Study of sales of Kenyan water filters shows promise

PATH partners with local agency to explore new way to offer residents water filters

BACKGROUND AND PROJECT DESCRIPTION

Clean water is scarce in Kenya's Nyanza Province, located on the shores of Lake Victoria. People in this region often collect their drinking water from shallow wells, nearby streams, or through rainwater catchment. The water is often contaminated, leading to a high prevalence of diarrheal disease in the region. To combat disease caused by unsafe drinking water, PATH's Safe Water Project has been evaluating various distribution models for placing water treatment devices in low-income households in multiple countries.

Throughout East Africa, small household goods are successfully sold through a "basket-of-goods" model where vendors travel to communities and households, marketing a collection of health-related items. Based on the success of these sales efforts in various countries, PATH was inspired to test whether durable water filters—products that are larger and more expensive than those traditionally sold in a basket of goods—could be effectively marketed to families in Nyanza Provice through this version of a direct sales business model.

PATH partnered with the Safe Water and AIDS Project (SWAP) to market water filters in ten districts of Nyanza Province. SWAP proved a strong partner due to their existing presence utilizing a successful basket-of-goods model to sell health-related items such as soap, water purification tablets, and condoms to families in the region. PATH and SWAP selected a ceramic water filter made by Chujio Ceramics, a Kenyan manufacturer based in Nairobi, for distribution in the pilot study.

PATH/Sara Watson

In Nyanza Province, Kenya, households often collect their water from unprotected sources such as this one.

BASKET OF GOODS PILOT DESCRIPTION

The pilot was conducted from December 2010 through June 2011 during which SWAP vendors in local communities served by ten SWAP field offices worked to incorporate the Chujio filter into their sales to local community members in the pilot area of Nyanza and Western provinces.

To initially measure awareness and usage of household water treatment products, PATH conducted a quantitative baseline survey of about 670 respondents from two villages within Nyanza province. Rachuonyo was selected as a control group due to its similarities to the pilot population. No promotional activities were conducted in this area. At the end of the pilot, an end-line quantitative survey was administered in these regions as well as Nyando to assess whether demand-generation activities associated with the pilot had changed perceptions and behaviors surrounding water treatment. A qualitative survey was administered to SWAP vendors and consumers to gain deeper insight into the successes and failures of the pilot.

In assessing whether the basket-of-goods model was potentially viable for distribution of durable water filters, PATH needed to make sure that cost was not a barrier to purchase. In five of the ten study regions SWAP offered the Chujio at a retail price of 1,100 ksh (about US$13)[1] and in the other five SWAP offered a reduced price of 700 ksh

(about $18) to gain an understanding of willingness to pay for a durable water filter. This aspect of the pilot was analyzed based on quantitative and qualitative survey responses as well.

KEY STUDY FINDINGS

The Chujio filter proved to be popular with and understood by users. Quantitative and qualitative data indicated that filter users understood the need to treat unsafe water and that they saw the Chujio as an easy and effective way to do so. It was seen as safe, simple, and hygienic because the use of a tap to dispense water prevented recontamination. Many users also saw the Chujio filter as a long-term, cost-effective method of treatment compared with water purification tablets or using firewood to boil water.

The Chujio filter, however, was also seen by some users and vendors as difficult to carry and fragile. This was a particular challenge for vendors who were sometimes hard pressed to carry the filter on foot to potential buyers. In some cases vendors resorted to carrying the filter's box and using that as a demonstration tool for potential customers.

Despite PATH's attempt to reduce the cost of the filter as a barrier to purchase, the price of the Chujio was still perceived as too high by some potential consumers at both the 1,100 ksh and 700 ksh price points.

At the end of the pilot only about one percent of those offered a chance to purchase a filter did so, a number that was lower than anticipated. The low uptake rate seemed to stem from a combination of factors including the perceived high price, lack of stock in local SWAP offices, and in some cases, the perception that there was no need to treat their water.

CONCLUSIONS AND NEXT STEPS

Despite low uptake of the Chujio filter, the pilot still showed promise in other areas. The strongest endorsement of this distribution effort comes from SWAP itself, which is continuing to sell durable ceramic water filters within their basket-of-goods product offering. Employing the lessons learned from the initial PATH pilot, SWAP is making adjustments to the model and continuing to provide this new household water treatment option to families within their sales regions. SWAP was able to locate a local manufacturer capable of producing a quality product at a lower price. Thus, subsequent sales of the new filter have been profitable and sustainable for SWAP and its vendors. Still needed are more effective ways to physically move the filters to consumers, along with better consumer financing options for purchase.

In addition to this success, the pilot provided PATH and SWAP with insights into ways to more effectively market water filters. These suggestions included conducting monthly meetings with vendors to share successful selling techniques and improving demand-generation activities to increase awareness about the importance of household water treatment. The model also showed the power of word-of-mouth advertising, as friends and neighbors were cited as sources of information about the Chujio even more often than SWAP offices and vendors. Hospitals and clinics, as well as schools, also were shown to be effective channels for promoting water filters and demonstrating their use.

The ceramic filter itself has great potential. It appears to be a highly desirable product for low-income households and has proven to be a valuable addition to SWAP's fast-moving basket-of-goods selling model.

PATH is gratified to see that selling a household water treatment device through the basket-of-goods model showed enough promise for SWAP to continue the method and tailor it to this category of products. In an effort to continue supporting SWAP's efforts, PATH is working to bring new ceramic water filter designs to East Africa to test their acceptance by households in this region. Through user research, PATH will assess potential demand for the new filter. PATH hopes a high demand will improve sales within SWAP's basket of goods, bringing safe water to more Kenyan households.

Clean water should be within everyone's reach. PATH is working toward that goal, one filter at a time.

[1] The normal retail price of the Chujio filter is 1,740 ksh (about $20). This cost of each filter was subsidized by PATH for the purposes of this pilot to best analyze willingness to pay.

PATH
A catalyst for global health

PATH is an international nonprofit organization that transforms global health through innovation. We take an entrepreneurial approach to developing and delivering high-impact, low-cost solutions, from lifesaving vaccines and devices to collaborative programs with communities. Through our work in more than 70 countries, PATH and our partners empower people to achieve their full potential.

MAILING ADDRESS
PO Box 900922
Seattle, WA 98109 USA

STREET ADDRESS
2201 Westlake Avenue
Suite 200
Seattle, WA 98121 USA

info@path.org
www.path.org

January 2012