Letters

Long-lasting treated mosquito nets: a breakthrough in malaria prevention

Editor – Regardless of views expressed recently in the *Bulletin* (*1–2*), insecticide-treated mosquito nets are currently the only viable option to prevent malaria transmission in large parts of Africa. To be effective, mosquito nets have to be treated by dipping them in suitable insecticides at least once a year. Less than 5% of the nets currently used in Africa are properly treated or re-treated. Looking for practical solutions, WHO stimulated industry to produce long-lasting insecticide-treated mosquito nets (LLNs), using new bioactive fabric technologies. Long-lasting nets are treated only once, at factory level. The insecticide can resist multiple washes and is released over time to the surface of the netting fibres. The major criteria for LLNs is that efficacy should last as long as the average lifespan of the net, i.e. 4–5 years. Compared with nets treated by conventional dipping, LLNs have several important advantages: no need for re-treatment; reduced insecticide consumption; and minimum potential environmental impact: release of insecticide in natural water bodies during washing is greatly reduced.

There are two LLNs commercially available, currently being evaluated through the WHO Pesticide Evaluation Scheme (WHOPES). R&D is crucial in further improving the technology. Second-generation LLNs are now emerging with even better performance. They are major technical breakthroughs, significantly changing prospects for successful implementation of ITN programmes, especially in Africa.

To protect the most vulnerable groups in Africa (children under five, pregnant women and people living below the poverty line) and to meet the objective set by the Heads of State of African countries in Abuja (60% of net coverage by 2005), it is estimated that a total of 115 million nets will be needed. To reach full coverage, ideally by the year 2007, an additional 97 million nets will be needed and maintenance of this coverage after 2007 will require 28 to 30 million nets per year. Protection of the whole population at risk of malaria in Africa would require about twice these numbers.

When envisaging further development of LLNs, it is important to involve the net industry in Africa and to facilitate technology transfer. Strengthening production capacity of LLNs in Africa and further reducing the price through well-targeted public–private partnerships will be an effective way to go to scale, reduce the malaria burden, and contribute to poverty alleviation. It also offers an opportunity to African countries to develop a profitable ITN economy and to play an increasing role in global efforts to roll back malaria. ■

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