Treated nets vs house spraying

Editor – In a recent letter (*1*) Dr Christian Lengeler dismisses as invalid our comparisons (*2*) of recent trials with pyrethroid-treated nets versus trials 20–40 years ago with house spraying of non-pyrethroid insecticides. One of his reasons is that the initial intensities of malaria transmission were different in the trials compared. Lengeler may postulate that the lower intensity of transmission in the Pare Taveta and Garki spraying trials versus the Bagomoyo, Muheza and Ougadougou net or curtain trials explain why these spraying trials worked better. However, he cannot then explain away the fact that the Kisumu spraying trial worked better than the Kilifi net trial because, in that comparison, it was the spraying that was up against the higher initial transmission conditions. As we mentioned, publication is expected soon of data from a net trial at Kisumu, and a more exact comparison of those data with the earlier spraying trial there should then be possible.

Lengeler points out that at the time of the spraying trials the parasite populations were fully susceptible to choloroquine and the general health services may have been better than today. However, as we pointed out, the Kisumu and Garki trials had unsprayed comparison areas and for all the trials there were baseline data. Our tables showed how well the spraying worked *in comparison with those controls*, where presumably highly effective chloroquine and other treatments were as available as in the sprayed areas.

Like Lengeler, we raised the question whether pyrethroid-treated nets may be the best we can hope for in the real present-day world. We certainly do not underestimate the difficulty of organizing and funding nationwide spraying in tropical Africa. However, we should not forget that in the 1950s, with generous assistance from donors and unflinching political will, India (which was then far less developed than it is now) did organize a successful nationwide spraying programme.

We pointed out that deployment of a given type of insecticide on a bednet might a priori be expected to be more effective and economic than the same insecticide sprayed on walls. We cited some evidence that appropriate non-pyrethroids can work better on nets than do pyrethroids, which may drive mosquitoes away before they have picked up a lethal dose. We now have more such evidence and are planning further studies to determine whether, by using an insecticide which gives higher mosquito mortality than do pyrethroids, one can reproduce the best malaria control results of the past without the need for spray pumps and teams of spraymen. ■

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1. **Lengeler C.** Comparison of malaria control interventions. *Bulletin of the World Health Organization*, 2001, **79**: 77.
2. **Curtis CF, Mazava AEP.** Comparison of house spraying and insecticide-treated nets for malaria control. *Bulletin of the World Health Organization*, 2000, **78**: 1389–1400.

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