

## Controlling diarrheal disease in Vietnam

Vietnam is seeing major gains after making child health a priority over the past several years. The country has already significantly reduced the number of children under age five who die each year and is on track to achieve Millennium Development Goal (MDG) 4—reducing child mortality by two-thirds by 2015. Over the past two decades, Vietnam has made significant progress in controlling diarrheal disease, with fewer hospitalizations and reduced malnutrition and mortality. However, the country’s public health leaders believe that progress has slowed and coverage of key interventions has fallen.

### REFRESHING NATIONAL GUIDELINES

Beginning in late 2008, PATH and Vietnam’s Ministry of Health (MOH) convened a working group of technical experts to review current policies, disease burden data, and the evidence for new interventions to prevent and treat diarrhea. This expert group’s efforts led to development of the MOH’s *Guidelines for Management of Diarrhea in Children*, which update the national prevention and treatment strategy by combining new interventions like zinc and low-osmolarity oral rehydration solution (ORS) with proven interventions, including proper nutrition, hygiene, and breastfeeding.

The new guidelines emphasize the role of the caretaker, as well as the education they provide to parents on prevention and treatment behaviors in the home. These include handwashing with soap and appropriate hygiene, as well as oral rehydration therapy. The government rolled out trainings nationwide covering these topics, along with clinical protocols. This included an overview of the pathogens that cause diarrheal disease in Vietnam like rotavirus, cholera, enterotoxigenic *Escherichia coli*, and *Shigella*. To help sensitize health care workers to the new guidelines, PATH provided technical and financial support to the MOH’s health education and communication division.

A pilot project in Binh Dinh province, located in south central Vietnam, assisted provincial health authorities in implementing the new guidelines at the local level. The project included the provision of zinc treatment—donated by Nutriset—which was distributed for the first time in Vietnam to health facilities throughout the province, coupled with community outreach to build awareness and demand. All provinces nationwide have now introduced the guidelines. An assessment of the pilot project informed efforts on practical implementation of the guidelines in other provinces. Vietnam’s experience could ultimately serve as a model for similar diarrhea control efforts throughout the Mekong region.

### WATER

Despite improvements in key social indicators (e.g., child mortality, the incidence of communicable diseases), water and sanitation and related diseases remain major health problems. Polluted drinking water and swampy conditions



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### VIETNAM’S LEADERSHIP IN EVALUATING ROTAVIRUS VACCINES

Vaccines against the primary cause of severe diarrhea will be a fundamental addition to control programs in the very near future. In particular, rotavirus vaccines have become available in recent years and already are showing dramatic impact in countries where they have been introduced.<sup>2,3</sup> Vietnam played a leading role in determining rotavirus vaccines’ efficacy in developing-country settings, participating in a pivotal clinical trial that helped inform the World Health Organization’s (WHO’s) recommendation that rotavirus vaccines be introduced in all countries worldwide.<sup>4</sup>

The National Institute of Hygiene and Epidemiology was among the institutions from seven countries that joined with PATH, CDC, WHO, vaccine manufacturers, and the GAVI Alliance to evaluate vaccine efficacy among low-income, high-burden settings of Asia and Africa. More than 2,000 infants in Bangladesh and Vietnam enrolled in the study, and the vaccine was shown to reduce severe disease by nearly half among impoverished communities in Asia.<sup>5</sup>

substantially increase the risk of disease, particularly diarrhea. More than 70 percent of Vietnam's nearly 86 million people live in rural areas and, while a large majority of rural communities have access to improved water sources, disparities remain in access to clean water.<sup>1</sup>

Vietnam's National Center for Rural Water Supply and Environmental Sanitation's national action plan on household water treatment and storage (HWTS) aims to improve the quality of drinking water and minimize diarrheal disease in Vietnam. To support this goal, PATH conducted a project to improve safe water treatment and storage in households.<sup>6</sup>

The project conducted a market research study of the current behaviors among middle- to low-income populations in Vietnam. Virtually all households claimed to treat their water, mostly via boiling. However, upon closer, qualified observation, only 64 percent boiled their water correctly. This and other results indicated areas for improvement of safe water treatment knowledge and practices in the community. The project also conducted a HWTS product scan to determine what types of products are available in the market, followed by a distribution channel analysis to better understand how the products get to customers. These studies highlighted the importance of sales representatives and consumer demand for products, which were used to design a pilot project in Can Tho that trained local health workers to sell HWTS products in their communities. In addition to conducting door-to-door sales of a chlorine-based HWTS tablet, health workers also provided messages to communities on the importance of safe water treatment and storage. The pilot evaluation illustrated the value of local health workers in delivering messages about waterborne diseases and proper methods for water treatment and storage, as well as in providing access to HWTS products. Findings from the safe water project provide a solid foundation for continuing improvements in access to clean water in Vietnam and reducing the burden of waterborne diseases such as diarrhea.



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