

The Anti-Vaccine Movement: Where Are We Now?



While the anti-vaccine bandwagon is collapsing amid studies discrediting the link between vaccines and autism, public distrust remains. With some vaccine-preventable diseases reaching epidemic status, is it too late to turn the tide?

By Trudie Mitschang

For many, actress Jenny McCarthy has become the poster mom of the anti-vaccine movement, thanks to her highly vocal stance against the measles, mumps, rubella vaccine (MMR) that she believes triggered her son Evan's autism. Her point of reference was a study published in the British medical journal *The Lancet* by Dr. Andrew Wakefield, a study that was later debunked and retracted after it was reported that Wakefield falsified data. According to Brian Deer, investigative journalist for London's *The Sunday Times*, Wakefield "was paid more than £400,000 (\$665,000) by lawyers aiming to prove that the vaccine was unsafe."¹ In the fallout, Wakefield even had his medical license revoked.

Of course, the Wakefield study was not the only misguided weapon in the anti-vaccine movement's arsenal. Many who had earlier jumped on the anti-vaccine bandwagon held to the theory that the preservative in children's vaccines, thimerosal, was causing autism, despite the fact that the United States had removed thimerosal from most childhood vaccines in 2001. Statistics have shown that autism rates have steadily increased since 2001, disproving the thimerosal link. According to the Centers for Disease Control and Prevention (CDC) website, "Evidence from several studies examining trends in vaccine use and changes in autism frequency does not support an association between thimerosal and autism. Furthermore, a scientific review by the Institute of Medicine (IOM) concluded that 'the evidence favors rejection of a causal relationship between thimerosal-containing vaccines and autism.'"²

Recently, in a move that surprised critics and supporters alike, McCarthy herself publicly began backpedaling on her anti-vaccine stance, stating, "I've never told anyone to not vaccinate — I believe in the importance of a vaccine program, and I believe parents have the right to choose one poke per visit."³

The question is: Has any of this helped turn the tide of public cynicism and distrust regarding vaccine efficacy and safety? If the alarming increase of new cases of measles, pertussis (whooping cough) and chickenpox is any indication, the answer is a resounding "no." McCarthy's critics say her more balanced viewpoint is essentially "too little, too late," with measles outbreaks in states like California and New York more widespread than they've been in decades. According to Alan Hinman, a public health scientist who sits on the scientific advisory board of the pro-vaccine parent group Voices for Vaccines, many people continue to believe that vaccines cause autism, while others simply don't trust the federal government or the pharmaceutical companies responsible for these vaccines.⁴

Understanding the Parent Perspective

Although the supposed autism link is the most cited reason given for forgoing immunization, surveys show parents have other concerns as well. Some say they believe the current vaccination schedule recommended by CDC is too aggressive for an infant's immune system to handle, while others doubt the long-term safety of vaccines. A small percentage of parents cite religious reasons for opting out. A survey in Marin County, Calif., found several themes common to "anti-vax" parents, including a preference for natural immunity over vaccine immunity; a belief that children were at low risk for some vaccine-preventable diseases; and a lack of trust in the healthcare system or pharmaceutical industry.⁴

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Currently, 48 states allow parents to sign a vaccine-exemption form, although California now requires a doctor's signature on the form, leaving many providers wondering how to broach the sensitive topic with parents. To help parents better understand vaccines, some healthcare providers are starting to provide information or articles from scientific journals about vaccinations. Several states have also worked to make getting an exemption tougher. In Colorado, for example, where 4 percent of kindergartners in 2013 were not vaccinated for nonmedical reasons, a proposed bill sponsored by State Rep. Dan Pabon, a Democrat from Denver, would require parents to get a doctor's note or watch a video about risks before opting out of vaccines.⁴

Earlier this year, researchers confirmed that a 2010 whooping cough outbreak in California, the nation's worst in more than 50 years, was spread by children whose parents applied for nonmedical exemptions to school vaccination requirements. The study showed that more cases of whooping cough occurred in the clusters of unvaccinated children than not, resulting in 9,120 instances of the disease and 10 deaths. In San Diego County alone, there were 5,100 exemptions and 980 whooping cough cases.⁵

From the medical side of the equation, some physicians have resorted to their own defenses to protect their patients from those who won't vaccinate. Doctors at Olde Towne Pediatrics in Manassas, Va., have taken a hard-line defense and won't take new patients if the parents don't plan to vaccinate their children. It's not clear how many other physicians have followed suit, as experts say no comprehensive studies of the practice have been done.

"We don't want to put our patients at risk because people for their own personal reasons don't want to vaccinate," said Anastasia Williams, a managing partner of the practice who has been a pediatrician for 15 years. "We are doing our due diligence to protect our children who wait in our waiting room."⁴

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From Personal Choice to Criminal Intent

Last year, a popular television show raised a compelling legal question regarding parents who don't vaccinate, creating a firestorm of controversy. What if a mother decided not to vaccinate her child for measles and her 4-year-old contracts the disease and then goes on to infect a 1-year-old who is too young to be immunized? And what if that baby dies?

That was the controversial topic during a season 10 episode of "Law & Order: Special Victims Unit." And, it's also the hypothetical case study in a provocative paper in the *Journal of Law, Medicine and Ethics* that explores whether there's a case for holding people legally accountable for the spread of disease when they choose not to vaccinate their children. "One can make a legitimate, state-sanctioned choice not to vaccinate, but that does not protect the person making that choice against the consequences of that choice for others," state bioethicist Arthur L. Caplan and his co-authors.⁶

The authors argue that since epidemiologists today can reliably determine the source of a viral infection, the parents of the unvaccinated child could be charged with criminally negligent homicide or sued for damages.

Not surprisingly, those in the anti-vaccine camp were outraged by the suggestion of legal action. After Caplan wrote a related post for the *Harvard Law School* blog, angry comments poured in. "This article is industry propaganda at its worst!" declared one angry parent.⁶

While the debate surrounding personal choice and public liability remains a hot-button topic, it's being triggered not only by television shows. Case in point: The San Diego 2008 measles outbreak that was triggered by an unvaccinated 7-year-old boy who infected 11 other unvaccinated kids, according to CDC.⁷ It was reported that the majority of the cases occurred in kids whose parents had requested personal belief exemptions through the state of California, one of 17 states to allow them. But three of the infected were either too young or medically unable to be vaccinated. And overall, 48 children too young to be vaccinated were quarantined, at an average cost to the family of \$775 per child. CDC noted that all 11 cases were "linked epidemiologically" to the 7-year-old boy, and that the outbreak response cost the public sector \$10,376 per case.

Dorit Rubinstein Reiss, a professor of law at UC Hastings College of the Law in San Francisco, Calif., wrote a recent blog post titled "The Cost of Vaccine Misinformation." In addressing the question of liability claims against physicians and organizations who spread misinformation about vaccine efficacy, Reiss said, "The cost of the anti-vaccine misinformation is in harm and suffering. Those who make decisions based on misinformation — especially unvaccinated children and the victims who are subsequently infected by the unvaccinated — are the ones who bear the burden. It's time to put the monetary costs where they belong: on those providing the misinformation that causes harm, whether that harm is intentional or negligent."⁸

The Value of Vaccines

In many ways, vaccines are a relatively recent development in medical history. It was just a little more than 200 years ago when English scientist Edward Jenner observed that milkmaids who had been exposed to cowpox seemed immune to contracting the dreaded smallpox infection. In 1796, Jenner tested his hypothesis by inoculating a boy named James Phipps with material from cowpox blisters. He later repeated the experiment on the boy, but this time added a small amount of smallpox, hoping the procedure would immunize Phipps against infection. The experiment was a success, and Jenner's discovery ushered in the dawn of the immunization age.⁹

For many people today, it is difficult to imagine a time when diseases like diphtheria and polio ran rampant. For generations who have grown up with no memory of once-healthy children relegated to life in an iron lung due to an onset of

polio, complacency regarding immunization is yet another factor contributing to declining vaccination rates. In fact, in 1952, a record 57,628 cases of polio were reported in the U.S., leaving as many as 20,000 people a year paralyzed. The vaccine developed by Dr. Jonas Salk debuted on April 12, 1955, and while the last U.S. outbreak of polio was in 1979, health experts say growing pockets of unvaccinated children are cause for concern. “Scenarios for polio being reintroduced into the U.S. are easy to imagine, and the disease could get a foothold if we don’t maintain vaccination rates,” says Dr. Greg Wallace, a team leader for the CDC MMR and polio epidemiology branch.¹⁰

According to the World Health Organization, at least two million people in all age groups die every year from diseases preventable by recommended vaccines. In fact, statistics show that more Americans die each year from vaccine-preventable diseases than from car accidents, breast cancer or AIDS. Influenza, commonly referred to as the flu, is at the root of an estimated 400,000 deaths worldwide each year and surprisingly claims more lives than all other vaccine-preventable diseases combined.¹¹

The American Academy of Pediatrics stated the following in their handout *Vaccine Safety: The Facts*: “Vaccines are necessary.... In many parts of the world, many vaccine-preventable diseases are still common. Since diseases may be brought into the United States by Americans who travel abroad or from people visiting areas with current disease outbreaks, it’s important that your children are vaccinated.”¹²

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The good news is not all parents today have been swayed by the wealth of misinformation regarding vaccine safety. Voices for Vaccines, a parent-led organization that supports and advocates for on-time vaccination and the reduction of vaccine-preventable disease, states on its website: “At Voices for Vaccines, we believe it’s time for parents who vaccinate to begin sharing their stories and telling the world why they

choose to protect their children from vaccine-preventable diseases. The Voices for Vaccines blog, Parents Who Vax, provides parents who have chosen to vaccinate their children an opportunity to talk about their decisions to do so.”¹³

“My little one is just over 7 months old, and we did our vaccines according to schedule,” says Claire White, a young mother from Temecula, Calif. “What influenced my decision was seeing the devastating effects of many of these illnesses on very young children, from mild sickness to death. Modern medicine has its risks and complications, but the risk seemed very minimal, and for me, the benefit outweighed the risk.”

When asked if the negative view of vaccines portrayed in the media had swayed her at all, White stated, “Media coverage has not influenced me at all. There is so much misinformation regarding vaccines that it is crucial that people are proactive and research information themselves and not just swallow whatever they are being fed.” ❖

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