

Protecting Asia's children

Japanese encephalitis on the fast track to control

What do international travelers and 200 million children in China have in common? They have received a vaccine for Japanese encephalitis.

Japanese encephalitis, or JE, is a deadly, mosquito-borne disease that kills tens of thousands of children in Asia every year and causes permanent disability in many more. Most children in Asia live at risk, but few receive the protection they need.

Consider the story of Mahesh. A typical boy from a rural village in southern India, he went to school, played with friends, and did his household chores. Two years ago Mahesh contracted JE. Although he has fared better than most—he survived and has no physical disability—the infection damaged his brain so badly that he no longer recognizes his own parents. Today Mahesh attends school, but he sits passively in the back of the classroom, unable to concentrate for any stretch of time. He will never be able to work. For a family that lives hand to mouth, his illness is financially as well as emotionally devastating.

A vaccine is essential

PATH is helping spare other children and their families this fate. We're working with countries in Asia and the Pacific, where JE is endemic, to understand the disease and to prepare



Children in China already receive a vaccine for Japanese encephalitis. PATH is helping children throughout Asia get the same protection.

the way for a new vaccine that will safely and affordably prevent it.

The only way to effectively control JE is with a vaccine. International travelers to Asia often get vaccinated, but the commonly used vaccine has drawbacks that make it difficult to integrate into national immunization programs in developing countries: three doses are required, there are side effects, and it is very time-consuming and expensive to produce. There simply isn't enough vaccine or funding for all the children who need it.

Hope hails from China

In search of a solution, PATH surveyed the field for a better JE vaccine and found that, over the last 15 years, China has vaccinated more than 200 million children with an

effective vaccine made from active but weakened virus. Although the Chinese vaccine is safe, effective, affordable, and easy to produce in large quantities—especially since only one dose is needed—language and cultural barriers had prevented information about its potential from being shared internationally.

To get the word out about the Chinese vaccine, PATH has been presenting at international meetings and translating available research. We're helping the producer obtain prequalification from the World Health Organization so that it will be easier for other countries to import the vaccine. We're also supporting clinical trials to confirm that JE vaccine can be given at the same time infants get their measles

DEAR FRIENDS,

When PATH realized that China was already using the kind of Japanese encephalitis vaccine the rest of Asia needed, it signaled an important trend in global health. More and more countries are developing the capacity to support culturally appropriate innovations in technologies, health systems, and policies.

That means the traditional flow of new ideas moving from wealthier countries to poorer ones could increasingly be complemented by “south-to-south” transfer—from one developing country to another. These countries benefit from lower production costs, greater commitment to preventing region-specific diseases, and a strong interest in further building local capacity.

To foster such innovations, the global health community needs to support indigenous inventors, create incentives to invest in locally relevant technologies, and strengthen the systems that enable innovation to take hold. PATH increasingly works with companies in “emerging” countries, such as Brazil, China, India, and South Africa, to advance high-quality, affordable technologies on their home territory.

We also participate in “innovation networks”—like the Developing Country Vaccine Manufacturer’s Network—that promote the flow of information and ideas between the developed and developing worlds, between the public and private sectors, and between governments and nongovernmental organizations. These exchanges multiply the impact of global investment in global health.



Christopher J. Elias, MD, MPH
President



Julie Jacobson

PATH relies on individual donors to supply the flexible funds that helped us first explore the problem of Japanese encephalitis—and bring it into the international spotlight.

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shots, which would make it easier to fit into existing immunization programs and would dramatically increase the number of children who receive protection.

Understanding the problem

Especially where resources are scarce, decision-makers need all the information they can get to set priorities. We’re helping private-sector partners develop standard tests for diagnosing JE and working with the World Health Organization and governments to set up systems for tracking the disease. These efforts will allow countries to understand the extent of JE, prioritize it, and focus prevention efforts on the regions and people that most need protection. We’re also studying the cost-effectiveness of different strategies to get the vaccine to children—even those who live in remote villages and are hardest to reach.

PATH began exploring the problem of JE with flexible funds that were part of a large grant to improve immunization in developing

countries. We discovered that the problem was much larger than anyone had recognized—but that the tools to solve it were at hand. Our activities, along with the work of our many partners around the world, have put JE on the fast track to control.

We envision a world where every affected country has the information, resources, and political will to stop JE and where every child at risk is protected early in life by the best protection modern science offers—a safe, effective vaccine. ●

Meet Mahesh

The short film *Shadow Lives* explores the human toll of Japanese encephalitis. Take just seven minutes to meet Mahesh, his family, and others who have experienced this disease—it’s available on our website at www.path.org/je.

PATH helps Eastern Europe prepare for bird flu

Our staff in Ukraine are assessing readiness and procuring supplies that will help the region respond to avian influenza, should it arrive.

The first cases of bird-to-human transmission of the deadly virus occurred about two years ago. Since then, 122 cases have been confirmed in Asia, and half of the infected individuals have died. Scientists worry that the virus, spread when migratory flocks mingle with domestic birds, will mutate and begin spreading from human to human, raising the threat of a flu pandemic.

PATH's activities will help Belarus, Moldova, and Ukraine respond to even a single case of bird flu—to stop the virus before it can spread further. Tapped by the US Agency for International Development, our procurement experts are securing laboratory equipment for detecting the disease, as well as clothing and supplies to protect people who raise and handle birds. In addition, we're assessing the readiness of three high-risk provinces in Ukraine and helping decide how best to distribute supplies.

Taking stock on World AIDS Day

December 1 is World AIDS Day. It's a call to take stock of where we are in stemming the HIV epidemic, and although the work can be frustrating, it doesn't have to feel hopeless. Recent breakthroughs mean that a safe, effective gel that will protect women from HIV is closer than ever to becoming a reality. Other tools that prevent the spread of HIV are also within



New tools will help women protect themselves from HIV.

sight—an improved condom for women, safer ways to deal with medical waste, readily available drugs for preventing mother-to-child transmission of HIV. Moreover, every day, around the world, resilient individuals and communities are also taking stock—of their own attitudes and behaviors that may contribute to poor health. HIV is big, but the world is bigger. PATH is proud to be advancing technologies and strategies to prevent HIV and to be part of the momentum that will one day eclipse this deadly epidemic.

Two opportunities to engage

It seems like we're always on the go here, and there are so few chances to let you know about the exciting work we're doing. Now we have a new way to keep in touch: our online newsletter, *Bridging the Gap*, which goes out every six weeks. Drop an email to development@path.org, and we'll sign you up. (Don't worry—your email address is safe with us. We never sell or distribute our lists.)

Laboratories as small as credit cards will be the subject of our February event for PATH Associates (annual donors of \$1,000 or more). The event will be held at our Seattle headquarters on February 23, 2006. Come hear about one of our newest technologies straight from charismatic laboratory scientist Bernhard Weigl. For information or to reserve a seat, please contact Ashley Cafaro: 206.788.2472 or associates@path.org. ●

PATH'S MISSION

*is to improve
the health of people
around the world by
advancing technologies,
strengthening systems,
and encouraging
healthy behaviors.*



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PATH donor is proud to pay it forward

When Megan Lane was growing up in Australia, her family received help from nonprofit organizations—food baskets and toys around the holidays, uniforms and books when school started. “I always recognized how relieved my mother was to have that help,” she recalls.

A real passion

Because of her background, Megan is passionate about supporting nonprofits, which is why she accepted a friend’s invitation to attend PATH’s Breakfast for Global Health, held in Seattle last spring. “I had no idea what PATH was, other than a quick look at your website,” she told us. “And when I heard about all the different things that you were doing—not just for women, not just for men, but for communities—what I really liked about it was the innovation.”

Our work on a female condom tailored to the developing world

interested Megan most—especially our intention to make it available in poor countries. “You can develop something, but you also have the business connections and savvy to distribute it,” she observed, “That really intrigued the businessperson inside of me.” Moreover, she notes, “Coming from Australia and living in a country that I didn’t grow up in, I have a real passion for world affairs.”

PATH Partners

At the breakfast, Megan was inspired to give. The idea of writing a large check was daunting, so she joined the PATH Partners program instead—agreeing to have a smaller amount deducted from her bank account once a month. She wanted donating to be automatic, she says, “something that just has to be done . . . just like you pay your car loan, you pay your rent.”



“People think giving has to be really big,” says monthly donor Megan Lane, “but if you just start somewhere, it becomes easy.”

Megan sees her monthly donation to PATH as an investment in all of our lives, because “we’re all interlinked.” A side benefit, she says, is staying informed, through PATH publications and events, about issues she might never otherwise encounter: “It allows me to think outside of my everyday life and know that I can make a difference.” ●

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