

PATH's integrated approach to reducing diarrheal disease in Cambodia: combining prevention and treatment

BACKGROUND

Diarrhea is the second-leading cause of child deaths worldwide. About two billion cases of diarrheal disease are reported in children under the age of five, and the lives of 801,000 are lost to this preventable and treatable disease every year.ⁱ The burden of diarrheal disease disproportionately impacts developing countries, especially those within Africa and Asia.

Prevention and treatment solutions exist that are highly effective at reducing diarrheal disease. Water treatment options such as chlorine and water filters can greatly reduce the presence of harmful pathogens in drinking water. Sanitation methods such as latrines prevent these harmful pathogens from entering water sources. Oral rehydration solution (ORS) and zinc are low-cost, easily-administered, and highly effective treatment methods for preventing deadly dehydration from diarrheal disease.ⁱⁱ While all of these prevention and treatment options to reduce diarrheal disease exist, barriers such as affordability, accessibility, and awareness often prevent use by those who need them most.

PATH'S WORK IN REDUCTION OF DIARRHEAL DISEASE

PATH works to lift these barriers by developing affordable and appropriate water filters and sanitation solutions, developing financing options to make costs manageable, and improving management of illness through increased access to ORS and zinc. Historically, prevention efforts and treatment efforts associated with diarrheal disease have often been independent of each other. However, PATH recognizes the potential for increased impact in a coordinated approach that combines prevention and treatment.

PATH has been testing mechanisms for integrating diarrheal disease reduction efforts in Cambodia—a country where diarrhea is the second leading cause of morbidity and mortality among children under five and accounts for 17 percent of deaths among this age group.ⁱⁱⁱ In 2001, the Cambodian Ministry of Health (MOH), with technical support from PATH, established a new national policy,

National Policy on the Control of Acute Respiratory Infection and Diarrheal Disease Among Children Under Five. The establishment of this policy catalyzed two successful pilot projects by PATH, the MOH, and other partners aimed at improving behaviors, services, and products to prevent and treat diarrhea.



PATH/Heng Chivoan

Lack of access to safe drinking water causes many cases of diarrheal disease in Cambodia, especially for children under the age of five.

By harnessing the successes from one prevention-focused project in Cambodia and one treatment-focused project in Cambodia, PATH has streamlined community strategies to increase awareness of and access to prevention and treatment products, and by merging two programs into one, we have increased the overall efficiency of the project.

PREVENTING DIARRHEAL DISEASE IN CAMBODIA

PATH launched the Safe Water Project in 2006 to investigate the viability of market-based approaches to provide clean water to low-income households in several countries, including Cambodia. In 2011, together with Cambodian manufacturer, Hydrologic Social Enterprise, and Cambodian microfinance institution, VisionFund Cambodia, PATH tested the potential for provision of household water filters through financing options to low-income households in Kampong Speu province. Financing options, provided by VisionFund, were established to remove the barrier to affordability and allow households to

pay the US\$20 cost of Hydrologic’s Super Tunsai ceramic water pot (CWP) in small increments over many months.

PATH/Sara Watson



At microfinance meetings like this one, households were informed about the benefits of safe drinking water and were offered loans to purchase household water filters.

During this pilot project, microfinance meetings were held to inform households of the health benefits from clean drinking water and to describe the CWP and available financing options. These meetings, led by trained sales representatives called “Clean Water Experts” (CWE), served as an opportune avenue for disseminating health messaging about diarrheal disease prevention.

The pilot program was dramatically successful, with uptake of the CWP increasing from under 7 percent to nearly 21 percent in nine months within the pilot area. Even more encouraging, surveys indicated that over 80 percent of households that purchased the CWP were still using it regularly up to one year after initial purchase. The majority of filters were sold to lower-income households in Kampong Speu and VisionFund reported 100 percent loan repayment by the end of the pilot project.

Acknowledging the success of this diarrheal disease prevention pilot project, PATH sought to join efforts with a successful diarrheal disease treatment project and ultimately expand this combined approach nationally.

TREATING DIARRHEAL DISEASE IN CAMBODIA

In parallel with PATH’s prevention efforts in Kampong Speu, PATH has also experienced success with treatment efforts in Kampong Thom province. Shortly following the release of the MOH’s new diarrheal disease control policy, PATH initiated a pilot project focused on reducing the burden of diarrhea by building awareness and coverage of ORS and zinc as a treatment for dehydration caused by diarrhea. The new policy supplied a groundwork on which PATH and the MOH developed a cascading approach to training health care workers at all levels within the health system about ORS and zinc—from the provincial level, to the district level, to the community health center level, and

ultimately to Village Health Support Groups (VHSG) led by village health volunteers (VHV).

Throughout Cambodia, village health volunteers are trained by district-level MOH officials to spread health messages to communities through regularly held community meetings conducted by the VHSGs. These meetings, referred to as “mother classes” provide mothers with the latest knowledge about health behaviors, practices, and services recommended and offered by the MOH. The VHSG is the critical linchpin between mothers and the health care system in Cambodia, especially in rural areas where health centers are often very long distances away from homes and villages. Recognizing the tremendous utility of the mother classes, PATH has worked with VHVs to incorporate health messaging about diarrheal disease treatment options, with particular emphasis on ORS and zinc therapy. Not only are messages disseminated by these VHVs, but the new MOH policy has cleared the way for them to actually disperse zinc and ORS to the mothers directly, saving them a long journey to a drug seller or clinic—further reinforcing the VHSGs as trusted venues for health information and services.



PATH/Heng Chivvan

At monthly “mothers’ classes,” village health volunteers pass down their knowledge to build awareness among mothers in their villages. The groups discuss diarrhea, including when and how mothers can treat children at home and when to visit the village health support groups for zinc and ORS.

Over 5,000 mothers have participated in the mother class emphasizing diarrheal disease management with ORS and zinc. In survey interviews with participating VHVs, the vast majority believed that the caretakers are now better equipped to identify the danger signs of diarrheal disease, and that treatment practices were improving in the community. The surveys also found that 60 percent of VHVs believed that because of the pilot, the number of severe cases of diarrhea needing to be referred to health centers or hospitals has declined in the pilot area. Equipped with knowledge and access to ORS and zinc, mothers are successfully treating their children at home.

Data collected in surveys also indicated an increase in knowledge and use of ORS and zinc therapy to treat diarrheal disease among mothers in the pilot area. Ninety-five percent of mothers surveyed at the endline indicated that they would administer ORS and zinc to children suffering from diarrheal disease—an increase from 58 percent of mothers who reported this in the baseline survey.

The positive reception of this information by Cambodian mothers has inspired PATH to expand information about diarrheal disease to encompass a powerful combination of prevention and treatment methods.

COMBINING PREVENTION AND TREATMENT

PATH has taken the successful components of the water filter financing pilot in Kampong Speu province and combined them with the successful components of the ORS and zinc promotion pilot in Kampong Thom province to develop a community-level approach that integrates prevention and treatment of diarrheal disease. Messages about the importance of water treatment and sanitation solutions that were presented at microfinance meetings in Kampong Speu by CWEs were adapted to fit within the VHSG mother class curriculum. Information about financing options—which are currently being expanded to encompass household latrines in addition to water filters—has also been integrated into mother classes.

With education that now spans the health risks of unsafe drinking water, water treatment and sanitation solutions, methods of acquiring water filters and latrines, and recommendations for treatment with ORS and zinc, PATH is empowering mothers with knowledge and interventions to successfully protect their families from the dangers of diarrheal disease.



PATH/Heng Chivoan

PATH's work in diarrheal disease prevention and treatment empowers mothers to confidently address this illness within their families.

In collaboration with UNICEF, the Cambodian MOH, and provincial health authorities, PATH is implementing this combined approach in Kampong Thom, Kampong Speu, and Kandal provinces with the intention of scaling this approach across the country and beyond.

ⁱ UNICEF. *Pneumonia and diarrhoea: Tackling the deadliest diseases for the world's poorest children*. New York:UNICEF; 2012.

ⁱⁱ Bartram J, Corrales L, Davison A, et al. *Water Safety Plan Manual Step-by-step risk management for drinking-water suppliers*. World Health Organization, Geneva. 2009.

ⁱⁱⁱ Black RE, Cousens S, Johnson HL, et al. Global, regional, and national causes of child mortality in 2008: a systematic analysis. *The Lancet*. 2010; 375(9730): 1969-1987.



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