

Yes, You Can Speak to Rotary

Janice Flood Nichols, author of *Twin Voices: A Memoir of Polio, the Forgotten Killer*,
janice16@roadrunner.com

No one hates polio more than I do. This year's "We're Still Here," provides a unique opportunity for survivors to spread the word about a disease that has taken far too much from far too many.

Think about it: If the last worldwide case of polio was to be diagnosed today, the children and young adults battling the acute phase of the disease will be coping with the same post-polio syndrome issues we deal with as you read this article, but 10 to 50 years from now... What a sad reality!

I've spent the last several years researching, writing, and speaking on polio. Although all Rotarians are aware of the commitment their organization made as a spearheading partner of the Global Polio Eradication Initiative (GPEI), it has been a long, hard fight – with an endgame that remains a few years off at best.

The first time I was asked to speak to a Rotary club, I asked myself what I could possibly bring to the table that Rotarians didn't already know. Many talks later, I realize that our stories can serve to embolden their membership.

- Rotarians are a diverse group. Some were alive during the epidemic years. Our stories serve as a means to recall long-buried memories of that frightening period. Many Rotarians were born after the epidemic years. Our stories serve as a means to connect with the acute disease that persists in many developing countries.
- Polio remains endemic in four countries and an importation issue in several developing nations. Many Rotarians reside in countries where polio remains an issue. Professionals and volunteers are tired. GPEI now predicts that if polio is not eradicated in the near future, there could be more than ten million children paralyzed by mid-century. Our stories serve as a reminder of the years of struggle that remain ahead for many children.
- If you were born with the gift of gab (like me), you may delight in an opportunity to address Rotarians. I've found that the most effective presentation is one that incorporates a personal story, facts & figures on polio, and information on the human consequences of eradication failure – 20 minutes max.
{I've included a "Polio- Fast Facts" to assist you with your presentation}.
- If you're a quieter type, you may not wish to ad lib or do a power point presentation. In that case, invite a few of your fellow survivors and ask a local club if you could sit en masse at a meeting. Your numbers, alone, will serve as a powerful reminder of polio's effects.

How do I know our involvement can do some good? Because I've had far too many Rotarians come up to me after a meeting—thank me for coming, thank me for telling my story, and, most importantly, thank me for re-energizing them. "We're Still Here" for a reason! – Janice Flood Nichols, Class of 1953.

Polio - Fast Facts

Janice Flood Nichols, author of *Twin Voices: A Memoir of Polio, the Forgotten Killer*,
janice16@roadrunner.com

Polio is a highly contagious disease caused by a virus. Although polio has plagued mankind since ancient times, most people contracted the disease by the time they were two as a mild flu-like illness. The earliest recorded studies of polio were in the mid-1800s. The first recorded outbreak in the United States occurred in Louisiana in 1841. In 1894, 132 cases were reported in a Vermont epidemic.

Ironically, 20th C advances—indoor plumbing, improved sanitation methods, single family dwellings—allowed the once innocuous disease to become a dreaded killer andcrippler. Yearly epidemics in the U.S. began in 1916. Although polio epidemics occurred throughout the world, our country experienced the highest incidence of the disease in the pre-vaccine years.

In spite of the fact that adults can contract the disease, the polio virus prefers children; polio was once referred to as “infantile paralysis.” Young adults (between 20 and 40) are most likely to die. Boys are more prone to paralysis than girls. Pregnant women are especially vulnerable.

How is Polio Spread?

Polio is spread through fecal-oral and oral-oral routes. Outbreaks can also occur from contaminated food or water. The poliovirus is most contagious just before and after onset of the clinical illness.

Characteristics and Treatment

In 95% of cases, polio is asymptomatic; some people exhibit mild flu-like symptoms. In 3-4% of people, the virus enters the blood stream and attacks cells in the spinal cord and base of the brain that control movement. Symptoms include: fever, fatigue, headache, stiff neck, limb pain, difficulty breathing & swallowing. Paralysis or death can occur within hours. If the virus attacks nerves that control muscles that expand and contract the lungs, the patient is unable to breathe on his own; this type of polio is called bulbar polio.

Less than 25% of patients diagnosed with paralytic polio suffer severe permanent disability; 50% recover with no residual paralysis. The greatest return of function takes place in the first six months, although improvement can be noted for the first two years. Death occurs in 5–10% of patients (with some variation reported in different medical texts), though mortality rates can rise significantly in the bulbar form of the disease.

Treatment includes surgical and non-surgical intervention. Non-surgical treatments include: physical therapy, occupational therapy, whirlpool therapy, and the use of crutches, braces, wheelchairs, and respirators. Surgical intervention includes such procedures as: fusions, tendon transfers, and scoliosis surgery. About 1/3 of polio patients develop scoliosis, or curvature of the spine. If the curve progresses to a point where breathing is hampered or the patient experiences severe pain, a spinal fusion is sometimes performed. Severe limb deformities can result, especially if the patient does not receive intensive rehabilitation services. Some of the deformities associated with polio include:

foot stuck with toes pointed down, foot twisted outward, foot twisted inward, toes curved upward, excessively curved arch, curved big toe, forward curve of the knee, unstable knee, twisting deformity of the hip, hip bent forward, and upper limb deformities.

Post-Polio Syndrome

Since the 1980s, a condition called *Post-Polio Syndrome* has been found to affect between 25–60% of polio survivors. Survivors who suffered more serious acute problems, but made the greatest recovery, are the group most likely to develop post-polio syndrome. Symptoms include: new weakness in previously affected or unaffected limbs, general fatigue and exhaustion, difficulty breathing, swallowing, and sleeping, muscle and joint pain, and decreased cold tolerance. Post-polio is not a recurrence of the virus.

Although the cause of post-polio syndrome is not fully understood, most practitioners believe that it is caused from degenerating nerve cells. Since nerve cells were killed or damaged during the acute phase of the disease, the remaining nerve cells had to sprout additional fibers in order to compensate for the loss. Over time, it is believed that the neurons become overtaxed. Survivors who engaged in strenuous activity are also made especially susceptible to the condition.

Since post-polio syndrome symptoms vary so much between patients (and even vary from day to day in the same patient), there is no universal treatment that can be prescribed. Patients are urged to avoid activities that cause fatigue and to take frequent rests. Therapy, walking, and swimming may also be recommended, though normal endurance rules do not follow. Over-taxing of muscles can actually cause a decrease in function. Thus, more exercise is not necessarily better exercise. Most survivors learn to understand their own limitations and modify activity accordingly. Anti-inflammatory medications are often helpful. Studies are currently underway using globulin and anti-globulin agents to decrease symptoms.

Some Facts and Figures - Polio remains the world's greatestcrippler. Worldwide, 10 to 20 million people live with the after-effects of polio.

- * From 1915 to 1950, the U.S. had 368,000 cases of polio and 49,300 deaths.
- The worst polio epidemics in the U.S. occurred in the 1950s. From 1951–1954, there were an estimated 160,333 cases of polio with 7514 deaths.
- In 1954, the Salk vaccine trial took place. 1,829,916 children in 211 counties in the U.S. as well as children in areas of Canada and Finland took part.
- With the 1955 licensing of the Salk polio vaccine, polio incidence in the U.S. decreased by nearly 90% by 1961. With the 1961-1963 licensing of the Sabin polio vaccine (an oral vaccine), incidence decreased even more rapidly. The U.S. was declared polio-free of the wild-virus type in 1979.
- In 1988, the Global Polio Eradication Initiative was launched as the world's largest public health venture. At the time, there were 350,000 cases of polio each year in 125 countries.
- 6–8 cases of polio, caused by the live-virus Sabin vaccine, were recorded each year in the U.S. between 1980 and 1996. To prevent this, the U.S. returned to the killed-virus polio vaccine, administered by injection, in 2000.

- The WHO sets 2008 as its goal year to eradicate polio. If polio is not soon eradicated, WHO predicts that by mid-century more than 10 million children could be paralyzed. Vaccine, through UNICEF, costs as little as 60 cents per dose.