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Health System Strengthening: Role of conditional incentives?

Establishment of a sustainable system of net distribution

Von Kara Hanson und Christian Lengeler

Large-scale vector control offers a highly effective method for primary prevention of malaria. The new generation of long-lasting Insecticide-Treated Nets (ITNs) offers up to 5 years of protection and provides a robust tool for lasting reductions in the transmission of the disease. As a result, the Secretary-General of the United Nations has set new objectives for ITN use on behalf of the international community: to provide by 2010 protection by an ITN to 80% of those affected by the disease. This commitment reflects the importance of ITNs and malaria control for reaching the Millenium Development Goals 1, 4, 5 and 6 in endemic countries. Hence, the world is embarking on an ambitious quest to upscale rapidly this intervention. This "licence to kill mosquitoes" has also been taken seriously in Tanzania, which has one of the biggest national programmes on the African continent.

Pregnant women are a high-risk group for malaria morbidity and mortality in endemic areas (RBM 2005). In addition, they are closely associated with babies, the group having the highest risk of dying from malaria. As a result, malaria prevention strategies have often been directed at expectant mothers. Of course, this does not preclude the wider use of ITNs by everybody else in the community, and increasingly countries are aiming for universal coverage of their citizens.

Why vouchers rather than direct distribution of ITNs?

For some years now there has been a clear consensus that the public sector must invest resources to protect high-risk groups, and hence find practical ways to distribute subsidies to high-risk groups - and possibly to the wider population.

Essentially, two options are available to raise rapidly protection levels with ITNs in high risk groups using targeted subsidies:

1. direct distribution of ITNs to pregnant women (and possibly children to under five years) via antenatal care (ANC) and mother-and-child health (MCH) clinics;
2. subsidies in the form of a voucher with a defined value (up to 100% of the net cost), which

are given to pregnant women at MCH clinics, which can then be exchanged for a net from a local shop.

Vouchers have been used in the past in the health sector, mainly in the area of reproductive health in Asia and Latin America. For ITNs, vouchers were first implemented in the context of the Kilombero Net Project – KINET (Mushi et al. 2003) in Tanzania. Tanzania has implemented vouchers on a national scale since 2004, with financial support from the Global Fund to fight AIDS, TB and Malaria and the US President's Malaria Initiative. The Tanzanian National Voucher Scheme (TNVS) is part of the multi-pronged national ITN programme (NATNETS) coordinated by a team of the National Malaria Control Programme (NMCP) and the Swiss Tropical Institute (STI). The evaluation of the TNVS is carried out by a consortium made up by the Ifakara health Institute (IHI) and the London School of Hygiene and Tropical Medicine (LSHTM).

The vouchers are distributed through the public health system after having been printed and logged with the main operational contractor, the Mennonite Economic Development Associates (MEDA) (Figure 1). Currently, the vouchers are worth 3250 TShs or USD 2.50. The vouchers can then be used by the beneficiaries to buy an ITN from any participating commercial retailer. Since the average retail price of an ITN is USD 3.50, women have to pay on average a one dollar cash top-up at the time they purchase their net. The ITN retailer is then reimbursed the value of the voucher with more nets by the wholesaler, who in turn will be re-imbursed by agents of the logistics contractor. A more detailed presentation of the TNVS is given in a recent publication by Heierli and Lengeler (2008).

Why use such a round-about approach, rather than distribute the nets directly? There are two main reasons favouring this approach:

1. ITNs distributed directly through the public sector clinics could easily overload the system; public clinics often find it difficult to supply even basic drugs, getting them to distribute bulky goods such as ITNs on a regular basis would pose a formidable logistic challenge. In addition, ITNs are a valuable commodity and keeping track of stock and avoiding misuse would be very difficult.

2. The use of vouchers creates a predictable demand for ITNs in even the most remote corners of the country, stimulating the commercial ITN market. The latter can then efficiently and sustainably supply ITNs to the rest of the population.

Vouchers also have two important additional functions: strengthening the role of public health services (through making MCH services more attractive) and providing a focus for health promotion with regard to malaria.

The Tanzania National Voucher Scheme (TNVS) depends on a close working relationship between the Government, NGOs, civil society groups, and private sector manufacturers and distributors of ITNs. Hence, it represents a good model of a successful Public-Private

Partnership at national level. It also represents a good model of a successful form of conditional transfer of resources.

Main results

Commercial ITN sales in Tanzania have increased steadily from 2001 to 2007, reaching nearly 3 million units per year at present. The proportion of these nets bought with a voucher has also been increasing steadily, currently standing at 43%. Operationally, the TNVS has been running well, with the majority of health facilities stocking vouchers and delivering them in routine services, a notable achievement in this very large and populated country.

On the other hand, net usage rates in both pregnant women and infants have remained well below the target of 80%. In 2007, 39% of pregnant women used any sort of a net, while only 23 % were using an ITN regularly. For infants, the results were slightly higher: 56% for any type of net and 34% for an ITN (Hanson et al. In Press). Clearly, the TNVS works well but more effort is needed to improve usage rates.

A more in-depth analysis of the 2007 evaluation survey focusing on socio-economic classes showed that the average usage rates shown above hide significant socio-economic differences, with the poorest groups having much worse usage rates. To use a net women must: attend an antenatal clinic, receive a voucher, and redeem their voucher at a shop. Measured inequalities in final usage can arise because of failures at any level. As a result, "any net" coverage was over 80% in the best off group, compared to only 34% in the poorest group. (Marchant et al. submitted).

There was an attempt in 2006-2007 to improve this inequitable situation by introducing an "equity voucher" but this was not successful for operational reasons. In addition, inability to afford the top-up amount of one dollar was only one of the problems faced by the poorest women.

The forthcoming mass distribution of free long-lasting ITNs in 2009-2010 will go a long way to address the issue of inequity in access, and it should ensure a rapid increase of ITN usage in the country (a so-called "catch-up" activity). Hopefully, the TNVS will survive the mass distribution of free ITNs and provide a way to continue reaching newly pregnant women and newborn children, hence providing for a national "keep-up" strategy.

Conclusions

Discount vouchers for ITNs are a feasible and attractive system for targeting ITN subsidies. Such vouchers help women and also support the establishment of a sustainable system of net distribution. Hopefully, it will continue to provide a way to continuously reach newly pregnant women and newborn children after the planned mass distribution of free long-lasting ITNs. With both a "catch-up" and a "keep-up" strategy, Tanzania (one of the most malarious countries in the world) should see tremendous health gains in the years to come.

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