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Why Parents Fear the Needle

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DESPITE overwhelming evidence to the contrary, roughly one in five Americans believes that vaccines cause autism — a disturbing fact that will probably hold true even after the publication this month, in a British medical journal, of a [report thoroughly debunking the 1998 paper](#) that began the vaccine-autism scare.

That's because the public's underlying fear of vaccines goes much deeper than a single paper. Until officials realize that, and learn how to counter such deep-seated concerns, the paranoia — and the public-health risk it poses — will remain.

The evidence against the original article and its author, a British medical researcher named Andrew Wakefield, is damning. Among other things, he is said to have received payment for his research from a lawyer involved in a suit against a vaccine manufacturer; in response, Britain's General Medical Council struck him from the medical register last May. As the journal's editor put it, the assertion that the measles-mumps-rubella vaccine caused autism "was based not on bad science but on a deliberate fraud."

But public fear of vaccines did not originate with Dr. Wakefield's paper. Rather, his claims tapped into a reservoir of doubt and resentment toward this life-saving, but never risk-free, technology.

Vaccines have had to fight against public skepticism from the beginning. In 1802, after Edward Jenner published his first results claiming that scratching cowpox pus into the arms of healthy children could protect them against smallpox, a political cartoon appeared showing newly vaccinated people with hooves and horns.

Nevertheless, during the 19th century vaccines became central to public-health efforts in England, Europe and the Americas, and several countries began to require vaccinations.

Such a move didn't sit comfortably with many people, who saw mandatory vaccinations as an invasion of their personal liberty. An antivaccine movement began to build and, though

vilified by the mainstream medical profession, soon boasted a substantial popular base and several prominent supporters, including Frederick Douglass, Leo Tolstoy and George Bernard Shaw, who called vaccinations “a peculiarly filthy piece of witchcraft.”

In America, popular opposition peaked during the smallpox epidemic at the turn of the 20th century. Health officials ordered vaccinations in public schools, in factories and on the nation’s railroads; club-wielding New York City policemen enforced vaccinations in crowded immigrant tenements, while Texas Rangers and the United States Cavalry provided muscle for vaccinators along the Mexican border.

Public resistance was immediate, from riots and school strikes to lobbying and a groundswell of litigation that eventually reached the Supreme Court. Newspapers, notably this one, dismissed antivaccinationists as “benighted and deranged” and “hopeless cranks.”

But the opposition reflected complex attitudes toward medicine and the government. Many African-Americans, long neglected or mistreated by the white medical profession, doubted the vaccinators’ motives. Christian Scientists protested the laws as an assault on religious liberty. And workers feared, with good reason, that vaccines would inflame their arms and cost them several days’ wages.

Understandably, advocates for universal immunization then and now have tended to see only the harm done by their critics. But in retrospect, such wariness was justified: at the time, health officials ordered vaccinations without ensuring the vaccines were safe and effective.

Public confidence in vaccines collapsed in the fall of 1901 when newspapers linked the deaths of nine schoolchildren in Camden, N.J., to a commercial vaccine allegedly tainted with tetanus. In St. Louis, 13 more schoolchildren died of tetanus after treatment with the diphtheria antitoxin. It was decades before many Americans were willing to submit to public vaccination campaigns again.

Nevertheless, the vaccination controversy of the last century did leave a positive legacy. Seeking to restore confidence after the deaths in Camden and St. Louis, Congress enacted the Biologics Control Act of 1902, establishing the first federal regulation of the nation’s growing vaccine industry. Confronted with numerous antivaccination lawsuits, state and federal courts established new standards that balanced public health and civil liberties.

Most important, popular resistance taught government officials that when it comes to public health, education can be more effective than brute force. By midcentury, awareness efforts

had proven critical to the polio and smallpox vaccination efforts, both of which were huge successes.

One would think such education efforts would no longer be necessary. After all, today's vaccines are safer, subject to extensive regulatory controls. And shots are far more numerous: as of 2010, the Centers for Disease Control recommended that every child receive 10 different vaccinations. For most Americans, vaccines are a fact of life.

Still, according to a 2010 C.D.C. report, 40 percent of American parents with young children have delayed or refused one or more vaccines for their child. That's in part because vaccines have been so successful that any risk associated with their use, however statistically small, takes on an elevated significance.

It also doesn't help that, thanks to the Internet, a bottomless archive of misinformation, including Dr. Wakefield's debunked work, is just a few keystrokes away. All of which means the public health community must work even harder to spread the positive news about vaccines.

Health officials often get frustrated with public misconceptions about vaccines; at the turn of the last century, one frustrated Kentucky health officer pined for the arrival of "the fool-killer" — an outbreak of smallpox devastating enough to convince his skeptical rural constituency of the value of vaccination.

But that's no way to run a health system. Our public health leaders would do far better to adopt the strategy used by one forward-thinking federal health official from the early 20th century, C. P. Wertenbaker of the Public Health and Marine-Hospital Service.

As smallpox raged across the American South, Wertenbaker journeyed to small communities and delivered speech after speech on vaccinations before swelling audiences of townsfolk, farmers and families. He listened and replied to people's fears. He told them about the horrors of smallpox. He candidly presented the latest scientific information about the benefits and risks of vaccination. And he urged his audiences to protect themselves and one another by taking the vaccine. By the time he was done, many of his listeners were already rolling up their sleeves.

America's public health leaders need to do the same, to reclaim the town square with a candid national conversation about the real risks of vaccines, which are minuscule compared with their benefits. Why waste another breath vilifying the antivaccination minority when steps can be taken to expand the pro-vaccine majority?

Obstetricians, midwives and pediatricians should present the facts about vaccines and the nasty diseases they prevent early and often to expectant parents. Health agencies should mobilize local parents' organizations to publicize, in realistic terms, the hazards that unvaccinated children can pose to everyone else in their communities. And health officials must redouble their efforts to harness the power of the Internet and spread the good word about vaccines.

You can bet that Wertenbaker would have done the same thing.

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