

# Protecting children from diarrheal disease

PATH takes a comprehensive approach to combating this leading cause of child deaths

While improved prevention and treatment strategies have cut diarrhea-related deaths by nearly half in the past 30 years, diarrheal disease remains a leading cause of death in children under age five. More than 2,300 young children die daily from severe diarrhea, with more than one-third of those deaths from rotavirus disease, and even more suffer long-term health effects.

PATH is working to defeat diarrheal disease on many fronts. We draw from our expertise in promoting healthy behaviors, strengthening health systems, and developing and advancing drugs and technology solutions to help prevent and treat diarrheal disease around the world.

PATH collaborates with communities, governments, private firms, and nongovernmental organizations to reduce the toll of diarrheal disease. We work to catalyze investment and design innovative, market-driven solutions. We develop new medicines, promote proven prevention and treatment approaches, help government partners with strategic planning, and work to improve health-related behaviors.

## HEALTH TECHNOLOGIES FOR PREVENTION, DIAGNOSIS, AND TREATMENT

PATH's efforts range from developing new vaccines, medicines, and safe water technologies to inventing low-cost diagnostic tests and assessing sanitation needs. Examples of PATH's work include:

- Conducting phase 3 clinical trials in Africa and Asia with our partners to determine the efficacy of licensed rotavirus vaccines in the developing world. The research led the World Health Organization (WHO) to recommend rotavirus vaccine introduction in all countries as part of a comprehensive diarrheal disease control strategy.
- Working with manufacturers in emerging countries to develop new rotavirus vaccines that are safe, effective, and affordable.
- Teaming with public- and private-sector partners on vaccines against the main bacterial causes of diarrhea, enterotoxigenic Escherichia coli and Shigella.
- Improving water treatment and storage products for low-income households and communities through user engagement in the design process and partnerships in product development and production.
- Collaborating with commercial safe water partners in Cambodia, India, Kenya, Vietnam, and other countries to test distribution, financing, and sales strategies.

#### **SUCCESS STORIES**

### **Accelerating vaccine access**

Children in Sudan recently became the first Africans to be vaccinated against rotavirus with support from the GAVI Alliance and technical, advocacy, and communications input from PATH via its role in the Accelerated Vaccine Introduction Technical Assistance Consortium. Sixteen other GAVI-supported countries are expected to follow.



# Taking an integrated approach

PATH helped Vietnam's Ministry of Health launch updated diarrheal disease control guidelines for health workers at all levels of the country's health system, and we provided funding and technical support to train health workers in using the new guidelines. We also helped create posters, brochures, and radio and TV announcements on preventing and treating diarrhea based on the guidelines.

• Helping to commercialize an inexpensive handheld device to test water quality and assessing the landscape of water testing technologies.

#### PARTNERSHIPS TO IMPROVE HEALTH SYSTEMS AND BEHAVIORS

Collaboration is essential to PATH's work. We contribute to important multilateral efforts and provide direct technical assistance to countries. For example, PATH and our partners help to accelerate the introduction of rotavirus vaccines in countries with a high burden of rotavirus disease by engaging in rotavirus vaccine supply and demand forecasting, allowing country governments, donors, and multilateral partners to plan more effectively.

Other examples of our collaborative approach include:

- Contributing as a primary partner in the Accelerated Vaccine Introduction Technical Assistance Consortium, which supports the GAVI Alliance's initiative to facilitate the rapid, large-scale, financially sustainable introduction and implementation of rotavirus and pneumococcal vaccines in eligible countries.
- Advising the Global Public-Private Partnership for Handwashing with Soap on improvements to technologies that support lasting behavior change.
- Leading a consortium of development, child health, and water, sanitation, and hygiene (WASH) organizations in the Health/WASH Network, which advocates with policymakers and donors for integrated solutions to diarrhea, pneumonia, and malnutrition.
- Participating in WHO's Household Water Treatment and Safe Storage Network, a global collaboration to improve health for families without reliable access to safe drinking water.
- Participating in the India Water Quality Association to strengthen public- and private-sector investment in water treatment for low-income households.

## **BUILDING CAPACITY TO PREVENT AND MANAGE DISEASE**

PATH provides resources to help countries adopt and increase use of effective interventions, such as improved oral rehydration solution, zinc treatment, exclusive breastfeeding, handwashing practices, and rotavirus vaccination. We raise awareness about the burden of rotavirus disease and the potential of rotavirus vaccines to save lives. We also created DefeatDD.org, a website that provides technical and advocacy resources to inform global efforts to end diarrheal disease.

PATH also works to address policy, clinical, and community barriers to diarrheal disease control, increase the knowledge base on diarrheal disease, and promote a coordinated response between the public and private sectors. This approach is being successfully implemented in Cambodia, Kenya, Malawi, and Vietnam.

We also advance innovative approaches and technologies to strengthen nutrition systems and change behaviors and feeding practices that can contribute to deaths from diarrheal disease. For example, PATH has worked in 15 countries to design and implement proven nutrition interventions among health workers and communities.

## LOOKING AHEAD

With the tools in hand to combat diarrheal disease and fatal dehydration, our challenge now is to expand use of effective interventions to spare millions more children from severe diarrhea. PATH's work is focused on energizing and strengthening the global response to this persistent threat.

### Saving dehydrated children

In Kenya, PATH helped revitalize the use of oral rehydration therapy corners—dedicated spaces in health clinics where mothers with dangerously dehydrated children can immediately access lifesaving treatment while learning about nutrition, hygiene, and home care.



#### **Ensuring access to clean water**

PATH helps produce, distribute, and sell household water treatment and storage products to low-income consumers. In India, we solicited the advice of families about design features to make these products effective and easy to use. Their opinions informed the creation of product design guidelines for companies developing new products for low-resource settings and led to the introduction of three low-cost household water treatment products.



PATH is an international nonprofit organization that transforms global health through innovation. We take an entrepreneurial approach to developing and delivering high-impact, low-cost solutions, from lifesaving vaccines and devices to collaborative programs with communities. Through our work in more than 70 countries, PATH and our partners empower people to achieve their full potential.

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