

# When May Ignorance Become a Blessing?

**A WONDROUS EVENT RECENTLY TOOK PLACE IN A PROVIDENCE** elementary school classroom. It happened quietly, with little fuss and with no newspaper reporters to record the precious moment. The class teacher was discussing events surrounding World War II and noted, in passing, that President Franklin D. Roosevelt had been a victim of polio. A young student raised her hand and earnestly inquired: "What's polio?" It is likely that most if not all of her fellow students were equally ignorant of the term; and if their teacher were younger than age 55—born in this nation—she too might have known the word only through the reading of history books. Were Jonas Salk and Albert Sabin still alive, they would have glanced at each other and grinned broadly.

Acute poliomyelitis is caused by a virus that principally attacks the brain cells that subserve and control the voluntary muscles of the body. The virus circulates via sewage-contaminated water and often attacks the healthiest, most physically vigorous youngsters in a community. The result is a flaccid (limp) paralysis of one or more limbs, and sometimes, in more severe cases, even the muscles that control breathing are compromised.

The Salk vaccine, rendered through injection, was first used in trials in 1956; and the Sabin oral vaccine, some years later. On the 20th anniversary of the first polio vaccine trials in Rhode Island, Jonas Salk, as guest of Brown University, joined the local physicians in celebration.

Although an occasional case of polio arises in the United States, often in a migrant child who had been infected overseas, this nation has been essentially polio-free for many decades, in contrast to the earlier decades of the 20th century when as many as 200,000 children were afflicted annually.

And the remainder of the world? Polio transmission, thanks to extensive use of the vaccines, has been interrupted in all nations except for four countries: Nigeria, Afghanistan, Pakistan and India, four nations burdened by extensive poverty, forced migrations, civil wars, a paucity of health education facilities and inadequate medical resources. In Nigeria, for example, rumors that the virus caused sexual sterility in children caused many ill-advised parents to shun the vaccine.

Until recent years, India was heavily plagued with yearly epidemics of polio, often exceeding 50,000 victims per year. A conscientious effort, beginning in 1988, concentrated on the children of the urban slums and particularly children of migrant workers. This strategy diminished the annual number of paralyzed child to about 800. By the year 2009, the Indian

government estimated that the number of children not provided with the polio vaccine was down to 12.3%. A large-scale effort was then undertaken in 2010 and, since then, only two cases of verified polio have been recorded: one in West Bengal (January, 2011) and one in Jharkhand (October, 2010). In a vast country of some one billion persons, 31% of which are below the age of 15, and in an area of about 1,269,000 square miles, this was an immense, an awesome accomplishment.

Beginning with Jenner's vaccine to prevent smallpox back in 1796 and with the subsequent vaccines to prevent childhood measles, rubella, diphtheria, tetanus, pertussis, pneumonia, hepatitis and a handful of other childhood communicable ailments, the world has witnessed a miracle: Through the 16th century, a newborn child, say in England, had about one chance in three of surviving until age 18. Today, in that same England, the chances of survival to adulthood hover about 98%. Historians will agree: The preventive vaccines against childhood diseases have saved more lives than any other single factor in the life-preserving resources of the medical profession. Mothers—whether they be English, Lithuanian or Cambodian—no longer must plan for at least three pregnancies to ensure that perhaps one child will survive to adulthood and thereby insure for their declining years.

Today, a class of school children blissfully unaware of the threats of diphtheria, measles, whooping cough, poliomyelitis and smallpox—or even the meaning of those names of the pestilences—is cause for all of us to smile. At this very moment there are scientists, here and elsewhere, working diligently so that school children, generations hence, may also raise their hands to inquire of their teacher; "What is cancer?"

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## Disclosure of Financial Interests

The author and his spouse/significant other have no financial interests to disclose.

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