



MALARIA, MALI

Case Study (Healthcare)

Project Summary:

The United Nations Children’s Fund (UNICEF) has undertaken a major effort to combat malaria in sub-Saharan Africa. One major focus of their programs has been the distribution of insecticide-treated nets, with much of this effort funded by international health organizations and philanthropy. This program in Mali offers an example of expansion of the program through the use of a public-private partnership (PPP).

Mali is a landlocked country with a mostly flat terrain and some rocky hills in the north. The Niger River crosses the southern part of the country and forms an interior delta. Mali also has a subtropical to arid climate. Those parts of the country which receive significant rainfall experience a rainy season for part of the year and extremely dry weather for the remainder of the year. During the rainy season, Mali often faces problems with flooding when the Niger River overflows. When combined with environmental problems of deforestation, soil erosion, and desertification, this creates conditions ideal for the transmission of malaria.

Malaria is one of the principal causes of mortality and morbidity in Mali. With a population of approximately 11 million, Mali has over 800,000 reported cases of malaria annually, according to the World Health Organization (WHO). Malaria accounts for 13% of all mortality in Mali for children under the age of five. Malaria is endemic throughout the more populated southern half of the country, with over 90% of the total population at risk of endemic malaria, with young children and pregnant women being the most vulnerable.

Malaria spreads through the bite of Anopheles Gambiaemosquitoes, infected with the Plasmodium parasite. The mosquito receives the parasite from a blood meal taken on an infected person. When the mosquito takes a blood meal from another person, these parasites are injected through the mosquito’s bite. Once the parasite enters a person’s blood, toxins are eventually released that cause fever, chills, and flu-like malaria symptoms. If the person is left untreated at this stage, malaria can quickly become life-threatening by disrupting the blood supply to vital organs. An estimated 80 to 90 percent of children under five carry Plasmodium parasites during the rainy season in Mali.



Malaria is a fatal disease which can be prevented and cured. The best method of prevention is insecticide-treated bed-nets (ITNs), which are also one of the most cost-effective interventions against malaria. An ITN is a mosquito net that repels, disables, and kills mosquitoes coming into contact with the insecticide on the netting material. Mosquito nets treated with Pyrethroid insecticides add a chemical barrier to the net's physical one, killing mosquitoes that come into contact with it. If used properly, the ITNs offer at least a 50 percent reduction in the risk of contracting malaria. The challenge for Mali was finding an economic and efficient way to distribute these ITNs to the broadest portion of the population possible.

NetMark is a project to accomplish this very objective, by building commercial markets for ITNs. The project was launched by the government of Mali in the early 1990's, with the intent of harnessing the power of the commercial sector to reach citizens effectively and equitably, and leveraging the impact of limited public sector resources. NetMark formed a public-private partnership with the National Malaria Control Program of Mali, using a time-limited investment by USAID to increase the commercial supply of and public demand for ITNs. This partnership between commercial companies and national malaria control programs has resulted in nationwide public education and promotional efforts.



Project Objectives:

The partnership's mandate is to increase demand for and expand the availability of ITNs in Mali. NetMark has worked in eight African countries with more than 40 commercial partners, including four of the world's largest suppliers of ITNs, and over 30 African manufacturers, wholesalers, and distributors. The approach promotes ITNs that are sold at subsidized prices, in order to motivate commercial sector involvement and leverage the limited public sector resources available for this effort. The goal is to ensure that affordable ITNs are available to all socio-economic groups in the country, targeting high risk groups such as pregnant women and children of less than five years, and provide them with free or subsidized ITNs. NetMark also help donors to target their free distribution to the neediest people. This is an effective methodology, as indicated by recent surveys in four countries that demonstrate that the number of people protected from malaria by ITNs has risen by an estimated 15 million in the past four years.

NetMark also conducts public education campaigns, which provide people with critical information about the dangers of malaria and how ITNs can save lives. The project encourages stronger links between ITN suppliers and distributors. The project aims to make ITNs accessible to more people and ensure continuous availability of the ITNs even after the project's end.

By introducing private sector competition in the market for ITNs, the project has seen a significant drop in their retail prices. On average, an ITN can be purchased in 2005 for 75% less than what an untreated net cost in 2001. NetMark also encouraged Mali to remove taxes and tariffs on insecticides and netting materials, resulting in further reductions in net prices for consumers. NetMark worked with the National Malaria Control program to lift the value-added tax (VAT) and tariffs from both imported and locally-produced mosquito nets, in order to reduce costs and facilitate greater access to the pesticide-impregnated mosquito nets. Today Mali is one of only 17 nations worldwide which have removed taxes on initial ITNs.

The partnership also supports a streamlined system of subsidizing ITNs to the poor. The project helps African manufacturers improve quality, capacity, and introduce long-lasting nets that will provide protection for three to five years instead of six months. The potential health and economic impact of widely used ITNs throughout Mali is enormous - if properly used, ITNs could cut the health impact of malaria in half.



Project Description:

1.Partners

Public sector partners in this effort include the Mali Ministry of Health, the U.S. Agency for International Development (USAID), and other international agencies. A number of major international private firms are also involved in NetMark. One is a Dutch company with over 25 years' experience in manufacturing mosquito nets and which first developed the long-lasting insecticide-treated nets (LLINs). Another is a Danish company specializing in complex emergency response and disease control textiles, with a long association with non-governmental organizations (NGOs), UN agencies, and national ministries of health. This same company manufactures a long-lasting insecticidal polyester bed net.

A third private company, headquartered in Germany, is one of the world's leaders in crop protection, biotechnology and non-agricultural pest control. The company has focused on creating a highly specific insecticide, based on pyrethrum, which has a rapid action against almost all insects and is relatively simple to impregnate and retain on a mosquito net.

Several marketing communication companies are also involved in NetMark. They provide skills in building markets by focusing on consumer behavior and developing the most effective communications strategies for educating the public about Malaria and the use of ITNs, and encouraging people to use health services.

A key element of this public-private partnership is its network of local for-profit manufacturers and distributors. NetMark provides them with manufacturing expertise and subsidies to increase the availability of ITNs, particularly for poorer areas. The local partners, however, assume the management risk of operating themselves effectively and profitably.

Nonprofit organizations are another component of the NetMark partnership. These groups expand their existing outreach programs to include targeted subsidies to reduce the retail price of the ITNs, as well as promote the use of the malaria prevention tool and related health services. Targeting of subsidized, and sometimes even free, products for the most vulnerable is combined with stimulating the commercial sector by using a range of supply and demand side incentives which maximize efficient and sustained product delivery.



2. Implementation Environment

NetMark conducts activities that influence many facets of the ITN market environment in Mali. Along with increasing sales of ITNs across all sectors of society, the program stimulates ITN demand, establishes distribution networks, improves manufacturing and assists in introducing new technologies. This leads to increased availability, affordability, appropriate use and demand for high-quality ITNs throughout Mali.

In Mali, NetMark's communication activities have helped teach more than 100 million people about the dangers of malaria and how ITNs can prevent it. In four of the NetMark countries surveyed in 2004, it is estimated that nearly 15 million more people were protected from malaria by ITNs than before this partnership began activities in 2000. In Mali, NetMark's programs have particularly benefited the lower socio-economic groups. ITNs now cost 75 percent less than untreated nets did in 2000, because of more ITN brands and competition in the market that has been established by this program. NetMark's national public education and promotion programs in Mali have increased demand for and sales of ITNs beyond just its formal partners – it has increased use of ITNs whether distributed through the public or commercial sector.

NetMark's partnerships with 35 African and 9 international commercial partners have resulted in investment over \$18 million in country programs and made organizational changes to support growing market demand. This has ensured a sustainable supply of nets when donors are no longer willing or able to supply free nets for all of sub-Saharan Africa's 689 million people. Before the partnership, few nets were treated with insecticide, but now in Mali over 65 percent of nets owned have been treated. NetMark advocacy also contributed to the removal of taxes and tariffs on insecticides and netting materials, which led to market expansion and lower prices, ensuring a supply of quality nets for the public. Their efforts also have provided baseline information useful to the public health community as well as the private sector involved in ITNs. This helped the private sector understand the consumer perspective, as they develop and supply their products. The information also helped serve as the basis for the design of promotional campaigns encouraging the purchase and correct use of these products.

These education efforts about Malaria and ITNs have also paid off. In the past, insufficient attention had been paid to designing and implementing locally appropriate communication strategies to accompany ITN distribution. There was no strategy to inform communities of the importance of ITNs and of how to hang, use, and maintain them properly. As a result, many people who received ITNs did not sleep under them, re-sold them, reduced their efficacy through inappropriate washing practices, or failed to replace them when they became damaged or torn.



NetMark's national scale public education efforts have been very successful and increased the proper use of ITN and decreased the incidence of malaria.

3. Financial Agreement

When the project was first launched, NetMark had received a commitment from the Malian Ministry of Health for approximately \$800,000 (renewable for two more years) through a Memorandum Of Understanding (MOU) that called for NetMark and non-governmental agency (NGO) to launch a national ITN use and marketing program. NetMark also received \$500,000 from USAID/Bamako for the first year of an ITN social marketing campaign to support the establishment of a commercially viable ITN market to be implemented by two Malian ITN importers/distributors. In addition, NetMark agreed to complement this funding with at least \$300,000 of USAID/Washington funds on an annual basis. Equally important, NetMark has been very successful in developing public-private partnerships with international firms to be actively involved in this project in Mali – this has led to \$16.8 million (nearly a third of the total budget) in private sector support for the program.

4. Contract Provisions

Under the terms of the MOU with the Malian Ministry of Health, NetMark and an NGO agreed to modify their original plans and jointly invest their respective funds in a way that builds on the relative strengths of each organization through a closely coordinated effort. This joint effort was an attempt to make the most cost-effective investment on behalf of USAID and the Ministry of Health, to increase the demand, availability, affordability, and appropriate use of ITNs. This collaboration includes the following:

- **Planning and Coordinating:** NetMark, the NGO and their commercial partners developed a joint implementation strategy with the intention of launching activities in early 2003. All parties were involved in the coordinating committee to ensure that activities remain consistent with Ministry of Health's goals and integrated with the efforts of other partners such as UNICEF and other NGOs. NetMark hired a Malian coordinator who was responsible for daily coordination with partners and oversight of its activities, with support from NetMark's Regional and Washington staff.
- **Marketing:** The NGO used its funding to support a nation-wide campaign to promote the importance of retreating nets. The campaign directly supported an evolution towards commercial sustainable marketing without creating financial barriers to the use of other resources for target populations.



- Marketing of commercial ITN brands: NetMark used its funding to co-invest with the manufacturing partners in the marketing and distribution of several brands of ITNs. This was done through a combination of an umbrella campaign, matching funds for initial procurements, investments in Malian distribution/promotion support, and possible matching funds for branded advertising. The commercial partners paid for product procurement, brand advertising and promotion, and ensured national distribution.
- Targeted subsidies: The partnership developed multiple mechanisms to target the delivery of subsidized ITNs to pregnant women. These approaches included the targeted distribution of a subsidized ITN through antenatal clinics, and a discount voucher program with commercial partners, in collaboration with World Vision and Save the Children.
- Market Research, monitoring and evaluation: The partnership developed a research plan that guides implementation and allow for evaluation of impact on increasing demand, affordability, appropriate use and access. It also identifies best approaches for delivering targeted subsidies that are linked with commercial marketing of ITNs to maximize coverage and commercial viability.

5. Implementation Metrics

NetMark is working with its partners in support of the National Malaria Control Program in Mali, to create a sustainable market for ITNs to successfully prevent the spread of Malaria, through the following:

- Supply – NetMark is increasing the supply of ITNs by improving the coordination of commercial and institutional procurements, providing technical and financial support to expand manufacturing capacity and quality, and creating strong links between manufacturers and the best distributors in Africa. Increasing the supply of ITNs is necessary to meet the rapid increase in demand for ITNs among consumers and institutional buyers.
- Demand – NetMark builds demand for ITNs through marketing campaigns based on extensive behavioral research. This effort is amplified by joint investment with African distributors and ITN suppliers who market their own brands. As demand grows within a competitive market, consumers should benefit from improved quality, lower prices and wider availability.



- **Distribution** – NetMark is working with suppliers and distributors to ensure the uninterrupted distribution of ITNs at a national scale through improved stock management, joint investment to expand the number of outlets carrying ITNs, partnerships with grassroots organizations for community level distribution, and mobile promotional teams.
- **Improved Technologies** – NetMark is working closely with world-class consultants, insecticide companies, and net manufacturers to bring the most promising technologies from the laboratory to Africa as quickly as possible. This partnership will continue to support the transfer of technology for improved, longer-life ITNs that are available to individuals and institutional buyers at the lowest possible cost.
- **Equity** – NetMark works with commercial and public sector partners to ensure there is equal demand and access to ITNs across all socio-economic groups. This is accomplished by using targeted subsidies to provide discounted or free ITNs to the most vulnerable populations via the commercial sector. In countries like Mali, with high and equitable net coverage, NetMark works with partners to promote the retreatment of those nets.
- **Sustainability** – NetMark is developing a commercial market culture to replace what is now a trader culture, where suppliers and distributors simply sell what they can when they can. In this regard, NetMark has facilitated the growth of strong, lasting partnerships between suppliers and their distributors.

Commentary:

1. Problems with the Project

The main problem that this partnership faced was the misconceptions that people had about malaria. Most people in Mali did not understand the disease and how to prevent it. Developing a national education program to clear up misunderstandings and inform citizens about the ITNs was the biggest hurdle that the program had faced. A remaining challenge is educating the poorer recipients of donated ITNs, many of whom sold the donated nets to obtain money for other needs. NetMark continues its educational efforts to improve the understanding that the ITNs provide significant health benefits and can help people avoid disease, medical expense, and even death.



2. Key Points for Success or Failure

The success of this healthcare public-private partnership in Mali has been contingent upon many factors:

- The Government of Mali recognized that incorporating private sector management skills and competitive market forces in the program for distribution of the ITNs would significantly expand the impact of the program;
- Although the government lacked the financial wherewithal to provide much direct funding support to the program, it nonetheless took active steps to support the wider distribution of ITNs, to include lifting the value-added tax (VAT) and tariff on ITN-related products;
- The use of targeted subsidies has enabled the project to distribute ITNs to poor households and communities which could not otherwise afford them;
- Increasing the demand, availability, affordability, and appropriate use of ITNs, which in turn help develop a market for private participation in ITN supply and distribution;
- Public education campaigns have provided people with critical information about the dangers of malaria and how ITNs can save lives;
- Introducing competition in the market and involving the commercial sector to benefit from the project; and
- Involving both the public and private sectors in a joint effort to prevent the disease, and enjoying the benefits that come from the success of the project.

Malaria causes an average loss of 1.3 percent in annual economic growth in countries with intense transmission of this disease. When compounded over the years, this loss leads to substantial differences in GDP between countries with and without malaria. Malaria traps communities in a downward spiral of poverty, disproportionately affecting marginalized populations and poor people who cannot afford treatment or who have limited access to health care. The NetMark project in Mali is helping to reduce the social and economic impacts of endemic malaria. The partnership aims to prevent the spread of the disease through the use of ITNs that are subsidized and available to everyone. The use of a PPP structure enables NetMark to leverage the government and donor funds available for this effort. This PPP challenges the way businesses think about market opportunity, encouraging them to take a broader view of the role their products can play and the consumer behaviors they can influence while addressing critical public health issues and serving the needs of the poor.