

# The Social Marketing of Insecticide-Treated Nets (ITNs) in Kenya



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# Background

PSI, an international nonprofit organization founded in 1970, harnesses the vitality of the private sector to address the health problems of low-income and vulnerable populations in 65 developing countries. PSI, with programs in safe water/oral rehydration, malaria, nutrition/micronutrients, family planning and HIV/AIDS, uses commercial marketing techniques to promote health products, services and healthy behavior that enable low-income and vulnerable people to lead healthier lives. Products and services are sold at subsidized prices rather than given away in order to enhance their perceived value, increasing the likelihood of use, and to motivate commercial sector involvement. PSI is now the leading

nonprofit social marketing organization in the world.

Through its network of local affiliates, PSI delivers affordable products and services through existing private and public channels, and information on other health strategies not related to products or services. PSI has an uncommon focus on measurable health impact and measures its effect on disease and death much like a for-profit measures its profits. In 2004, PSI estimates that its programs directly prevented hundreds of thousands of HIV infections, 6.1 million unintended pregnancies, 11.5 million malaria episodes and a variety of other health problems.

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## What is Social Marketing?

The goal of social marketing is to promote healthy behavior among low-income and underserved people in order to increase their standard of living and quality of life. Social marketing utilizes a variety of private sector practices, such as commercial distribution of branded health products and services and mass media, as well as a range of behavior change communications (BCC) techniques to achieve this goal.

Social marketing projects encourage private sector distribution networks to make needed health products available to low-income people at subsidized prices, through both traditional and nontraditional outlets

(e.g., kiosks and market stalls). Products are sold, rather than given away, because social marketing relies on the private, commercial sector to deliver these health products and services. A price, even a small one, can provide the wholesalers and retailers with profit that motivates them to provide the widest possible product distribution.

Communication is an integral element of social marketing. Product advertising serves to create demand among consumers, the trade (wholesalers and retailers) and health care providers. BCC encourages protective behavioral practices among individuals, leading to health improvement.

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## PSI in Kenya

PSI/Kenya is a locally registered nongovernmental organization (NGO) that is dedicated to improving the health of Kenyans through the use of social marketing techniques to increase demand for, access to and use of essential health products. PSI/Kenya was founded in 1990 and, as of November 2005, had 220 employees (an additional 150 people work as independent contractors and volunteer staff).

The launch of *Trust* brand condoms in 1993 marked PSI/Kenya's entry into HIV/AIDS prevention. Malaria control started in 1998 with the introduction of an insecticide net treatment service. This strategy was revised

in 2001 with the national launch of a mosquito net called *Supanet* packaged with an insecticide retreatment kit called *Power Tab*. In 2000, PSI/Kenya added family planning to its portfolio with the launch of *Femiplan* oral and injectable contraceptives. And in 2003, it introduced a chlorine water treatment solution called *Water Guard* for the prevention of diarrheal disease.

The combination of these activities has made PSI/Kenya a major contributor to the Government of Kenya's public health objectives related to malaria, HIV/AIDS, family planning and safe water.

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## Malaria in Kenya

Malaria is a major health problem in Kenya with a disproportionate effect on the poor, pregnant women and children under five. Malaria is the largest cause of death for children under five, causing an estimated 34,000 deaths annually. In pregnant women, malaria causes anemia, low birth weight, miscarriage and even maternal death. It is estimated that 10-20% of maternal deaths are attributed to malaria. Among adults,

over 170 million work days are lost each year due to malaria illness, and among children, 4-10 million school days are lost.

Over 70 % of Kenya's population, or over 22 million people, are at risk of malaria, 75% of whom live in rural areas. There are approximately three million children under five years and one million pregnant women living in malaria-prone areas of Kenya.

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## The Role of Insecticide-Treated Nets

A large body of research conducted throughout Africa has demonstrated that use of insecticide-treated nets (ITNs) can reduce malaria cases by up to 50% and deaths of children under five by 20%. In Kenya, an ITN efficacy trial conducted by the U.S. Centers for Disease Control and Prevention (CDC) showed a 33% reduction in child

mortality. The results were equally dramatic in pregnant women, with a 21% reduction in anemia and 28% decrease in low birth weight in infants.

ITNs are mosquito nets treated with an insecticide that repels and kills mosquitoes. The insecticide doubles the efficacy of the net

in preventing malaria, from about 25% to 50%. There are several insecticides approved by the World Health Organization Pesticides Board (WHOPES) for treatment of mosquito nets, but the one most commonly used in Kenya is deltamethrin. The treatment of the net can be done either at the community level where consumers bring their nets to a central dipping point, or at home with a home treatment kit. Nets can be sold with a home retreatment kit that is bundled together with the net. The insecticide is in tablet form, which is dissolved in a liter of water. The net is then soaked in the solution and then laid out to dry. The insecticide remains effective for approximately six months before the net requires retreatment.

The procurement cost for a double size net on the international market is approximately USD \$2.50. The price for an insecticide treatment kit is approximately USD \$0.35.

The next generation of nets does not require retreatment at all. These nets come pre-treated with insecticide that remains effective for the life of the net. Two manufacturers, Sumitomo (a Japanese company manufacturing in China) and Vestergaard Frandsen (a Danish company manufacturing in Vietnam) received WHOPES approval in 2004. These nets cost approximately twice as much as a regular untreated nets packed with a treatment kit.

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## Commercial Net Sector in Kenya

Although a commercial market for ITNs in Kenya did exist in 2001, the market was small, fragmented and limited in reach, especially in rural endemic areas. Retail sales of ITNs were estimated at less than 350,000 units while the requirement for protecting the vulnerable population was estimated at over 13 million nets. There were six medium sized manufacturers of nets in Kenya, each sewing approximately 3,000-10,000 nets per month. Virtually no nets were imported due to a 20% duty and 16% value added tax (VAT). Most local manufacturers sourced the netting material from a single supplier in Kenya. There was a 20% duty on yarn imports, but the duty and VAT on imported finished nets was eliminated in late 2002.

In 2002, there were about 10 net brands on the market, primarily available in large



A mother treats her net.

urban centers in textile shops and supermarkets. Virtually no nets were available in rural shops. The branding was very minimal and not very attractive to consumers, mostly consisting of a black and white leaflet mentioning the net brand and size. Consumer

prices for a net ranged from about USD \$4 for a small single sized net to \$10 for a very large net. The average price for a double sized net was about USD \$5-6 (see **Appendix D**). Both manufacturer and trade margins were very high. Manufacturer operating margins were estimated at about 20% and trade margins were even higher than that.

The public and NGO sectors also distributed ITNs in Kenya, but there were no sustained interventions of significant size.

There was virtually no insecticide treatment for nets available in the country in 2001.

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## World's Largest ITN Social Marketing Project

PSI's ITN work in Kenya began in 1998 with a pilot project funded primarily by the U.S. Agency for International Development (USAID). The pilot program was in the coastal region and consisted of a net redipping service for a minimal fee. A mosquito net branded Supanet was launched in 2000 in Kilifi district on the coast, and expanded nationally that same year. The net at that time was not packaged with a treatment kit. For cost effectiveness and logistical reasons, a home treatment kit was developed to replace the redipping service, and the Supanet was relaunched with a home retreatment kit bundled with the net, branded Power Tab, in April 2001.

In 2002, a USD \$25.4 million grant from the British Department for International Development (DFID) enabled the project to scale up to become the world's largest ITN social

marketing project. The project's mandate was to reduce the incidence of malaria especially among pregnant women and children under five by creating a culture of ITN use. There were specific targets for ITN coverage among pregnant women and children under five, rural areas, total project sales and awareness of the causes of malaria and the use of ITNs for prevention (see **Appendix A**). Communication and distribution strategies were developed based on a scoping mission, which recommended large scale social marketing of branded products as the most effective means to increase ITN use rapidly, while stimulating and extending sustainable commercial distribution channels.

In addition, DFID requested that PSI develop a distribution strategy that relied exclusively on the private sector.

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# The Initial Strategy

The approach involved a three-pronged strategy for the first two years: 1) aggressive commercial sector distribution to widen the availability of nets in urban and rural shops and supermarkets; 2) increased affordability of nets through a two tier subsidy, with a

higher subsidy in rural areas; 3) increasing demand for nets through an intensive national communication campaign. In addition, PSI worked closely with the commercial sector to develop ways to increase the total net market in Kenya.

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## Distribution

Three different mosquito nets were marketed. Two were available nationally at a 7% subsidy (relative to the unit cost of goods sold), and a third net targeted at rural areas was 40% subsidized. All nets were packaged with an insecticide treatment kit.

The primarily urban net was dark blue in color, conical shaped, double size and packaged with a Power Tab treatment kit. The consumer price was 350 ksh (approximately USD \$4.70). The net was priced so as not to significantly undercut the existing com-



A kiosk sells Supanet and Power Tab to rural consumers.

mercial nets in the market, but low enough to exert price pressure on the commercial sector to reduce their margins and increase their volumes. PSI sold the nets through a network of urban distributors who sold to wholesalers and retailers (see prices and trade margins in **Appendix C**).



Urban branded net.

A rural branded net was sold in rural commercial retail outlets for 200 ksh (approximately USD \$2.70). It was green, rectangular, double size and also packed with Power Tab.



Rural branded net.

the urban nets, they could not be sold to urban distributors or they would have leaked into the urban market and destroyed the commercial net sector. A sales force of 10 representatives with Land Cruisers covered rural areas and sold the nets directly to retailers on a cash basis. To increase the rural reach of its ITN program beyond existing rural retailers, PSI/Kenya built a network of 700 rural kiosks (pictured at right) in rural malaria prone areas. Local entrepreneurs — identified with the help of community leaders and selected using strict criteria — operated the kiosks.

## Communications

The objectives of the communications strategy were to increase demand and consumer willingness to pay for ITNs and retreatment kits by 1) increasing awareness among parents with young children and pregnant women that ITNs are the most effective protection from malaria, 2) increasing knowledge about the importance of treating nets with insecticide and 3) increasing consumer awareness of which household members are most vulnerable to malaria (pregnant women and children under five years) so that they receive preferential access to nets.

A branded campaign was developed to stimulate demand for Supanet and Power Tab through radio, TV and print media. Supanet advertising was targeted at pregnant women

and parents of children under five with soft, family-oriented messages promoting the use of Supanet for malaria prevention. The Supanet poster tag line below reads “Protect the Ones You Love with Supanet.” Power Tab communications were targeted at all mosquito net owners, and revolved around a locally developed super action hero called “Mr. Power Tab” who runs around smashing mosquitoes and protecting users from malaria. The idea was based on the World Wrestling Federation concept, which is quite popular in Kenya.

In collaboration with the Ministry of Health, PSI also developed and launched a “generic”<sup>\*</sup> communications campaign to educate consumers about malaria transmission, the

<sup>\*</sup> “Generic,” in PSI social marketing parlance, means unbranded, and done for general health promotion.

high-risk groups and the effectiveness of ITNs to prevent malaria. Such generic, or unbranded, campaigns are common in PSI social marketing projects and aim to grow the entire product category on which the project is focusing. The campaign included the use of mass media (TV, radio and print), as well as interpersonal communications such as antenatal clinic educational sessions, community drama, peer education in market places, and rural community festivals that drew the communities together for fun activities such as sports competitions that were also used as education venues. Examples of educational programs were a 20-minute television documentary on malaria transmission and prevention, a radio soap opera that aired on national and regional television and mobile cinema units that circulate in rural areas.

The generic communications strategy involved a “shock” campaign intended to spur people into action against malaria. Project research had shown that people are fairly apathetic and fatalistic about malaria, considering it just a part of life. The research also revealed that most people are not aware



These posters are from the 2002 branded campaign for, on left, Supanet ITNs (“Care for your loved ones with Supanet”) and, on right, Power Tab retreatment kit (“The strength to eliminate malaria”), the latter based on the World Wrestling Federation concept.

that pregnant women and very young children are most at risk from malaria. Rather, most believe that everyone was equally at risk. The TV spots, radio and print messages thus depicted the worst case scenario, warning people that malaria could kill their unborn child or their young children, and the way to prevent this was to sleep under an insecticide-treated mosquito net.

## Working with the Commercial Sector

PSI worked closely with the six main manufacturers of mosquito nets in Kenya as well as several large importers of nets to promote their brands through mass media advertising, thus helping to boost the ITN commercial market and further the development of a net culture. The manufacturers were eligible to purchase Power Tab for the highly subsidized distributor price. Five radio spots and two television spots were developed. The ads were generic in nature, advising people that the best protection from malaria was to sleep under ITNs. The tag at the end indi-

cated that people should look for the following net brands that were packed with Power Tab. One brand from each manufacturer was then mentioned or shown. The radio and TV ads were run three months of the year during the two rainy seasons. In addition, a print leaflet was developed for the trade that promoted the locally manufactured nets and gave the contact details for manufacturers. PSI also encouraged the manufacturers to improve the quality of their branding to make the nets more attractive to the consumers.

## The 2003 Results

The results after two years were quite encouraging in some respects. More than 1.2 million ITNs and 1.4 million retreatment kits were sold through commercial channels, significantly exceeding targets and expectations (see **Figure 1**, next page). This prevented an estimated 2.6 million malaria episodes and saved the lives of over 15,000 children.<sup>†</sup> A national survey conducted by PSI in 2003 showed nearly a 10% increase in household net ownership (see **Appendix B** for progress relative to DFID targets).

The mid-project 2003 knowledge, attitudes and practices (KAP) study showed significant increases in brand awareness: Supanet brand awareness increased from 27% to 79% and Power Tab from 0% to 64%. The percentage of adults who had correct knowledge of malaria transmission and the effectiveness of ITNs also increased. Awareness of ITNs

as an effective malaria prevention strategy increased from 3% in 2001 to 44% in 2003.

However, the increase in household ownership of nets and coverage of pregnant women and children under five years was much higher in urban areas (ranging from 27% to 59%) than in rural areas (18% to 22%).

The brand communications strategy proved quite successful with large increases in awareness noted through media research and with the KAP study. The generic communications material however, was not highly memorable as measured by media recall research, scoring significantly lower than the averages for this type of material. The KAP survey showed that awareness about the high risk groups only increased slightly, and was well below target.



These are two posters from a 2002 PSI/Kenya generic communications campaign that produced disappointing results. The poster at right says in Swahili, “Malaria kills 36,000 children every year,” (left) and, “Make sure your child sleeps under an insecticide-treated net,” (right).

<sup>†</sup> Malaria episodes and deaths averted are calculated based on life of nets and treatment efficacy, combined with percent of malaria protection and average malaria episodes per person per year.

**Table 1. 2000 Baseline and 2003 Actual Results Compared to 2006 Targets**

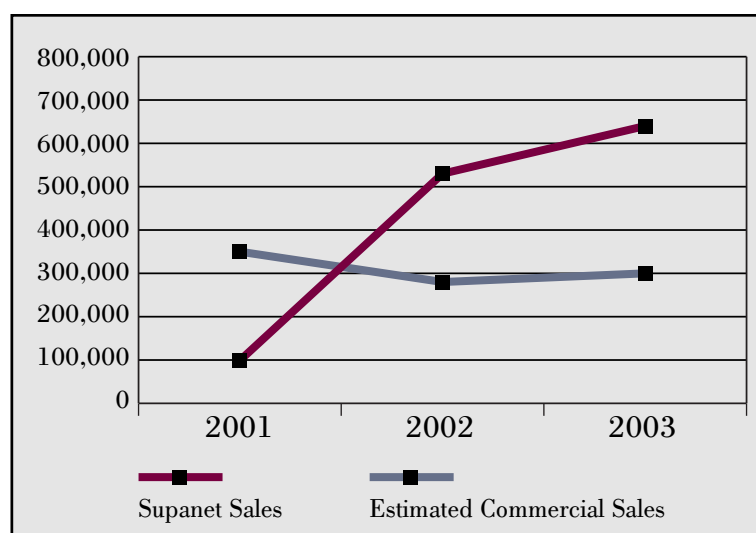
	<b>2000 ACTUAL (BASELINE)</b>	<b>2003 ACTUAL</b>	<b>2006 TARGET</b>
HOUSEHOLDS OWNING AT LEAST ONE NET	22%	31%	42%
CHILDREN UNDER 5 SLEEPING UNDER A NET	17%	24%	40%
PREGNANT WOMEN SLEEPING UNDER A NET	17%	25%	30%

## Commercial Sector

The commercial bed net market experienced an estimated 30% decline in volume from 2001 to 2002 after the introduction of Supanet. However, after they began bundling their nets with Power Tab (which PSI was aggressively marketing), the commercial market began to grow between 2002 and 2003. In addition, a large influx of imported nets arrived on the market in 2003 after

the import duty and VAT were lifted, and after significant demand had been created through the PSI brand and generic communications campaigns. The imported nets exerted significant price pressure on the local manufacturers, and the trade and consumer prices of these nets began to decline. Some were found at the same or lower prices than that of Supanet.

**Figure 1. Supanet and Commercial Net Sales, 2001-2003**



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# The Analysis

PSI had promised DFID 42% household ownership of nets, 40% of children under five and 30% of pregnant women sleeping under nets, including both rural and urban coverage, by 2006. By 2003, the project target for urban areas had been achieved, but rural coverage was well below target. At the 2003 rate of rural sales (approximately 200,000), it would have taken several years beyond the project end date to reach a rural target of 42% of households owning nets. Obviously, a shift in strategy involving distribution, pricing and/or communications was urgently needed if the rural coverage targets were to be met by the end of project.

In addition, DFID and the Kenyan Ministry of Health (MOH) were under significant external pressure to achieve the Abuja targets. In 2000, the Abuja Declaration was signed by most African heads of state, including Kenya's then President Daniel Arap Moi, at a meeting in Abuja, Nigeria at which they promised to do everything possible to curb malaria by 50% by 2010. The Declaration set out a number of target indicators that would signify progress in reducing malaria. The main indicator for malaria prevention was to have 60% of pregnant women and children under five sleeping under mosquito nets by 2006. When the disappointing 2003 rural survey results came in, both DFID and the MOH decided that more rapid progress must be made towards the Abuja ITN target.

Thus, in the next external DFID project evaluation, DFID changed the national household coverage target from 42% to 75% by 2006, with at least 60% of pregnant

women and children under five sleeping under a net. To accomplish this, they provided USD \$49.1 million of additional funding, for a total of \$74.5 million.

As a result of this analysis DFID allowed PSI to utilize public sector clinics for the first time to distribute ITNs based on PSI's successful use of government health clinics in Malawi. There were approximately 4,000 clinics in the public and private sector serving both the urban and rural populations.

DFID decided that all nets in the commercial sector should be bundled with a treatment kit, and thus agreed to fund a 100% subsidy on Power Tab so that all local manufacturers and importers of nets would be given Power Tab for free if they agreed to bundle all of their nets with Power Tab. In addition, DFID asked PSI to consider the medium- to long-term options on how to increase the role of the commercial net sector, especially given that some imported nets were able to compete with or even undercut the price of the subsidized brand Supanet. These options could include leasing the brand name Supanet to local manufacturers or withdrawing the Supanet from some markets where the local brands were widely available.

PSI staff met to discuss the changes required to meet the new goals. Included in the discussion were the following factors:

- ◆ Distribution and sales of nets in rural areas was lower than in urban areas due to a variety of factors including:
  - Low rural retail sector purchasing

power. Most rural retail outlets could only afford to buy 5-20 nets at a time because of limited cash availability, and PSI did not offer credit.

- Lack of affordability among a significant percentage of rural consumers. Even at a subsidized price of USD \$2.50, it was estimated that up to 40% of rural consumers could not afford or were unwilling to purchase nets at that price.
- ◆ The public sector health facilities were generally understaffed and overworked. In addition they had never before sold a product such as ITNs although they were experienced in handling some patient registration and lab fees.
- ◆ The generic communications campaign was not sufficiently effective in increasing

consumer awareness, particularly in rural areas.

- ◆ The new long-lasting ITNs (LLITNs) would be available on the international market and were registered in Kenya in 2004. However, supply of these nets was limited given the large global demand for them. Given that they were twice the cost of the regular ITNs packed with Power Tab treatment kits, it was unclear how much money should be spent procuring LLITNs and who should benefit from them.
- ◆ The commercial manufacturers were highly vocal opposing the introduction of a more highly subsidized net into the trade or health facilities where they might leak out and undercut the commercial net market.

# Debating the New Strategy

All the key PSI/Kenya marketing staffers were of one mind on the need for a new strategy. But there was some disagreement on what that new strategy should be.

PSI Technical Advisor Dana Tilson believed that the project should distribute and sell nets through public health facilities in order to increase access for rural consumers. She felt that the health workers were a credible source of health information and guidance for the rural population, and that rural consumers could be reached most effectively through health facilities. She also advocated for a price reduction, especially for rural consumers.

Supanet Brand Manager Chris Wainaina and Project Director David Walker expressed reservations about this public sector approach. First, they feared significant leak-

age of nets from the health facilities to the commercial sector that would undermine the commercial net market. Second, they were worried that the public health center staffs would not have the time or concern to sell ITNs. They suggested that net sales be limited to rural trade outlets with a price reduction.

There was significant concern about how to boost local ITN manufacturers' market share. Should PSI/Kenya simply withdraw Supanet from some geographical areas so that the manufacturers could sell their nets with no competition from Supanet, or should PSI/Kenya license the Supanet brand to the manufacturers, allowing them to market their own nets with the Supanet brand name? Either way, the manufacturers would benefit from increased market share.



Interpersonal education session at an antenatal clinic.

Although PSI had procured some nets (approximately 5% of total volume) from the local manufacturers, the quality of the nets was inconsistent and had to be closely monitored by an independent inspection agent. In addition, their volume capacity was only a fraction of the total requirement, leading to concern that they would not be able to produce sufficient quantities in a timely fashion to meet the market demand.

IEC Manager Rose Kibe, Tilson, Wainaina and Walker faced the task of reconciling all of this information and cobbling together a new distribution, pricing and communications strategy to address the situation at the end of 2003 in order to achieve the new donor deliverables by 2006.

Walker and Wainaina advocated that PSI withdraw Supanet from a small portion of the market, while Tilson advocated for a pilot trial of a brand licensing arrangement.

On the generic communications campaign, Kibe, studying media results that showed poor recall from the “shock and fear” campaign, believed that the messages in this

campaign were too negative and disjointed. She believed that people were tuning out the negative messages because they don't like to hear bad news and that there was nothing tying the messages together as a brand would do for Supanet and Power Tab. Therefore, she advocated for a “branded” generic campaign, whereby the same messages would be packaged under an umbrella slogan that would identify the whole campaign and make it more memorable.

Tilson liked the generic campaign, but thought the media placement of the messages was wrong. There were spots for increasing awareness about pregnant women and children under five as the most at risk, as well as ads promoting retreatment. All of these disparate messages were aired at the same time, and Tilson believed that that the listeners were not recalling specific messages very well because they were bombarded with so many messages at once. She advocated that the same messages continue to be aired with different media placement. All of the spots with the same message would be aired at the same time and for a longer period.

# Implementing the New Strategy

During the second half of the project (2004-2006), the main objective was to increase net ownership and use among rural at-risk groups and communities. The strategy, developed in conjunction with the Ministry of Health, was threefold: 1) Increase the subsidy on ITNs to rural communities; 2)

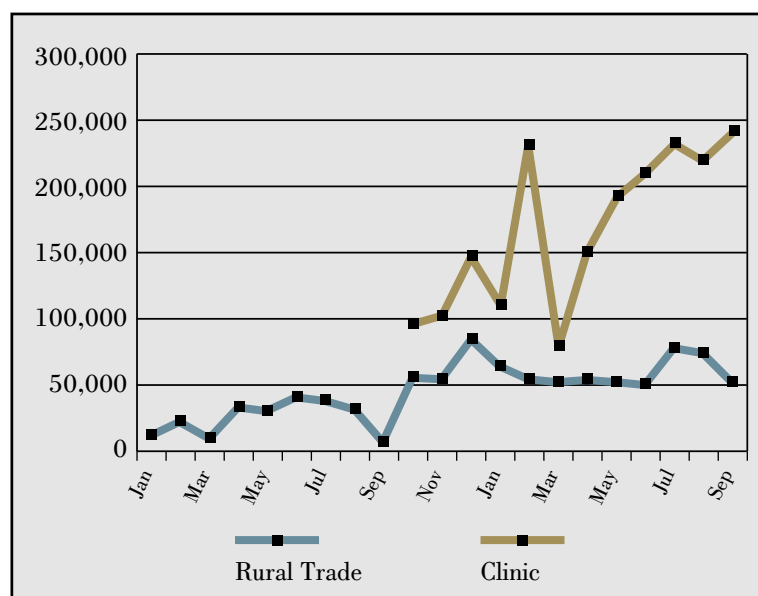
Increase the availability and affordability of the nets to pregnant women and children under five by selling them through health facilities; and 3) Create a new generic communications campaign that is actually “branded” in order to increase recall of the key messages.

## Distribution

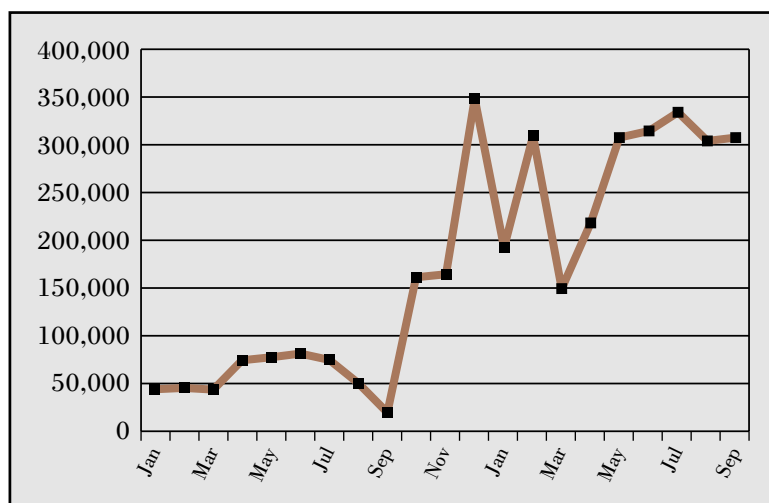
The new distribution strategy to public health clinics was tested in the Coast region during the first half of 2004, during which demand and sales of nets increased four-fold. The model was then rolled out from September 2004 to all the 51 malaria prone districts in the country. During the four-month rollout, over 2,000 health facilities and 4,000 health workers and community leaders were trained in malaria prevention with ITNs.

Nets bundled with an insecticide treatment kit were then sold through health facilities for 50 ksh (approximately USD \$0.65) to pregnant women and children under five. About four months later, when supplies could be secured, LLITNs were introduced but only sold through clinics to pregnant women and families with children under five. Although the LLITNs were twice as expensive as the bundled nets, DFID absorbed the ex-

**Figure 2. 2004-2005 ITN Sales by Month: Rural Trade and Clinic Sales**



**Figure 3. 2004-2005 Total ITN Sales by Month**



tra cost and the price to consumers remained the same. The nurses in the health facilities sold the nets to the at-risk groups after checking and stamping the antenatal card of pregnant women, or the child welfare card for children under five. PSI delivered the nets to the health facilities directly, and in bulk to district hospitals that acted as sup-

ply depots for the smaller clinics.

In addition, the subsidy on bundled nets sold to rural communities in malaria districts was increased and the net price reduced to 100 ksh. The price of nets in urban areas was reduced by only 30 ksh, which was only a slight subsidy.

## The Results of the New Strategy

The initial results of the new strategy far exceeded expectations. Average national monthly sales increased five-fold from about 50,000 per month during the first nine months of 2004 to over 250,000 per month between October 2004 through August 2005. After the clinic program was introduced, over 90% of PSI's net sales were through health facilities and rural commercial outlets (the other 10% being sold through urban commercial outlets). It is important to note that the cutting the price of the rural commercial net in half essentially doubled demand in rural areas. The initial demand even at this high supply level far outstripped the projected sales as well as PSI's capacity to import and distribute sufficient quantities of nets. Due

to the limited supply of the LLITNs from the two global suppliers, only 260,000 nets per month could be guaranteed for distribution for the balance of the project period.

If this demand continues through 2005 and 2006 and PSI is able to secure sufficient stocks, Kenya will reach the Abuja target (60% of pregnant women and children under five sleeping under a net) sometime in late 2005 or early 2006. DFID will support PSI in increasing its distribution capacity as well as increasing the volume of nets distributed in 2005-2006. By the end of 2006, it is estimated that 11.2 million nets will have been distributed during the five-year project. This will save an estimated 167,000 child lives.

## Communications

The new communications strategy incorporated the generic messages under an umbrella “brand” called “Malaria Ishindwe!” (translated as “Down with Malaria!”). The branded slogan was developed through local research. “Ishindwe” is a word often used by preachers in the churches to invoke campaigns against evil things or the devil. So the word has positive connotations among consumers and was readily understood and liked as a rallying cry to fight malaria. It is also memorable.

There were three messages in this campaign under the umbrella slogan: 1) In order to beat malaria, you have to sleep under a treated net; 2) You must know the people most at risk (pregnant women and children

under five); and 3) You must retreat your net in order to keep your home a “malaria free zone.” These messages were disseminated through mass media and interpersonal communications (clinic programs, community drama groups, road shows, etc), almost as a religious crusade. The messages were aired in three phases of three months each to insure that each message was understood and remembered by the target audience. The media research subsequently showed very high recall of the campaign and the campaign messages, much higher than the average recall for similar length ads. The national increase in awareness of the high risk groups and ITNs will be available in January 2006 from the second KAP study results.



It's Time! Let's eradicate malaria by ensuring that the places we live in become malaria free zones. Every night your family should sleep under a bednet. Down with Malaria!



We shall never give up! Remember to retreat your net twice a year before the rains to ensure the places we live are malaria free zones. Down with Malaria!



Protect them! Protect pregnant women and children under five from malaria. Ensure that every night they sleep under an ITN. Down with Malaria!

## Commercial Sector

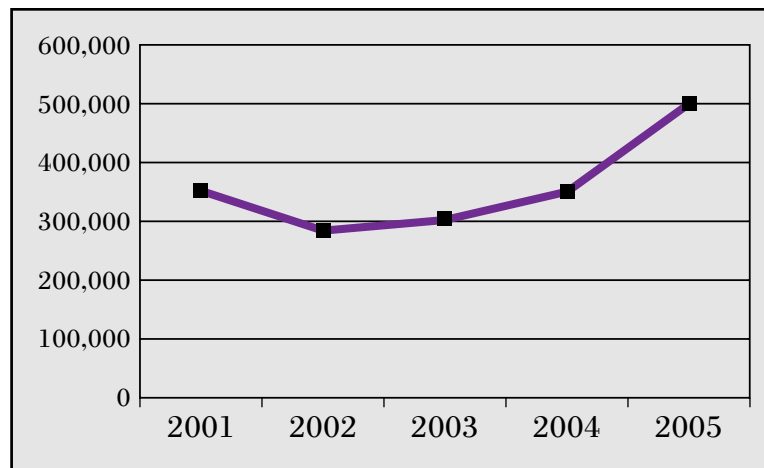
The ITN commercial sector began to grow in 2004 and 2005 with considerable support from PSI in the form of advertising, free Power Tab and a large generic communications campaign promoting the use of all ITNs. Estimated growth of the entire commercial sector — both local manufacturers and importers — was approximately 20% in 2004 and 40% in 2005. This growth occurred at the same time that PSI was distributing nearly five times the number of highly subsidized nets through rural health facilities.

It is important to note that much of the growth in 2005 came from imported nets from Asia, which probably hurt some of the local manufacturers. But the increased competition can only be good for Kenyan consumers suffering from malaria who now

have a greater choice of nets at lower prices.

PSI decided to pursue a brand licensing arrangement on a pilot basis with the largest local manufacturer in Kenya, Mossnet Industries. Under the agreement, Mossnet manufactures Supanet according to PSI specifications, receives free Power Tab from PSI and procures the packaging from PSI at cost to ensure consistent quality. Mossnet then supplied PSI's distributors in Nairobi with the Supanet at the PSI trade price. This expanded the market share of nets supplied by local manufacturers while maintaining the price and quality of the Supanet brand. The licensing arrangement has been successful and will be rolled out to other areas of the country and to additional manufacturers in 2006.

**Figure 4. Commercial Sector Sales, 2001-2005**



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# Appendix

## Appendix A. Program Objectives, 2006

### **Program goal**

Reduce morbidity and mortality from malaria among children under 5 years and pregnant women through the use of insecticide-treated mosquito nets (ITNs) and increasing net re-treatment rates.

### **Program Objectives**

1. Increase knowledge of malaria transmission and prevention.
2. Increase knowledge and use of Supanet and Power Tab insecticide-treated mosquito nets for malaria prevention.
3. Increase household ITN ownership.
4. Increase retreatment rates for mosquito nets.

### **Purpose level indicators**

1. 42% of households own at least one net; later increased to 75%.
2. 25% of net-owning households in rural areas retreated net in last 6 months.
3. 40% of children under 5 in urban/peri-urban and rural areas slept under an ITN the previous night; later increased to 60%.
4. 30% of pregnant women in urban, peri-urban and rural areas slept under an ITN the previous night; later increased to 60%.
5. Seven million Person Years of Malaria Protection (PYMPs).
6. 2.3 million Supanets sold.
7. 1.5 million Power Tabs sold.
8. Project cost/PYMP of \$3.32 over life of project.

### **Output level indicators**

1. 60% of wholesalers in malaria-endemic regions stock Supanet and Power Tab by 2005.
2. 90% of rural adults know where to purchase ITNs.
3. 60% of rural adults know where to purchase retreatments.
4. 50% report that they live within a 15-minute walk of a place to purchase nets.
5. 35% and 70%, respectively, of adults know that malaria is most dangerous for pregnant women and children under 5.
6. Increased number of adults who know that malaria is transmitted only through mosquito bites.
7. 90% brand awareness of Supanet.
8. 50% of adults identify treated nets as a method of malaria prevention.

## Appendix B. Progress Towards Program Objectives, 2000-2003

PURPOSE LEVEL				
INDICATOR	YEAR	TOTAL	URBAN	RURAL
% OF HOUSEHOLDS THAT OWN AT LEAST ONE NET	2000	22%	27%	18%
	2003	31%*	59%*	22%*
% OF NET-OWNING HOUSEHOLDS IN RURAL AREAS IN WHICH NET WAS RETREATED IN LAST SIX MONTHS	2000 <sup>β</sup>	-	-	-
	2003	22%	25%	20%
% OF CHILDREN UNDER 5 IN URBAN/PERI-URBAN AND RURAL AREAS WHO SLEPT UNDER A NET THE PREVIOUS NIGHT	2000 <sup>μ</sup>	17%	22%	10%
	2003	24%	51%	17%
% OF PREGNANT WOMEN IN URBAN, PERI-URBAN AND RURAL AREAS WHO SLEPT UNDER A NET THE PREVIOUS NIGHT	2000 <sup>μ</sup>	17%	22%	10%
	2003	25%	47%	17%

\* statistically significant difference

<sup>β</sup> The retreatment in 2000 was virtually zero, so this question was not asked in 2000.

<sup>μ</sup> These figures are approximations as this was not directly measured in the 2000 survey.

OUTPUT LEVEL				
INDICATOR	YEAR	TOTAL	URBAN	RURAL
% WHO KNOW WHERE TO PURCHASE A NET	2000	77%	91%	69%
	2003	81%	97%	76%
% WHO KNOW WHERE TO PURCHASE RETREATMENT	2000	8%	7%	8%
	2003	40%*	60%*	33%*
% WHO REPORT THAT THEY LIVE WITHIN A 15-MINUTE WALK OF PLACE TO BUY A NET	2000	20%	28%	11%
	2003	30%*	46%*	16%*
% WHO KNOW PREGNANT WOMEN ARE MOST AT RISK OF MALARIA	2000	1%	1%	1%
	2003	7%*	10%*	5%*
% WHO KNOW CHILDREN UNDER 5 ARE MOST AT RISK OF MALARIA	2000	35%	33%	37%
	2003	44%*	48%*	42%*
% WHO KNOW THAT MALARIA IS TRANSMITTED ONLY THROUGH MOSQUITO BITES	2000	45%	51%	41%
	2003	61%*	71%*	56%*
% WHO KNOW OF SUPANET	2000	27%	29%	27%
	2003	79%*	95%*	74%*
% OF ADULTS WHO IDENTIFY TREATED NETS AS A METHOD OF MALARIA PREVENTION (UNPROBED IN 2000, PROBED IN 2003)	2000	4%	2%	3%
	2003	44%*	63%*	37%*

## Appendix C. Supanet/Power Tab Price Structure, 2002

ITEM	DISTRIBUTOR PRICE	OPERATING MARGIN	WHOLESALE PRICE	OPERATING MARGIN	RETAIL PRICE	OPERATING MARGIN	CONSUMER PRICE
BLUE CONICAL (URBAN)	\$3.33	12%	\$3.73	20%	\$4.00	17%	\$4.67
GREEN RECTANGULAR (RURAL)			\$1.87	14%	\$2.13	25%	\$2.67
POWER TAB	\$0.33	20%	\$0.40	16%	\$0.47	43%	\$0.67

## Appendix D. Commercial Net and Supanet Prices, 2001-2003

YEAR	ESTIMATED COMMERCIAL VOLUME	AVERAGE CONSUMER PRICE COMMERCIAL NET	SUPANET CONSUMER PRICE
2001	350,000	\$5.70	\$5.20
2002	285,000	\$5.70	\$4.67
2003	300,000	\$5.05	\$4.67