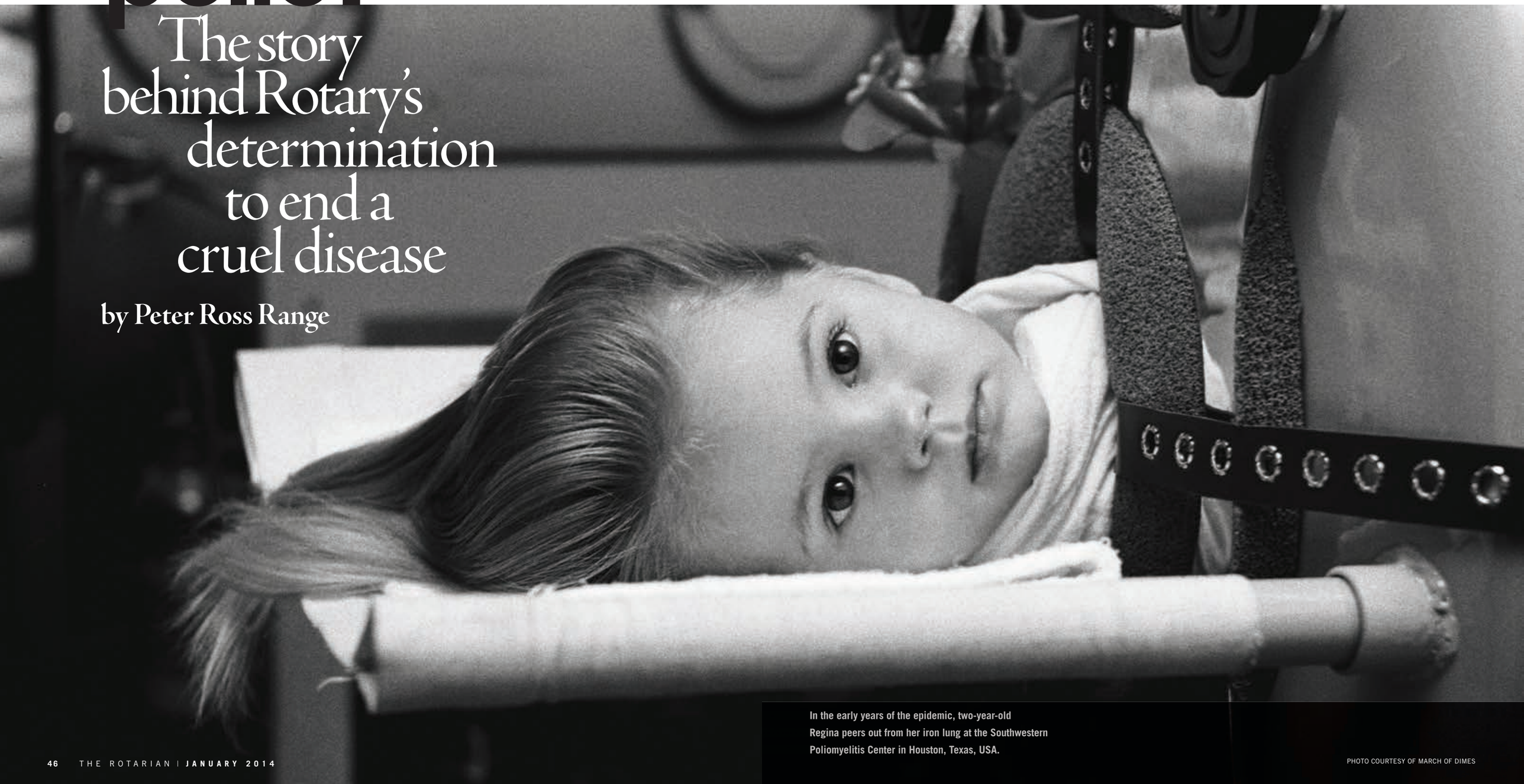
Why polio?

The story behind Rotary's determination to end a cruel disease

by Peter Ross Range

It was April 1979, and Clem Renouf, then RI president, was leafing through *Reader's Digest* on a flight from the Philippines. In the pages of the magazine, he read that smallpox had been eradicated for a little more than the cost of the two Australian naval vessels he'd seen the day before. He'd just been in Manila formalizing agreements to launch the first project under The Rotary Foundation's Health, Hunger and Humanity (3-H) Grants program, and now Renouf was wondering if these new grants could enable Rotary to tackle another disease with similar success. He called his friend **John Sever.**



In the early years of the epidemic, two-year-old Regina peers out from her iron lung at the Southwestern Poliomyelitis Center in Houston, Texas, USA.

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Sever was a district governor in the Washington, D.C., area and head of the infectious diseases branch of the National Institute of Neurological and Communicative Diseases and Stroke at the National Institutes of Health (NIH). Renouf had met him six months prior, when Sever had arranged for him to speak with contacts in the State Department before his first major trip as Rotary president, to West Africa. "I didn't expect a doctor to be so businesslike, but he changed that misconception," Renouf says. "So when I had this bright idea, it was natural I'd seek John's advice."

As a researcher, Sever was immersed in studies of infectious diseases that affect children, such as measles, and vaccine development. His professional goal was to identify new causes of disease and bring vaccines to the children of the world. He was keenly aware that smallpox – a scourge especially rampant in developing countries – had just been eradicated, the first disease to be halted through a concerted public health effort.

Sever also was friends with Jonas Salk and Albert Sabin, the men who had revolutionized public health with their development of the polio vaccines in the 1950s and '60s. The vaccines already were stopping polio in the developed world; the United States would see its last case of endemic polio later in 1979. Sever recognized that Sabin's oral vaccine, available for only 4 cents per dose, had the potential to save more than 350,000 children every year from the crippling disease all over the world, if only someone could organize the effort.

After Renouf's phone call inquiring about which diseases to target, Sever consulted with Sabin. A few weeks later, he mailed Renouf a letter with his recommendation: "If a single vaccine were to be selected for the 3-H program, I would recommend poliomyelitis."

The 3-H program was in its infancy. It was the first time Rotary had committed to new projects beyond the capacity of any one club or district. While the first project, which began in September 1979, focused on bringing polio vaccine to children in the Philippines, the program as a whole was intended to improve health, relieve hunger, and enhance human and social development. Rotary had never had a single corporate cause of this kind.

"The important thing was to get the polio vaccine from the manufacturers to the people who needed it," Sever recalls. "I knew that Rotarians were a big international army of volunteers. They could work with the governments of the world to assist with immunization and provide financial support and social mobilization."

Renouf credits Sever, a member of the Rotary Club of Potomac, Md., for convincing Rotary's leaders that the organization could tackle the disease. "Most would have dismissed it as an impossible dream, beyond our capacity financially or organizationally, as did many former leaders," Renouf says. "But here was a Rotarian uniquely qualified – a senior scientist with an appreciation of

A young patient arrives at the offices of the International Polio Victims Response Committee in Kinshasa, capital of the Democratic Republic of the Congo.

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Rotary's potential, who by virtue of his reputation personally and professionally was able to persuade the 1979-80 Board to adopt the goal of a polio-free world as the major emphasis of the 3-H program."

The son of a Chicago physician, Sever remembers his father caring for children with polio. At that time, he says, "you could buy polio insurance for your newborn." He recalls Sundays in Chicago, when families would go to particular schools or other public facilities for vaccine clinics. "That was called Sabin on Sunday – SOS – the equivalent to what we now call National Immunization Days."

Sever trained at Northwestern University as a pediatrician and earned a PhD in microbiology. At NIH and later at the Children's National Medical Center, he worked as a scientist who also saw patients, a vaccine expert who understood social outreach, and a medical administrator who knew the politics of public health.

These skills would come into play over the next three decades as Sever, along with many other Rotarians, inspired and led the global health community in its dogged struggle against a crippling disease. When 1984-85 RI President Carlos Canseco took office, he appointed a committee to create a long-term strategy to immunize all the children of the world against polio by Rotary's 100th anniversary. Sever served as chair of this Polio 2005 Committee, which developed the plan for Rotary to provide polio vaccine and support to any country that needed assistance. (In 1995, he was appointed to that group's present incarnation, the International PolioPlus Committee, on which he has served as vice chair of medical affairs since 2006.) Along with Canseco and Sever, Sabin and Herbert Pigman, then RI general secretary, were members of the Polio 2005 Committee. "It was these four men, I believe, who were primarily responsible for translating a dream into reality," Renouf has said.

In his role, Sever became Rotary's point man on the polio project and spokesman to the outside world. One of his first

Umar, son of the founder and chair of the Kano State Polio Victims Trust Association in Nigeria, is one of seven children, and the only one with polio.

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challenges was to create a partnership with the World Health Organization. Officials at the organization's headquarters were skeptical, unsure that the Rotarians knew what they were up against, Sever says. "With Canseco, we had to hold a lot of cocktail hours with WHO members at the InterContinental Hotel in Geneva. They received us politely, but they didn't think any nongovernmental organization could go the distance."

With Sever's help, Rotary received a special designation as a nongovernmental organization affiliated with WHO and forged an official partnership with the agency. That partnership, now known as the Global Polio Eradication Initiative, includes the spearheading partners WHO, Rotary International, the U.S. Centers for Disease Control and Prevention (CDC), and UNICEF. Other important sources of support include the Bill & Melinda Gates Foundation and national governments. One of the group's recent accomplishments was working with the government of India to make the country polio-free. In 2012, when WHO presented the Indian prime minister with a letter recognizing this achievement, he thanked Rotary and the other partners. "I was ecstatic," Sever says.

Sever is a clear and direct spokesman, as befits a dedicated scientist, but he's also modest. When he receives praise for his vision and years of nonstop work on behalf of polio eradication, he waves it away like a village health worker swatting at flies. "It wasn't just me," he insists. "Many, many others were involved."

After 47 years at NIH and the Children's National Medical Center, Sever works part time at the National Cancer Institute. Today, at an energetic 81, he continues to travel the world for the campaign he inspired 34 years ago, now 99 percent complete. "This last little piece is the hardest part," he says.

Sever's dual role as a Rotarian and respected scientist has proved "invaluable" to the Global Polio Eradication Initiative, says Hamid Jafari, the campaign's director at WHO. "He's a bridge between the world of science and the technical areas of public health that WHO and CDC scientists deal with, and the world of Rotary. Rotarians look up to him for validation of the science, of the technical strategies, of the research we have. So his word is important."

When the campaign switched from the trivalent vaccine to the monovalent and bivalent versions to concentrate on the remaining types of poliovirus, Sever was among those who helped build confidence in that strategy. "John was right there," Jafari says. "He understood the science, he understood the value of the

change, and he was right there championing this as a strategic shift in the program."

This past spring, Sever took part in several press conferences to announce the Global Polio Eradication Initiative's 2013-18 strategic plan. The plan lays out a blueprint for eradication in the last three polio-endemic countries – Afghanistan, Nigeria, and Pakistan – and certification of a polio-free world by 2018.

"It was important to have him there because he first spoke to the fundraising and advocacy strategy, the feasibility of financing this plan upfront, and then he spoke to the technical rigor and scientific basis of the document," Jafari says. "You have one person who is speaking on both aspects. To have that facility, when you have the *New York Times* or *Washington Post* or other important press persons in the room, was helpful."

WITH THE END IN SIGHT, NOW IS THE TIME TO BEAR DOWN.

Health ministers at the World Health Assembly in 2012 raised the polio eradication campaign to "emergency" status, an official designation meant to drive the political will to get necessary funding. Television and print campaigns such as the End Polio Now "This Close" ads, featuring notable figures like Bill Gates and Archbishop Emeritus Desmond Tutu, also raise public consciousness and support.

The final push will be costly: $5.5 billion, which will come from a combination of donations, NGO contributions, and funds from national governments. The money will fund not only the interruption of wild poliovirus transmission but also the intensive three-year surveillance period after the last case is reported, necessary for the world to be certified polio-free.

With the end in sight, now is the time to bear down, Sever says. "Rotarians get fatigued. The governments in countries that now have very little polio get fatigued. They sometimes say, 'Why don't you help with measles or parasites or something else?' Even if we sometimes merge polio immunization with these other efforts, we're here to eradicate polio. We're not here to switch to another program. Now is the time to stay focused."

"The polio eradication program is where it is today," Renouf says, "because of the contribution of some remarkable people – none more so than John. At a crucial time, he had the knowledge and experience and ability to breathe life into a nebulous idea and provide the leadership needed to reach a historic goal. I just hope he is on stage when that announcement is made, to receive the recognition he deserves." ■ – ADDITIONAL REPORTING BY DIANA SCHOBERG

This Bangladeshi mother and polio survivor begs for food on the streets of Dhaka alongside her sleeping baby.

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