

Insecticide Treated Nets (ITNs) Program Stimulates Net Use in Kenya

Key Findings

A recent study of 3,192 households in Kenya shows that a well coordinated ITN distribution program has successfully contributed to reducing barriers to net ownership and increased awareness and demand for insecticide treated nets.

Ownership and use of insecticide treated mosquito nets has increased significantly between 2000 and 2005 in Kenya. National household ownership of mosquito nets increased from 22% to 44% and the percentage of children under five years sleeping under a net the previous night increased from 24% to 35%. A similar trend was seen for pregnant women. Insecticide treated net ownership also increased significantly, and coverage in the key malaria endemic regions was higher than the national figures.

The Program Context

Malaria is a major health problem in Kenya with a disproportionate effect on the poor, pregnant women and children under five. Malaria is the leading cause of death for children under five, causing an estimated 34,000 deaths annually. Over 70% of Kenya's population, or over 22 million people, are at risk of malaria, 75% of whom live in rural areas.

The government of Kenya is a signatory to the Millennium Development Goals and the Abuja Declaration, which sets a target of reducing malaria in half by the year 2010. In addition, 80% of pregnant women and children under five are to have access to and sleep under insecticide treated nets for malaria prevention.

Since the year 2002, PSI has been working in conjunction with the Ministry of Health and other partners with support from DFID and USAID to make ITNs more accessible and affordable to those most in need. An intensive educational campaign has been combined with a distribution strategy that makes ITNs available at different subsidy levels to different segments of the population. For those most at risk (pregnant women and children <5), ITNs are available through the public and private health facilities for 50ksh. In rural shops and through community groups and NGOs, nets can be purchased for 100ksh, and for lower risk and urban areas, nets can be purchased in the commercial sector for as low as 200-400ksh.

The program also implemented intensive educational campaigns to increase awareness about malaria

transmission, who is most at risk, and prevention using ITNs.

Over 6 million ITNs have been distributed to date, with an additional 5 million targeted for distribution in 2006-2007. More than half of all the nets sold by 2007 will be long lasting nets. The program coverage is national but special emphasis has been placed on high transmission areas such as Coast, Western and Nyanza Provinces.

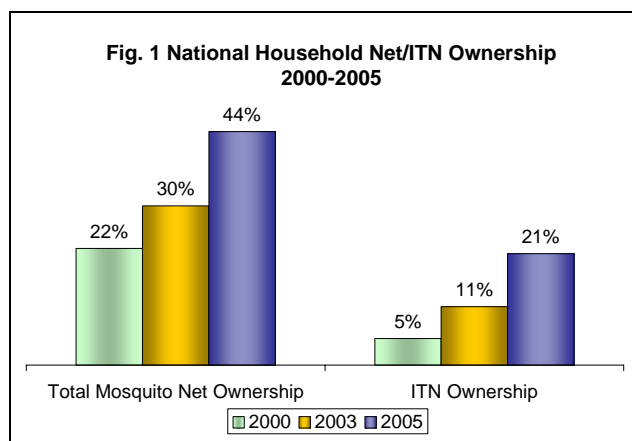
Methods and Data

Quantitative tracking surveys from 2000, 2003 and 2005 of approximately 3,000 households each were used to assess the attitudinal and behavioral impact of communication campaigns and the distribution of nets. The surveys were random probability based and nationally representative, excluding North Eastern province and the wealthier segment of the population which is not targeted. The surveys primarily measured trends in ownership of nets/ITNs, net treatment knowledge and practice, knowledge of the cause of malaria, and use of nets/ITNs by pregnant women and children aged less than five years.

Survey Results

Net/ITN Ownership

National mosquito net ownership has increased from 22% in 2000 to 44% in 2005, and insecticide treated net (ITN) ownership has increased from 5% in 2000 to 21% in 2005 (Fig 1).



Notes: Sample sizes for the 3 surveys are as follows: 2000 - 2,912 cases; 2003 - 2,919 cases; 2005 - 3,192 cases. ITN is defined as either a long lasting net or a conventional net treated with insecticide in the last six months.

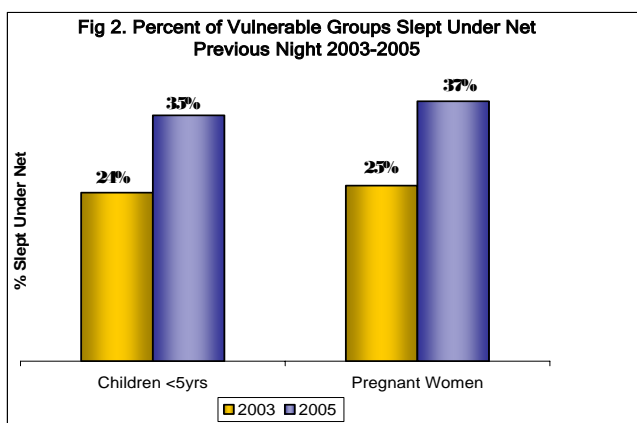
The survey results also indicated that rural and urban net ownership also doubled. Rural net ownership increased from 17% in 2000 to 37% in 2005, and

urban net ownership increased from 33% in 2000 to 62% in 2005.

The increase in net and ITN ownership has been especially impressive in the endemic areas of Coast, Western and Nyanza Provinces, where net ownership is at 59%, significantly above the national level of 44%. Note also that rural net ownership in the endemic regions is 52% and urban ownership is 79%. Ownership of treated nets has also increased significantly in the endemic provinces from 16% in 2003 to 28% in 2005.

Net/ITN Use by Pregnant Women and Children <5

Net use by those most vulnerable to malaria (i.e. pregnant women and children under five years), also increased significantly between 2003 and 2005. Among children under five, net use increased from 24% in 2003 to 35% in 2005. Treated net use increased from less than 5% in 2000 to 24% in 2005. Among pregnant women, net use increased from 25% to 37% nationally, and treated net use from less than 5% to 25% in 2005 (Fig 2).



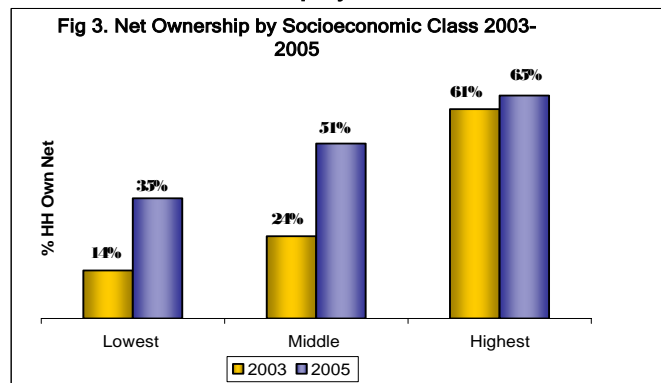
Results were again more dramatic in the highly malaria prone regions of Coast, Western and Nyanza, where 50% of pregnant women and 46% of children under five reportedly slept under a net the previous night in 2005. Treated net use was at 39% for pregnant women and 37% for children <5 in 2005.

It can be seen that significant progress towards the Abuja target of 80% ITN coverage of pregnant women and children <5 has been made, especially in the key endemic areas of Kenya.

Equity of Coverage

Fig 3 shows that net ownership has increased most among the lowest socioeconomic groups. The percentage of households owning nets in the lowest and middle socioeconomic categories has more than doubled. In addition, there was a greater increase in rural household coverage than urban. These are important findings, as it demonstrates that the most economically and geographically vulnerable groups (the poor and those living in rural areas) are being effectively targeted through the ITN distribution program.

Household Net Ownership by Socioeconomic Class



The availability of ITNs for 50ksh through health facilities, which began in 2004, has made a significant impact in increasing the use of ITNs by the vulnerable groups and by rural residents. The study revealed that 44% of children and 37% of pregnant women who slept under a net the night before the survey obtained that net through a health facility, and 40% of rural net owners obtained their net in a health facility.

Knowledge of Malaria and Prevention

Awareness of the cause of malaria, who is most at risk, and the use of ITNs as the best malaria prevention all increased significantly.

- Knowledge that mosquitoes transmit malaria increased from 70% in 2000 to 91% in 2005.
- Knowledge of children being at higher risk from malaria almost doubled from 35% to 69%.
- Awareness of pregnant women being at higher risk increased from 5% to 24%.
- The percentage of people mentioning net use as the most effective malaria prevention increased from 46% in 2000 to 73% in 2005.
- Awareness about net treatment increased from 29% in 2000 to 76% in 2005.

Conclusions and Implications

The study results clearly demonstrate that a well coordinated ITN distribution program with targeted levels of subsidy and an effective communications campaign can have a tremendous impact in increasing demand for and use of ITNs for malaria prevention. If current demand and sales trends continue, Kenya is well on its way to achieving the Abuja Targets and the Millennium Development Goals.

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