



Insecticide-treated mosquito nets

Most malaria-carrying mosquitoes bite at night. Mosquito nets, if properly used and maintained, can provide a physical barrier to hungry mosquitoes. If treated with insecticide, the effectiveness of nets is greatly improved, generating a chemical halo that extends beyond the mosquito net itself. This tends to repel or deter mosquitoes from biting or shorten the mosquito's life span so that she cannot transmit malaria infection.

Trials of insecticide-treated nets (ITNs) in the 1980s and 1990s showed that ITNs reduced deaths in young children by an average of 20%. Unfortunately, ITNs can be expensive for families at risk of malaria, who are among the poorest in the world, and cost is not the only barrier to their effective use. Often people who are unfamiliar with ITNs, or who are not in the habit of using them, need to be convinced of their usefulness and persuaded to re-treat the nets with insecticide on a regular basis.

In some areas where mosquito nets are already widely used, it has been estimated that less than 5% are re-treated to achieve their expected impact. WHO has worked with mosquito net and insecticide manufacturers to make re-treatment as simple as possible. However, the best hope lies with newly developed, long-lasting treated nets which may retain their insecticidal properties for four to five years—the life span of the net—thus making re-treatment unnecessary.

One of the targets set at the Abuja Summit in April 2000 was to have 60% of populations at risk sleeping under ITNs by 2005. This will require 32 million mosquito nets and a similar number of insecticide re-treatments each year. To achieve this, much work still needs to be done to make ITNs affordable, widely available,



ITNs are designed in various shapes, colours and sizes to appeal to local tastes and meet local needs.

Promoting the use of ITNs

The Roll Back Malaria global partnership promotes the use of ITNs for everyone at risk of malaria, especially children and pregnant women.

To promote the use of ITNs, RBM is working to:

- organize public education campaigns in malaria-endemic areas;
- lobby for reduction or waiver of taxes and tariffs on mosquito nets, netting materials and insecticides;
- stimulate local ITN industries and social marketing schemes so that nets are available at a price everyone can afford; and
- capitalize on the potential of newly developed long-lasting treated mosquito nets.





Pictures: WHO/RBM/P. Leidi; WHO/TDR

Above: a major problem with ITNs is ensuring that they are regularly re-treated. Communal dipping sessions are a popular solution.
 Right: RBM is encouraging the development of local netting industries through social marketing schemes.

and most importantly, appealing to the consumer. A variety of different approaches are being taken to promote ITN use, reduce their cost and ensure their quality:

- Social marketing schemes, health education campaigns and the development of a 'net culture' through promotion and publicity will all play their part in creating the necessary demand.
- In the Abuja Declaration, African governments committed themselves to reduce or eliminate the tariffs and taxes imposed on mosquito nets, netting materials and insecticides, in order to help lower retail prices. Almost 20 countries have reduced or waived such taxes and tariffs since the summit.
- Countries are also working to encourage the development of local industries and competition among them by ensuring private sector investment in manufacturing and importing mosquito nets.

- Further government action in the form of targeted subsidies, or subsidy schemes, is needed to bring ITN prices down to a level affordable to the poorest families.
- Since many mosquito nets currently in use have been distributed by NGOs or other organizations, WHO has recently drawn up a set of standard specifications for netting materials to make the procurement and quality control of ITNs easier.
- *The Strategic Framework for Coordinated National Action for Scaling-up Insecticide-treated Netting Programmes in Africa* (WHO/CDS/RBM/2002.42) reviews some of the generic issues frequently encountered in Africa south of the Sahara, during the integration of public and private sector activities, including issues of financing and distribution, and how limited public sector resources can be best used to provide the maximum possible long-term health benefits.



Roll Back Malaria is a global partnership initiated by WHO, UNDP, UNICEF and the World Bank in 1998. It seeks to work with governments, other development agencies, NGOs, and private sector companies to reduce the human and socioeconomic costs of malaria.