



## Consensus Statement on the use of wash resistant insecticide treatment kits as an interim strategy

### Working Group for Scalable Malaria Vector Control (WIN) & WHO Global Malaria Programme

March 30, 2007

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There has been considerable recent innovation by the private sector to develop new products that extend the insecticidal activity and durability of mosquito nets for malaria control. Most important among these is the development of long-lasting insecticidal nets (LLINs). According to current WHOPES standards, a LLIN is a factory-treated mosquito net expected to retain full insecticidal efficacy after at least 20 standard washes and for at least three years in the field under recommended conditions of use. Hence LLINs remain effective for the expected life span of the net, with no need for any treatment or retreatment at the community or household levels. There are three LLINs currently recommended by WHO, one with full recommendation: Olyset<sup>®</sup> (Sumitomo) since 2001, and two with interim recommendation: PermaNet<sup>®</sup> (Vestergaard) since 2003 and Interceptor<sup>™</sup> (BASF) since 2006. Today, almost all nets procured by national malaria control programmes are LLINs.

However, it will take a few more years before LLINs fully replace the current generation of conventionally treated nets. There is therefore a transition period during which the current large number of conventional nets (estimated around 30 to 50 million) still needs to be retreated with insecticide at home or at community level. Safe insecticide formulations are recommended by WHO for treatment of mosquito nets and several treatment kits are available for home dipping. However, very few national programmes have succeeded in achieving the regular retreatment of these nets (1 to 2 times per year or after every three washes). Hence, the considerable potential benefit of this large number of existing nets is currently not achieved. Ensuring effective and durable treatment of such nets would represent one of the most cost-effective interventions in malaria control today.

Interestingly, new treatment kits that substantially improve the wash durability of insecticide on conventional polyester nets are becoming available. WHOPES has recently recommended the use K-O TAB 1-2-3<sup>®</sup> for home-treatment of mosquito nets and another kit for wash-resistant treatment of nets is currently under WHOPES evaluation. A single treatment with K-O TAB 1-2-3<sup>®</sup> has been shown to increase the wash resistance of washed white and coloured conventional polyester nets to 15 standard washes, which, in normal field conditions, may be adequate to maintain them effectively as ITNs for much of their remaining life span. However, it must be emphasized that treatment of nets with K-O TAB 1-2-3<sup>®</sup> does not convert these nets into LLINs as per WHO definition. Therefore funding ear-marked for LLINs should not be diverted to conventional nets plus K-O TAB 1-2-3<sup>®</sup>.

The use of wash resistant treatment kits in countries with a high number of conventional nets creates an opportunity for a parallel interim strategy. However, such a strategy should only be seen as interim and it assumes that on-going programmes and policies are in place to provide LLINs as replacements over time. Mass treatment strategies should be time-limited and seen as complementary to LLIN programmes, which remain the ultimate goal of each national strategy.

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