

Vaccines save lives. But stricter laws may backfire.

Parents will just work that much harder to circumvent them

By Daniela Blei and Tamara Venit Shelton

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Measles are back. Despite a widely available and highly effective vaccine, in the first four months of 2019, the World Health Organization noted a threefold increase of measles cases over the same period last year.

The United States has experienced outbreaks in 30 states, including New York and Washington, where officials have declared public health emergencies. In Europe, the number of measles cases spiked to the highest in a decade, with outbreaks in Ukraine, Romania, Poland, the Czech Republic, Italy and France. More than 450 people have died of measles in the Philippines since January.

Governments around the world are responding to the crisis by making measles vaccines compulsory or by closing loopholes in existing laws. Yet vaccination policy specialists urge caution. They say state-mandated vaccines could actually lower vaccination rates among school-age children. Why? The answer is simple: parents. Stricter laws will probably encourage parents to seek new ways to skirt vaccination requirements.

With a minor cottage industry of media stories about the stresses of contemporary parenting, Americans could hardly be faulted for believing that vaccine fears, like other parental anxieties, are new. In reality, parents have always resisted mandated vaccines. Striving to be a “good parent” in an increasingly complex world, parents everywhere have long bristled at what they perceived to be overreach by public health officials into private family life. Near-universal compliance with state-mandated vaccines has been a historical aberration, not the norm.

Compulsory vaccination laws swept Western Europe and the United States 150 years ago, with early laws mandating smallpox vaccination for admission to public school. Targeting children made sense — young people have greater susceptibility to infectious diseases, and schools allowed vaccinators to reach large swaths of the population. And the deadly disease was everywhere. In 18th-century Europe, approximately 400,000 people died annually before Edward Jenner’s successful development of a vaccine in 1796.

Mortality declined, thanks to the vaccine, but smallpox epidemics continued to break out around the world, claiming tens of thousands of lives and scarring or blinding many more in the 19th and early 20th centuries.

Over time, public health officials hoped to save millions of lives by mandating vaccination, but most parents didn’t understand the science behind vaccination. They worried that government-licensed doctors would test unproven scientific theories on their vulnerable children. Their skepticism was warranted: Vaccines had not yet eradicated a single disease, and primitive injection technology caused pain and scarring. The quality of vaccine materials and training of vaccinators varied widely, making infection and even death a real possibility. While vaccines might be good for the community, each child faced significant potential risks.

This became the seed from which parental grass-roots resistance to vaccines grew.

In the 1850s, mothers and fathers in Wurttemberg, Germany, fought vaccination laws targeting schoolchildren. Their efforts inspired other parents to join ranks with family doctors in local anti-vaccination groups that proliferated across Europe.

The best-selling household manual, “The Woman as Family Doctor,” published in Germany in 1901 and eventually translated into 13 languages, advised families to leave the country, if possible, to protect school-age children from compulsory vaccination. Another publication, “Vaccination Cemetery,” documented cases of German children harmed by vaccines and sparked parliamentary debates about vaccine safety. According to its author, Germany’s pro-vaccination doctors were helpless against “the will of parents.”

In the United States, as vaccination requirements spread state by state in the 1850s and 1860s, doctors with a tenuous grasp on vaccine science stoked parental fears. In 1869, Ernst Kramer, a doctor popular with German immigrants in Milwaukee, declared that the dangers of vaccines outweighed the benefits. Kramer persuaded the local school board to allow unvaccinated children into public school. With the full support of parents, a local principal barred the city physician from entering his school to vaccinate students, with deadly consequences. When a smallpox epidemic struck the city in 1871, the German immigrant community was the hardest hit.

The battle over vaccination has always been entangled with the history of the family. In the 19th century, as disease and death rates declined, making infancy and childhood much less precarious, the child became the heart of the family. Middle-class families, having fewer children and accordingly more resources to devote to each child, sought a new scientific approach to parenting.

Experts on child-rearing spawned a growing literature — that could be helpful and anxiety-inducing at the same time — advising mothers on their children’s health, hygiene and education. Whereas the existing medical literature was written by a scientific elite, dominated by men working closely with the state, new parenting advice, published in pamphlets and books to be read at home, was accessible, intimate and child-centered. The overwhelming message was the fate of children now rested in the hands of their parents, especially mothers.

Nineteenth-century anti-vaxxers capitalized on the pressure and responsibility that parents felt. In the 1870s, anti-vaccination propaganda beseeched “Conscientious Fathers” to resist the British Vaccination Act and leave their children unvaccinated. British feminists such as Mary Hume-Rothery insisted that parents — especially mothers — held a special, natural authority over their children’s health and a right to defy doctors’ orders. Anti-vaxxer activists encouraged mothers to subvert vaccination laws by providing incorrect addresses or other false records to public health officials. These pushes successfully turned mothers and fathers into foot soldiers in the anti-vaxxer campaign against medical science.

While low vaccination rates led to more deaths, punishing noncompliant parents only exacerbated the problem. Parents worried that the interventions of new public health agencies diminished their parental sovereignty, and they resisted state mandates with even greater vigor. In Leicester, England, an 1867 law fined and imprisoned parents who failed to have their children vaccinated. Twenty thousand angry protesters demonstrated in the streets, and in the subsequent two decades, the childhood vaccination rate fell from 90 percent to 3 percent.

Parents weren’t just foot soldiers, or the target for anti-vaccination propaganda. They also became leaders of anti-vaccination movements, as was the case for Lora C. Little, after she blamed a mandatory vaccine for the death of her 7-year-old son, Kenneth, in 1896. Little toured internationally and published a searing indictment of vaccines titled “Crimes of the Cowpox Ring.” She successfully organized parents against compulsory vaccination for schoolchildren in Minneapolis and Portland, Ore.

Yet this movement of parents proved to be no match for the terror spawned by the reality of epidemic disease. After smallpox epidemics struck Milwaukee in the 1870s, parents' resistance to vaccinating their children eroded. As a result, no Milwaukeeans died of smallpox between 1883 and 1893.

In the early 20th century, polio infected thousands of children each year. The virus loomed like a specter over public swimming pools, movie theaters and schools. When Jonas Salk introduced a promising vaccine in 1953, parents' fear of childhood paralysis or death overrode any customary aversion to vaccines. By 1979, officials could declare the United States to be polio-free.

With the passage of time, however, the terror felt by parents has dissipated. Today's mothers and fathers may not remember when children died of preventable infectious diseases such as smallpox, polio or — as recent events suggest — the measles.

Feeling the pressure to protect their children from perceived harms, some have decided that vaccinations do more damage than good. While scientific evidence does not support that idea, it has fueled a resurgence of parental anti-vaxxer sentiment. In April, hundreds of parents thronged a California Senate meeting room to protest a bill that would restrict nonmedical vaccine exemptions. Echoing 19th-century skepticism about medical science, one activist held up a sign that read: "MY KIDS ARE NOT YOUR GUINEA PIGS."

The state Senate passed the bill, signaling that the resurgent strength of the anti-vaccine movement has actually prompted governments to enact new, stricter measures. Last month, German parliamentarians passed a law requiring parents to show proof of their children's immunizations or face fines of up to \$2,800.

However, history shows that governments must tread cautiously here. "Overly strict mandates can result in parents finding ways to avoid the vaccine requirements," warned experts Saad B. Omer, Cornelia Betsch and Julie Leask recently.

The world in 2019 is very different than it was in the 19th century. Vaccine technology has been proven safe and effective, and yet there remains pervasive insecurity about what constitutes "good parenting," fueled by popular media and easily exploited by an anti-science fringe.

The return of measles might scare parents into complying with vaccine requirements, as smallpox and polio eventually did. If not, the most effective way to counter anti-vaxxer propaganda might be education that recognizes that vaccine aversion is often driven by love for one's children.

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