

# Providing Safe Drinking Water in Benin



Many families in Benin struggle to ensure that their drinking water is safe. Even if it is clean at the source, it can be contaminated during transport and storage in the home. Nearly half of the population (43%) does not have access to improved water sources,<sup>1</sup> relying instead on unsafe sources such as un-improved wells. A 2007 survey revealed that 97% of deep wells in two provinces were contaminated with fecal coliform and other diarrhea-causing microbes.<sup>2</sup> Despite the lack of safe drinking water, a 2006 household survey showed that very few households treated their water to prevent diarrhea.<sup>3</sup> Of these few, most used inadequate methods, such as straining water through cloth or using bleach not dosed

appropriately for water treatment. Diarrhea is a significant health problem for children under five in Benin, causing 13% of annual deaths<sup>4</sup> as well as 15% of health center visits.<sup>5</sup>

To address this problem, PSI partnered with Abt Associates to implement USAID's Point-of-Use Water Disinfection and Zinc Treatment (POUZN) project. Evidence shows that point-of-use (POU) water treatment reduces diarrhea by 30 to 50% in the most vulnerable populations: children under five.<sup>6</sup> These household water treatment and safe storage interventions, which can be implemented rapidly, are an important complement to broader water, sanitation and hygiene interventions.

## WHAT WE SET OUT TO DO

In 2007, the POUZN project in Benin sought to reduce diarrhea morbidity and mortality in children by increasing accessibility to and demand for Aquatabs in eight out of 12 provinces. These provinces constitute 70% of Benin's total population. PSI aimed to:

- Create a sustainable supply of Aquatabs to increase household access;
- Raise awareness among caregivers about the need for proper treatment and storage of drinking water; and
- Increase usage of Aquatabs in households with children under five.

To achieve these goals, PSI Benin built on its existing commercial sector product distribution system and its relationships with the public sector and other nongovernmental organizations (NGOs) to increase access and availability of the product. PSI Benin trained health workers, NGOs, public and private distributors, and retailers about Aquatabs. The team worked with local NGOs to reach the public on a person-to-person basis in key villages. These interpersonal communications were complemented by mass media promotion through radio, television and billboard advertisements.

## WHAT WE ACCOMPLISHED

Household water treatment practices in Benin improved after PSI implemented the POUZN project. The proportion of households with children under five that had ever treated their water in the past using any method increased from 4% in 2006 to 12% in 2009. Of those who reported currently treating their water in 2009, the majority (52%) used Aquatabs. Among all households interviewed in 2009, use of Aquatabs increased from 0.1% in 2006 to 6.3% in 2009 – a significant gain given that the POUZN program had introduced Aquatabs in 2008 into an environment where few people had ever treated their water.

Access to Aquatabs has also improved as a result of the PSI team's efforts. In just one year of the project, the number of towns or city districts that had at least one shop selling Aquatabs increased from 7.5% to 35.5%. In fact, over 95% of the towns and districts in urban Littoral province boasted a shop selling this water treatment product.



Importantly, social norms about safe water practices and people feeling confident to treat their water were key determinants of use. Individuals who had heard a message about Aquatabs were twice as likely to ever treat their water, with 20.8% of those exposed to the messages ever treating compared with 9.9% usage among those who had not heard the messages (see Figure 1). Similarly, individuals who were exposed to one of PSI's health promotion messages were nearly three times as likely to use Aquatabs compared to those who were not exposed. Thirteen percent of those who were exposed were currently using Aquatabs. Just under 5% of those who were not exposed were currently using Aquatabs.

## WHAT WE LEARNED

- Campaign messages in Benin that focus on user needs, self-efficacy and social norms help increase uptake.**

PSI's efforts proved successful in Benin when it used messages on the importance of treating water, the ease of treating water and the usage of Aquatabs by other community members. Those interviewed frequently cited family and friends as their source of information on Aquatabs. PSI also learned that effective interpersonal communication and local NGO outreach were essential for increasing POU use in Benin, particularly in rural areas where television ownership is low or non-existent.

- Mass media plays an important role in creating awareness of and demand for previously unknown products.**

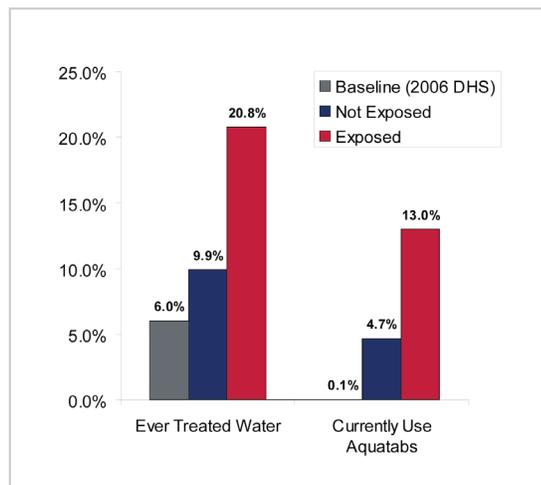
Exposure to behavior change messages (either through mass media or interpersonal communication) was an important driver of use. Research showed that radio was the primary source of information, followed by generic television programming. Respondents who had heard a message about Aquatabs were twice as likely to purchase and try the product compared to those who had never heard a message. Research results showed a positive association between exposure to at least one POUZN program message and ever treating, ever chlorinating, and currently using Aquatabs. New retailers who have seen the product on television are more likely to be open to stocking the product.

- A multi-pronged distribution approach helps provide access, generate demand and increase uptake by households.**

The PSI team leveraged the commercial and pharmaceutical sector, public sector and community-based distribution to increase access and availability of Aquatabs. Pharmacies, both commercial and those associated with Ministry of Health health centers, were the primary sales points, followed by commercial retail outlets (boutiques, market stalls, etc.). Few consumers purchased from community sales agents, but this is expected to change over time, given the increased emphasis on this sales channel.

- The choice of product packaging is important.**

PSI found that eliminating over-packaging reduced product cost while increasing its commercial viability, leading to larger distribution channels and increased public access.



**Figure 1:**

Water Treatment by Respondents with and without Exposure to Messages on Safe Water/Aquatabs, 2006–09 (% of households)

<sup>1</sup> Ministry of Health of Benin. ICF Macro. 2006. Benin Demographic and Health Survey 2006. Calverton: ICF Macro.

<sup>2</sup> The survey studied 300 deep wells in Oueme and Plateau provinces. Interview with GTZ Advisor, June 2007, Ministry of Water, Directorate of Mines, Energy and Hydraulics  
<sup>3</sup> Op. Cit. (see note 1).

<sup>4</sup> World Health Organization. 2010. World Health Statistics. Geneva: WHO.

<sup>5</sup> Benin Ministry of Health. 2005. Ministry of Health 2005 Annual Report and Report from the National Health Information System (SNIGS).

<sup>6</sup> Fewtrell, L. et al. (2005). Water, sanitation, and hygiene interventions to reduce diarrhoea in less developed countries: a systematic review and meta-analysis. *Lancet Infectious Diseases* 5, 42-52; Arnold, B.F. et al. (2007). Treating water with chlorine at point-of-use to improve water quality and reduce child diarrhea in developing countries: a systematic review and meta-analysis." *American Journal of Tropical Medicine and Hygiene* 76(2), 354-364.