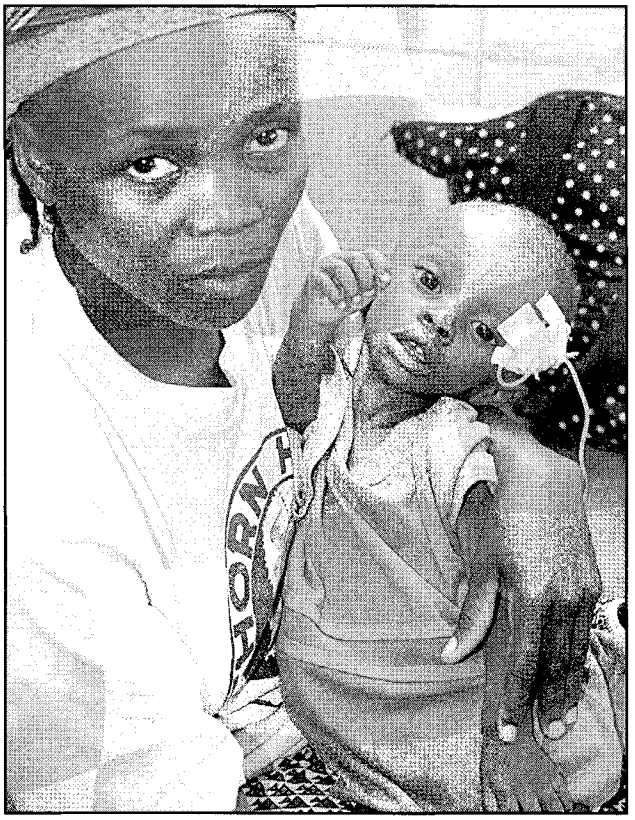
Africans push to tame malaria

But funding shortages and drug resistance hamper control efforts

By **Itai Madamombe**

The Ugandan government announced in October that it would distribute 4.5 mn free insecticide-treated bed nets to protect children and pregnant women from malaria, thereby boosting the East African country's efforts to conquer the mosquito-borne disease. According to Mr. John Bosco Rwakimari, head of the Ugandan Health Ministry's malaria-control programme, the treated net has several benefits: it works as a barrier between the body and the mosquito, it repels mosquitoes and it kills those that land on it.



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Mother with malaria-stricken child in Liberia. Wars have disrupted antimalaria programmes.

"Our target is the country's entire 5 million households," explains Mr. Rwakimari. "But the funds we have got are inadequate." Currently, there is enough money to supply 2 million households with bed nets. Through the initiative, made possible by a $6 mn grant from the Global Fund to Fight AIDS, Tuberculosis and Malaria, Uganda will also mobilize community members to help implement the programme.

Worldwide, there are at least 300 mn acute cases of malaria each year, resulting in more than a million deaths. Around 90 per cent of these deaths occur in Africa, mostly among young children. In Uganda, malaria is the leading cause of death among children under five years old.

Funding needs

In November, the Global Fund called for a fifth round of proposal submissions, renewing optimism that African countries would be able to strengthen their malaria-control efforts. The call, made during a board meeting in Arusha, Tanzania, came despite pressure for a postponement. The fund is suffering an overall financial shortfall, and the US, its largest contributor, was reluctant to endorse a further round of fund-raising, arguing that other donors have not been meeting their pledges.

The fund is a global public-private partnership dedicated to attracting and disbursing additional resources to prevent and treat HIV/AIDS, malaria and tuberculosis worldwide. Since it was created in January 2002, it has committed about $3 bn in two-year grants to 128 countries. Roughly 56 per cent of that amount has been committed to fighting HIV/AIDS, 31 per cent to malaria and the rest to tuberculosis.

The World Health Organization (WHO) estimates that international funding for malaria prevention and control must be up to $2.5 bn a year to save the millions of lives lost to this preventable disease — far below the amount currently reaching antimalaria programmes. "To sustain impact, funding must not be sparse and sporadic, but adequate with long-term focus to meet not only the immediate targets but also to meet the Millennium Development Goals and beyond," WHO said in September.

Devastating impact

Malaria is estimated to cost Africa more than $12 bn every year in lost gross domestic product, even though the disease could be controlled for a fraction of that sum. "One cannot overstate the devastating consequences of malaria on economic development," says Mr. Jeffrey Sachs, a leading international economist and special adviser to the UN Secretary-General on the Millennium Development Goals.

Work productivity suffers due to illness, absenteeism and premature death. That in turn deters business investors, both local and foreign. Tourism suffers due to travelers' unwillingness to visit malaria-stricken countries. Malaria also reduces the accumulation of human capital by hindering child health, school attendance, performance and cognitive development.

In heavily hit countries, malaria may account for as much as 40 per cent of public health expenditures. Households bear most of the cost of purchasing insecticides, mosquito nets and antimalarial drugs. These private expenditures are greater than donor support, and more than twice what governments spend on malaria prevention and treatment, WHO points out.

A host of obstacles

A combination of factors makes it difficult for Africa to tame malaria. Most infections in sub-Saharan Africa are caused by *Plasmodium falciparum*, the most severe and life-threatening form of the disease. This region is also home to the most aggressive species of mosquitoes, making transmission rates in the region much higher than anywhere else. In addition, political and social upheavals disrupt antimalaria campaigns and often

turn to page 18

Africans push to tame malaria

from page 4

force large numbers of people to relocate to high-risk areas.

Compounding these problems, the malaria parasite has developed a resistance to the most common drugs, especially chloroquine, the cheapest and most widely used antimalarial medicine in Africa. Since 2001, WHO has recommended that countries where malaria is resistant to conventional treatments switch to an artemisinin-based combination therapy (ACT). Forty countries, 20 of them African, have to date officially adopted ACTs.

Derived from a raw material extracted from a plant, artemisinins are currently the most effective treatment for malaria, but at $2 for an adult dose they are 10-20 times more expensive than older medicines. But even at those prices, the surge in demand has created shortages of artemisinin likely to persist until at least March 2005, warns WHO.

Roll back campaign

Despite these constraints, efforts to eradicate malaria continue. In 1998, the WHO, UN Children's Fund (UNICEF), UN Development Programme and World Bank launched the Roll Back Malaria Partnership to coordinate international efforts. Two years later, 44 African heads of state came together in Abuja, Nigeria, to endorse the campaign's goal of cutting the incidence of malaria by half by 2010.

The partnership, which now includes 90 organizations, hopes to meet its target through rapid clinical case detection and treatment, wider use of insecticide-treated bed nets, more treatment of malaria during pregnancy and focused control of malaria transmission in emergency or epidemic situations. WHO notes important progress despite inadequate funding. WHO's *Africa Malaria Report 2003* notes that about 15 per cent of African children slept under mosquito nets and 2 per cent under insecticide-treated nets, which are known to be highly effective. Although these rates are far from satisfactory, the widespread adoption of mosquito nets in Africa reflects a significant change in behaviour, the report adds.

Hopes for vaccine

More good news came in October when, after more than two decades of effort, scientists announced that they may have found the first vaccine effective against malaria. Tested on healthy children between the ages of 1 and 4 in Manhica, Mozambique, the vaccine cut by one-third the likelihood of contracting malaria and reduced by more than half the risk of developing serious, life-threatening cases of the disease.

"Malaria is the number-one killer of African children," said Mozambican Minister of Health Francisco Songane. "We did this not only for the people of Mozambique, but for the people all over Africa whose health and development suffer greatly from this terrible disease."

If further clinical trials confirm the vaccine's efficacy, it could be available for widespread use by 2010. Together with bed nets and other prevention and treatment options, this may provide a real possibility for slashing malaria's deadly toll. ■

Africa needs 1 million health workers

Over the next decade Africa will need to train an additional 1 million health care professionals, says a study by a consortium of private foundations, health organizations and research institutes, including the World Health Organization. The continent will also have to find ways to retain more of the doctors, nurses, pharmacists and laboratory technicians it currently produces.

The report, released in late November, declares that severe shortages of trained health care workers is contributing to the spread of HIV/AIDS, tuberculosis and other infectious diseases in developing regions. It accuses wealthy nations of contributing to the crisis by creating a "fatal flow" of health professionals to Europe and the US. The study notes that there are more Malawian doctors practicing in the UK city of Manchester than in Malawi itself, while Zambia has seen 550 of the 600 doctors it has trained since independence emigrate to better-paying jobs abroad.