



## **Water, please!**

Lessons Learned from Social Marketing of  
Point-of-Use

Drinking Water Treatment Products

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In this presentation, I will present the magnitude of the drinking water quality problem.

Then I will discuss point-of-use (POU) water treatment as one solution to providing safe drinking water. POU programs are rapid to implement, low-cost, and can be carried out on a national or regional scale. POU interventions are also complementary to infrastructure development projects that improve the supply of water but cannot guarantee safe water quality at the household level.

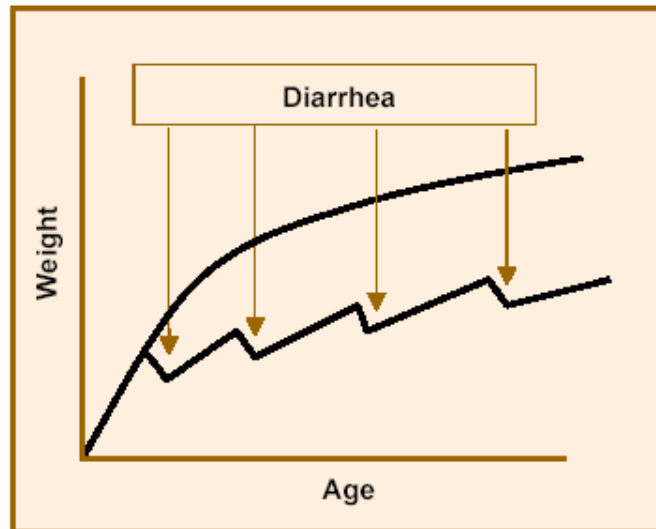
We at USAID, along with our partners, have a substantial body of lessons learned in socially marketing POU products and behaviors. I will present highlights from these, finishing with some challenges and areas for future research to increase correct, consistent and sustained uptake of POU.

## WHY DO WE FOCUS ON DIARRHEA PREVENTION?

◦ *Preventable major burden on health care system*

◦ *Important contributor to malnutrition in children under 5*

◦ *Negative impacts on household economics, education, and time*



Why do we focus on diarrhea prevention?

The short answer is because we CAN prevent diarrhea. It is estimated that over 80% of childhood diarrhea can be prevented! And an ounce of prevention is worth a pound of cure, as you can see in this graph. During the critical years of child development from 0-5 years, each bout of diarrhea pushes the child off the normal growth curve, and repeated bouts of diarrhea can lead to lifelong physical AND mental effects.

Diarrhea is a serious problem – It is the third biggest killer of children under 5, mostly in developing countries. It is also a common problem, with an estimated prevalence of over 25% in children under 5.

Diarrhea places a heavy burden on the health care systems in developing countries, and has negative impacts on household economics, and lowered potential of the children due to missed school days.

54% of child deaths are associated with malnutrition, and diarrhea and malnutrition create a dangerous and vicious cycle. Children with diarrhea are less able to absorb nutrients, and malnourished children are more likely to get diarrhea. Contaminated water, along with poor sanitation and hygiene behaviors, is a major cause of diarrhea.

And treating drinking water at the point of use has been shown to reduce diarrheal disease in children under five around 40%, with a range of 25% to well over 50%.

So that is why we socially market POU products. Donors like USAID are (or should be!) very interested in supporting interventions that can have such a dramatic health impact.

## Point-of-Use Treatment Options

- Physical
- Chemical
- Biological
- Combined



This presentation focuses on methods that have been shown to remove or disinfect pathogens, which are bacteria, parasites, and viruses in water that cause diarrheal disease.

Physical methods include filtration, ultraviolet disinfection, either with a UV bulb, or from exposure to sunlight, a method called Solar Disinfection, or SODIS, and boiling (which does NOT have an evidence base for public health effectiveness),

Chemical methods include chlorine and iodine, and also adding flocculants (chemicals that coagulate in the water, trapping large particles that then settle out). The CDC does not recommend iodine for long-term use because of its potential to cause thyroid problems.

Biosand filters use a biological process to inactivate pathogens.

Finally, combined methods are two steps, one to clarify, either with filtration or flocculation, and then a disinfection step. Examples of this are P&G's PUR product, such as a ceramic filter coated with colloidal silver, or filtration plus chlorination.

## Selecting a POU Option

### Technical aspects

- Does it address the specific contaminants of the water source?
- Do you require residual protection for possible future contamination during storage?

### Sustainability

- Acceptability (taste, smell, cost, cultural)
- Availability (distribution, incentives to retailers, non-commercial partners)

### Scalability of program approach

There are several criteria to consider when selecting a POU option.

We need to know that the technology actually improves water quality in a lab setting; whether it improves water quality but also reduces diarrhea in an actual field setting (which covers the sustainability aspects of acceptability and availability); and we want to know if there is a program strategy that will be able to take the intervention (product plus the new behaviors) to a large scale.

We still have a lot to learn about program approaches, but clearly social marketing is one way to make these products available and desirable to our target populations.

## **Lessons Learned in:**

1. Project Design
2. Production of components
3. Regulatory environment
4. Marketing and communication
5. Sales and distribution
6. Creating partnerships
7. Product cost, pricing and cost recovery

<http://www.ehproject.org/PDF/ehkm/LessonsLearnedFinal.pdf>

In response to the cholera outbreak in Peru in the 1990s, CDC developed a household water treatment and safe storage strategy, called the Safe Water System (SWS), that includes three elements: (1) water treatment at point-of-use (POU) with a dilute sodium hypochlorite (chlorine) solution; (2) storage of water in a safe container, and (3) education to improve hygiene and water use practices.

Population Services International (PSI) was involved with the design and testing of the first SWS trials and has since implemented safe water programs in 20 developing countries, often with the support of USAID. This presentation briefly covers seven main lessons from PSI's experience social marketing the safe water system over the past 10 years.

All of these lessons are covered in more detail in the document listed at the bottom of the slide: <http://www.ehproject.org/PDF/ehkm/LessonsLearnedFinal.pdf>

## Project Design

Three critical factors:

- (1) identifying appropriate target group(s) for the product and messages
- (2) establishing a stable funding base
- (3) recruiting and assembling the human resource expertise

The target groups for a POU product include those with a high incidence of water-borne diseases, yet sufficient resources to regularly purchase the product.

Several countries launched POU products without a stable funding base, and later ran out of funds for production and marketing. When a POU program is re-launched in one of these countries, there are additional hurdles to regaining consumer confidence in the product.

USAID and PSI's experience has primarily been with the liquid form of chlorine which comes with unique challenges for social marketers, because the product has to be manufactured, and special expertise is required to engage in production/quality control/logistics of caps, labels, bottles, solution.

However, we are also gaining experience with powdered products like P&G's PUR and chlorine tablets, which are sold in sachets, and which allow for a more traditional social marketing approach.

## **Production**

### Key factors for quality production

- determine the correct chlorine dosage
- locate, arrange for, and monitor local production
- establish stringent, ongoing quality control at program outset
- set appropriate expiration date for the product

### **Production of Safe Water Product Components**

In addition to the human resources capacity, there are some key factors for ensuring quality of the product.

Standardizing the product packaging into a 150 mL plastic bottle with a 3 mL cap, with the sodium hypochlorite concentration modified to meet the dosage needs in each country, has led to a more easily produced, transported, used, and affordable product.

## Regulatory Environment

- Secure approval of all relevant government ministries
- Program staff must be prepared to respond to technical questions about the product in a timely and technically sound manner.

Approval of all relevant government ministries is an essential step in securing product registration, ensuring the product's long-term sustainability in-country, and maintaining collaboration with other government programs. Often rural water is in a different ministry than urban water supply, and neither urban nor rural water supply are in the Ministry of Health, so this takes some investigation by the social marketing organization just to identify the relevant government ministries!



## Marketing and Communications

- Critical for awareness and education about why and how to treat drinking water
- Behavior change requires time, a sustained investment, and a range of approaches
- Target group(s) and channels of communication may vary between rural and urban settings
- Campaigns need to be aspirational, and complement other diarrheal disease prevention and treatment campaigns

The communications have to go beyond information to stress behavior change. Behavior Change communications (BCC) aims to provide vulnerable people with the information and skills to help them adopt behaviors that can improve their quality of life.

## Selecting communication channels

- Media habits of each audience
- Message source and credibility
- Reach, frequency and continuity
- Importance of intermediaries
- Complexity of message



POU is a very complex behavior, so it requires more product demonstration and individual contact than other health products.

## Sales and Distribution

- Use both public and private sectors
- POU doesn't sell itself. A consistent push -- through large, bright, point-of-sale materials that call attention to the product -- is needed
- Partner with existing organizations to increase distribution and promotion

The commercial sector in most developing countries provides an efficient vehicle for large-scale distribution of essential household items to the urban and peri-urban markets

However, ensuring that the product reaches the retailer is not enough. A consistent push -- through large, bright, point-of-sale materials that call attention to the product -- is needed to keep the product in the forefront of retailer displays and consumer minds.

Partner NGO volunteer or community-based distribution networks can assist with promotion and distribution and significantly improve rural penetration. Successful programs can encourage commercial firms to enter the market with their own brands.

## Creating Partnerships

- Partnerships strengthen political support for safe water programs and expedite product uptake and behavior change among target populations
- Donor advocacy and reliance on trusted spokespersons and product champions has assisted with the rapid uptake of and belief in the efficacy of the product

Partnerships help with promotion as well as with sales and distribution.

## **Product Costs, Pricing and Cost Recovery**

- Most production and distribution costs can be covered by sales
- It is a careful balancing act to set an affordable consumer price that recovers production and distribution costs, minimizes subsidies, and yet provides key target populations access to the product

## Safe water and HIV/AIDS programming

- Persons living with HIV/AIDS (PLWHA) are particularly susceptible to opportunistic infections and diarrhea
- Partner with non-governmental organizations that provide care to PLWHA

Now that the keys to success in implementing household water treatment programs are better understood, the scale and depth of these powerful programs can be expanded to improve health among poor and vulnerable populations

## Limitations of social marketing

- Reaching the poorest of the poor
- Reaching remote areas

Clearly those outside the cash economy will require a different approach, probably some kind of targeted subsidy. However, social marketing can still reach very poor populations when they understand the economic costs of not treating their drinking water, and making economic arguments for consistent, sustained adoption.

And of course, social marketing will depend on NGO partners to extend the reach of the commercial distribution system.

## Key Challenges

- Focus on programs, not just technologies or products
- Achieving/demonstrating scale with multiple products and strategies
- Developing measures of programmatic effectiveness, cost-effectiveness, and cost-benefit for priority strategies

New water treatment products are continually coming on to the market. However, the goal is to get an effective affordable and acceptable product out to our target population, particularly children 6-24 months old.

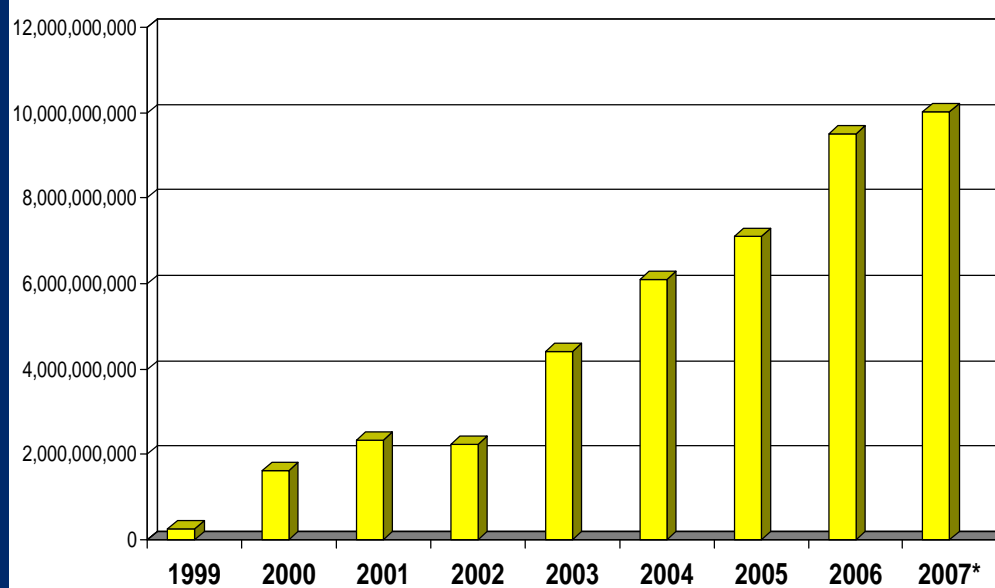
We who support and implement POU programs need to reach agreement on a common indicator that can be rolled up for reporting at the policy level on what is being achieved – not sales or distribution, but something related to effective use

Need a mix of interventions and products to achieve large scale use

More research is needed to better understand what constitutes consistent use, and what level of use can still results in the desired public health impact.



## PSI: Liters of Water Treated, 1999–2007\*



- 2007 figures not final
- Impressive gains have been made, but we know there is still a vast need for safe drinking water

**Thank you for viewing this presentation.  
I look forward to reading your questions and  
comments.**