

# Preventing Childhood Diarrhea Through Hygiene Improvement

**Diarrhea is still a significant child health problem. It is ...**

## **... Common**

Today, children in developing countries have as many episodes of diarrhea as ever. The estimated number of cases, about 2 billion per year, has not gone down in thirty years.

## **... Serious**

An estimated 1.6 million children under 5 years of age die annually because of diarrhea, and many of those who survive suffer from malnutrition and lasting impairments to mental and physical development.

## **... Costly**

Families pay a high price to care for children with diarrhea in terms of money, time and lost opportunities, and childhood diarrhea is a costly burden on national health care systems.

***and it is preventable through essential hygiene practices***

- › drinking safe water
- › safely disposing of feces
- › washing hands with soap
- › protecting food

Hygiene improvement effectively reduces diarrhea and is a critical element of child health and nutrition programs.



# The Hygiene Improvement Framework

The Hygiene Improvement Framework is a tool for designing and implementing diarrhea prevention activities. A comprehensive approach to preventing diarrhea should address three key components: access to the necessary hardware or technologies, promoting healthy behaviors and support for an enabling environment to ensure wide-scale application and sustainability.

## Access to Hardware

- > Water supply systems
- > Improved sanitation facilities
- > Household technologies and materials
  - Soap
  - Safe water containers
  - Effective water treatment

## Hygiene Promotion

- > Communication
- > Social mobilization
- > Community participation
- > Social marketing
- > Advocacy

## Hygiene Improvement for Diarrheal Disease Prevention

## Enabling Environment

- > Policy improvement
- > Institutional strengthening
- > Community organization
- > Financing and cost-recovery
- > Cross-sector & Public Private Partnerships

By applying the Framework in simple, proven and cost-effective ways, child health programs can significantly reduce diarrhea and improve child survival.



# Framework Components

## Improving access to hardware includes

- › Continuous safe water supply systems to communities and neighborhoods
- › Sanitation facilities to dispose of feces, especially the feces of young children
- › Technologies and materials for improving household-level hygiene, such as soap, water treatment and safe storage containers

## Promoting hygiene addresses the adoption of key hygiene practices and involves

- › Communication — raising awareness of the importance of improved hygiene and supporting hygiene behavior change
- › Social mobilization — involving various groups and sectors in diarrhea prevention
- › Social marketing — working with the public and private sector to create demand for hygiene “products” such as soap, water disinfectants and latrines
- › Community participation — identifying barriers to adopting improved hygiene practices, and designing and monitoring hygiene improvement programs
- › Advocacy at all levels — influencing policy and action at all levels to promote hygiene improvement and interventions that support it

## Strengthening the enabling environment entails

- › Policy improvement — assessing the adequacy of national policies, identifying gaps, and developing new policies
- › Institutional strengthening — helping institutions define their role and mission, improve management, increase technical competence, and train their staff
- › Community involvement — developing local capacity to operate and maintain local water supply, sanitation and hygiene systems
- › Financing and cost-recovery activities — helping local communities devise strategies to recover costs
- › Cross-sector and public-private partnerships — supporting collaboration between various sectors (e.g., public health and public works) and between public and private partners (e.g., ministries of health and soap manufacturers)

# Hygiene Improvement has proven benefits and health outcomes

- › A 30–50% reduction in the burden of diarrheal diseases can be achieved through improved water supply, sanitation, and hygiene<sup>1</sup>
- › An analysis of 21 controlled field trials related to water disinfection and safe water storage at the household level showed a reduction of 42% in diarrheal disease compared with other groups<sup>2</sup>
- › A recent review of the literature found that the single hygiene practice of handwashing with soap is able to reduce diarrhea incidence by over 40%<sup>3</sup>
- › A 2004 WHO report shows that investing US\$1 in selected interventions to improve water and sanitation services results in benefits in the range of US\$5 to US\$11<sup>4</sup>





# Starting from where you are

The Hygiene Improvement Framework can be applied to an ongoing program or be the basis for developing new diarrhea prevention activities. Five possible implementation scenarios are described below:

## **Scenario 1 — Expanding an existing child health program to include hygiene promotion.**

In Haiti, Population Services International added a handwashing campaign to an existing nationwide diarrhea control program that promoted ORS to mothers and other caretakers of children under five.

## **Scenario 2 — Integrating hygiene improvement into other health programs, such as nutrition, HIV/AIDS, food security.**

Interventions such as household-level water treatment, improved sanitation and improved hygiene practices can be incorporated into programs focusing on care of people living with HIV/AIDS. Adding hygiene improvement will be important in reducing risk of opportunistic infections. Any health program that promotes breast feeding or has a nutrition component as its sole or partial focus, can easily incorporate diarrhea prevention, especially hygiene messages, into its package of interventions.

## **Scenario 3 — Supporting the public sector and NGOs to strengthen the enabling environment.**

Programs in health and other sectors can include hygiene improvement in their strategy to build institutional capacity for long-term sustainability and for scaling-up. In the DR Congo, the Santé Rural III project (SANRU) included hygiene promotion within a broader Primary Health Care program, creating the capacity for scale-up to reach over 10 million people. In Madagascar, NGOs successfully helped 160 remote communities to build and manage water supplies and improve sanitation and hygiene within a multisectoral population, health and environment program.

## **Scenario 4 — Adding a hygiene promotion component (software) to an existing water supply and sanitation (hardware) program.**

In the Bangladesh Sanitation and Family Education (SAFE) program, the hardware was already in place. The addition of hygiene promotion by targeting common unhygienic practices through an outreach and educational initiative resulted in a decrease in diarrhea prevalence by as much as two-thirds.

## **Scenario 5 — Applying the complete Framework.**

In just two years, the Rural Water Supply, Sanitation, and Environmental Health Program in Nicaragua increased access to safe water and sanitation, carried out capacity-building and hygiene promotion efforts in 289 communities, and brought about improved hygiene behaviors with a reduction in childhood diarrhea.

---

Adapted from Joint Publication 8. *The Hygiene Improvement Framework — A Comprehensive Approach for Preventing Childhood Diarrhea*, which is available at [www.ehproject.org](http://www.ehproject.org).

## References

1. Esrey SA, Potash JB, Roberts L, Shiff C. (1991). Effects of improved water supply and sanitation on ascariasis, diarrhoea, dracunculiasis, hookworm infection, schistosomiasis, and trachoma. *Bull World Health Organization*, 69 (5): 609-621. The World Bank (1993). *World Development Report 1993: Investing in Health*. Curtis V, Cairncross S, (2004). Effect of Washing Hands with Soap on Diarrhea Risk. A Systematic Review. *Lancet Infectious Diseases*, 3(5):275-281
1. Clasen T, Cairncross S (2004). Household water management: refining the dominant paradigm. *Tropical Medicine and International Health*, v.9, n.2, 187-191 February.
3. Curtis V, Cairncross S, (2004) op cit.
4. Hutton G, Haller L (2004). Evaluation of the Costs and Benefits of Water and Sanitation Improvements at the Global Level. WHO.