

## **Appendix 1 (as supplied by the authors): Steps in the voucher scheme process**

The process of acquiring an insecticide treated net through the Tanzanian National Voucher Scheme involves the following steps:

Step 1. Pregnant woman attends antenatal clinic. In Tanzania, attendance at least once during pregnancy to antenatal clinic is estimated at 94%, making scale-up of interventions via routine clinics a viable option; yet a minority of women do not attend, resulting in minor attrition.

Step 2. Pregnant woman attending clinic receives a discount voucher for a net. Antenatal clinic attendees should be given one voucher which can be used as part payment for a net purchased from a local shop. At this step there is potential for attrition given the challenges of stock-outs and staff shortages reported in the Tanzanian health service.<sup>15</sup>

Step 3. Use of the voucher to buy a net. The redemption value of the voucher is fixed at Tanzanian shillings 3,250 (approximately US\$3), which is around 75% of the usual retail purchase price. The woman must pay the difference between the price of her chosen net and the voucher value. This step is susceptible to attrition if, for example, she finds it difficult to access a shop, does not have the cash to pay the top-up amount, the shop does not have nets in stock on the day that she visits, or the shop keeper does not want to accept the voucher.

Step 4. Net bought with insecticide. At the time of this study the vast majority of nets for sale in Tanzania were conventional polyester nets requiring regular re-treatment. Since April 2002, all nets produced in Tanzania have been packaged with a pyrethroid insecticide treatment kit “Ngao” (Swahili for “Shield”). These insecticide kits are also sold individually for net re-treatment. Attrition may arise if a shopkeeper sells the insecticide kit separately from the net.

Step 5. Treatment of nets. An insecticide treated net is considered to be effectively treated if it has had insecticide applied in the last 12 months, or if it is a net treated with long-lasting insecticide (insecticide which binds to the fibre of the net and which remains efficacious after numerous washes, and over time). Pre-treated long lasting insecticidal nets were only available from small scale projects at the time of this study and attrition may occur because not all users treat their nets with insecticide.

Desired outcome. Personal use of insecticide treated nets – a woman uses her treated net.

This possibility for attrition from the scheme is shown in supplemental table 1.

Supplemental table 1. Process for insecticide treated net voucher scheme: hypothetical example assuming 90% success at each step\*.

	Influences at the clinic level		Individual use of a voucher	Net treatment influence		Outcome: Sleep under insecticide treated net
	STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	
	Attendance antenatal clinic	Receive a net voucher	Used voucher to buy a net.	Net bought with insecticide	Net treated with insecticide	
<i>Possibility for attrition in the process:</i>						
Non- attendance to clinic	<b>X</b> <b>(100 women *0.9)</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
Nurse doesn't give voucher		<b>X</b> <b>(90 women * 0.9)</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
Unable/unwilling to access shop			<b>X</b> <b>(81 women * 0.9)</b>	<b>X</b>	<b>X</b>	<b>X</b>
Retailer separated net from insecticide				<b>X</b> <b>(73 women * 0.9)</b>	<b>X</b>	<b>X</b>
Misunderstanding of treatment process					<b>X</b> <b>(66 women * 0.9)</b>	<b>X</b>
Barrier to using net in household						<b>X</b> <b>(59 women)</b>

\*Household survey indicators used to represent the 5 steps in the insecticide treated net voucher scheme process

- STEP 1 “Did you visit the antenatal clinic during pregnancy?” asked of women who’d had a live birth in the preceding 12 months
- STEP 2 “At antenatal clinic did you receive a discount voucher for buying a net?” asked of women who’d had a live birth in the preceding 12 months and who attended antenatal clinic
- STEP 3.”Have you used the voucher to buy a net?” asked of women who’d had a live birth in the preceding 12 months and attended antenatal clinic and who received a voucher
- STEP 4. “Was the net you purchased with the voucher packaged with an insecticide treatment kit?” asked of women who’d had a live birth in the preceding 12 months and who attended antenatal clinic and who received and used a voucher
- STEP 5. A summary indicator of the effectively treated net status of all nets purchased using a discount voucher, derived from household reports
- Outcome: Sleep under insecticide treated net. Derived from currently pregnant reports of insecticide treated net use on night before survey.

**Appendix to:** Marchant, T, Schellenberg D, Nathan R. Assessment of a voucher scheme to deliver insecticide-treated mosquito nets to pregnant women. *CMAJ* 2010. DOI:10.1503/cmaj.090268.