The Safe Water System Project: Working with local health care staff in Kenya

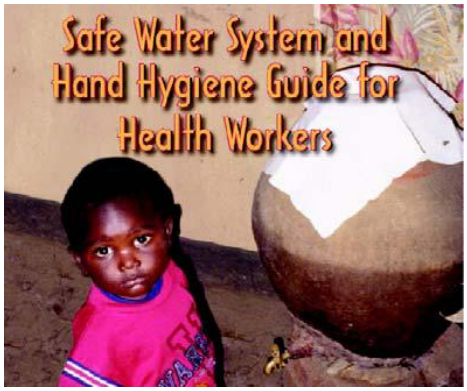
Background

An estimated 884 million people worldwide lack access to an improved water source. Hundreds of millions more drink contaminated water from improved sources because of unsafe water treatment and distribution systems and unsafe water storage and handling practices. Every year, there are approximately 2.5 billion cases of diarrhea, killing an estimated 1.3 million young children. It is estimated that 88% of these diarrheal deaths are the result of unsafe water, inadequate sanitation, and poor hygiene. The Safe Water System (SWS) is a water quality intervention proven to reduce diarrheal disease incidence in users by 22-84%. The SWS includes: 1) water treatment with chlorine solution at the point-of-use; 2) storage of water in a safe container; and, 3) behavior change communication.

Increasing Safe Water System Use in Kenya

The SWS project in Kenya began in 2000 with a CARE/Kenya pilot project in Nyanza Province. Results from this project showed a 56% reduction of diarrheal disease risk in rural communities. Based on a successful pilot project, Population Services International/Kenya began socially marketing a SWS product, a bottle of sodium hypochlorite solution branded as 'WaterGuard' in May 2003. Shortly after WaterGuard was introduced to the region, a survey was conducted to estimate product use in Homa Bay, population 30,000. The findings revealed that only 14% of people were using WaterGuard. Due to low product use, alternative methods of promoting WaterGuard within the region were investigated. One such effort was a project to train nurses at local health clinics to educate their clients about the importance of safe water and proper hand washing techniques. Hand washing techniques were incorporated into this project because washing hands with soap can also reduce the risk of diarrhea by 40%. Nurses were the chosen health messengers for this intervention because they are considered by the community as a reliable health source, and therefore may have a positive influence on health behaviors.

The first pilot project was launched at the Maternal and Child Health Clinic in Homa Bay. Nurses at the clinic were trained in a 4-hour instructional session on the impact and importance of diarrheal diseases, and how to prevent diarrheal disease through the correct use of the SWS and hand washing at critical times using a six-step hand washing procedure. The nurses were trained to deliver these messages to their patients with diarrhea daily in either 5-minute one-to-one sessions or 30-minute group sessions. Patients who received instruction from nurses were visited at their home 2 weeks and 1 year after the program was implemented to assess uptake of WaterGuard and hand washing practices. Findings of this evaluation revealed that WaterGuard use among those who received instruction was high and sustained: 68% and 71% of clients, respectively, had free chlorine residual in their water storage container 2 weeks and 1 year after receiving health messages. Hand washing knowledge retention was also high, as one year after the intervention, 34% were able to demonstrate all six handwashing steps, 98% were able to accurately demonstrate at least four of the steps, and all clients had appropriate hand washing facilities including soap in their home.



This intervention proved effective in increasing sustained adoption of the SWS and handwashing knowledge in vulnerable populations. These results are promising for future interventions that link a socially marketed health product with local information that encourages and increases adoption of the WaterGuard product, particularly due to the limited time needed for implementation and the low cost of the intervention. Replication of similar projects is feasible for regions with limited resources in order to prevent diarrheal diseases through the promotion of safe water and proper handwashing techniques.

For more information, please visit www.cdc.gov/safewater

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