

UNITAID, a flexible international drug purchase facility, was established in 2006 by Brazil, Chile, France, Norway and the UK. In partnership with UNICEF and WHO, UNITAID delivered 670,000 lifesaving treatments of ACT to Liberia in June 2007 and more than 700,000 treatments to Burundi in August 2007.[16] UNITAID's flexible and timely response to partner countries to help fill gaps and shortfalls is invaluable.

Approximately 264 million ITNs are still needed to achieve RBM's 80% coverage target for Africa's pregnant women and under-fives by December 31, 2010. However, with funding available for approximately 103 million nets, this leaves a shortfall of approximately 161 million nets.[17] The "Cover the Bed Net Gap" is a unique public-private partnership of Governments, corporations, foundations, and private citizens which is campaigning and working to meet this need.

Continuity is key to successful malaria control. Poorly financed control strategies can be catastrophic. Fifty years ago during the WHO's campaign to eradicate malaria, many countries greatly reduced malaria deaths but then donor funds dried up and local attention waned. As a result, control policies were abandoned prematurely and the disease returned to an even more vulnerable population which hadn't developed immunity to it. This happened in Sri Lanka where tragically more than 10,000 people now contract the disease annually.[10] To safeguard against this, in 2007 the Global Fund allowed countries with high performance and expiring grants to apply for a Rolling Continuation Channel (RCC), which enables them to receive funding for malaria control for an additional five years.[18]

Ministerial action

Health Ministers could stimulate achievement of the RBM 2010 targets by addressing the bottlenecks which currently hinder progress. Just one African country from a data sample of 36 met the WHO-recommended threshold density of at least 2.28 health workers (doctors, nurses and midwives) per 1000 population.[19] Increasing government spending on health as a percentage of total government spending, which for 32 of the 36 countries sampled was woefully inadequate at below 15%, should therefore be a priority.[20] Using well-trained CHWs - who can be recruited, and retained, by the offer of a living wage - to perform diagnoses, deliver life-saving medications to remote villages and educate people about the need for malaria prevention and treatment is

another option. New drugs can also be delivered to rural children within 48 hours of the onset of fever through community-based volunteers or home-treatment kits. In Ghana's Ho District, community volunteers – who are either farmers or teachers chosen by the community - delivered drugs to 75% of febrile children.[13]

Countries should also remove import duties or restrictions and VAT on anti-malarial commodities, which limit their affordability, across Africa. Despite Leaders pledging at the 2000 Abuja Summits to reduce or waive taxes and tariffs for anti-malarial commodities that are needed for malaria control strategies, only two of 17 countries surveyed by NetMark had completely removed restraints on ITNs, LLINs and insecticides.[21]

Ministers can take advantage of the Global Fund's flexible financing and apply for "frontloaded" grants, which enable commodity purchases to be brought forward and so increase access to LLINs. Consultation with the RBM Partnership for technical support and to quickly negotiate and sign grants, develop detailed first-year work-plans and budgets, and Monitoring and Evaluation plans is also advisable.

At the country-level, Ministers should ensure that partners are aligned through concerted activities so that fragmentation of effort and dissipation of impact cannot occur. In view of this, the promising Global Health Partnership Initiative of British Prime Minister Gordon Brown emphasizes national ownership and a holistic, coordinated response which will benefit action against malaria as well as numerous other global health issues.

Ministers must also strive for donor alignment. A significant step towards this is the RBM Partnership's harmonized work plan, which combines the work flows of all partnership mechanisms and allows even greater harmonization between more actors

involved in malaria control efforts. An aim of this work plan is that the RBM Partnership could provide managerial support, expert advice, interfacing, facilitation and advocacy to all 45 malaria-endemic African countries so that they can generate country-specific, technically and operationally feasible scale-up plans.[15]

Last but not least, increased Ministerial involvement in global advocacy efforts portrays their vision for scale-up, sustains malaria's high public profile and secures vital financial commitments.

In this article I have highlighted some recent outstanding country achievements in Africa's fight against malaria which can be replicated elsewhere. However, an unrivalled coordination, planning and operational support effort will need to accompany the UN Secretary-General's vision of a universal coverage of malaria interventions to halt malaria deaths in Africa by the end of 2010. Undoubtedly, the biggest benefit of these endeavours would be a reduction in the unacceptable 80% of annual malaria deaths, or 800,000, occurring in African children under five.[22]

The RBM 2010 targets originated from the African Summit on Roll Back Malaria which took place in Abuja, Nigeria on 25 April 2000. At the close of these momentous proceedings, Summit host and President of Nigeria Olusegen Obasanjo observed that the decisions taken that day would mark the beginning of the end for malaria. He also warned that after raising the hopes of their people, African Leaders could not afford to disappoint. Finally, he expressed his hope for Africa,

"May malaria be rolled out and development rolled in."[23]

Let's realize this dream and turn the inconsolable tears of Africa's children into tears of joy.

2,500 words

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