

## **Don't Take Vaccines for Granted**

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What's behind falling vaccination rates? People forgetting how truly terrible some diseases were.

The recent spread of measles in the United States is an unwelcome reminder of the declining vaccination rates among American children. It has also led to a vigorous political debate between those who believe that vaccinations of children should be mandatory, and those, like Sen. Rand Paul and Gov. Chris Christie, who argue that such decisions are best left to the children's parents. (Both Christie and Paul later tried to clarify their comments.)

It is important to note that both sides agree that vaccinations are beneficial and believe all children should be vaccinated. The disagreement comes with the idea of government mandates for vaccines. And here, there has been a dearth of much-need nuance in the debate.

First, some perspective is in order. Over time, vaccinations against polio, measles and chickenpox, to give just a few examples, fell to 94 percent, 92 percent, and 91 percent respectively. But, if vaccinations are so obviously good, why are the rates of vaccination declining? In a word: progress. The plagues of the past have been all but vanquished, making the current generation less wary of the dangers that remain.

For most of human history, to quote the English philosopher Thomas Hobbes, life was "solitary, poor, nasty, brutish and short." Danger lurked everywhere. Consider smallpox. As late as the 18th century, smallpox killed some 400,000 Europeans annually. The overall mortality rate was 20 percent to 60 percent; among infants, it was more than 80 percent, and was one of the reasons for the low overall life expectancy of 25 years. A French medical textbook written in 1775 estimated that 95 percent of the population contracted smallpox at some point during their lives. Many of those who survived spent the rest of their lives horribly disfigured.

Then Edward Jenner, an English country doctor, noticed that milkmaids never got smallpox. He realized that milkmaids were immune from smallpox, because they contracted cowpox – a mild disease of cows that resembles smallpox – when they were children. So he initiated the practice of vaccination with cowpox. (Vacca, incidentally, is the Latin word for cow.)

Jenner published his results in 1798. In spite of his discovery, life expectancy remained pitifully low for some time to come. As late as 1900, in Western Europe, which was, along with the United States, the most advanced region in the world, life expectancy was only 50 years.

Today, American parents face choices uninformed by the experiences of previous generations. Most likely, they have never encountered children suffering from diseases that are easily preventable through vaccination.

A similar behavior has been observed in gay communities in rich countries, where the HIV/AIDS epidemic had subsided to a point where unprotected sex is making a comeback – especially among young adults who have never met a person suffering from full-blown AIDS, and whose HIV-positive friends are, thanks to modern medicine, indistinguishable from the rest of the population.

The debate over vaccination is a timely reminder of the old adage "With great wealth comes great responsibility." By historical standards, we are immensely wealthy, healthy and safe. Our ignorance, however, is irresponsible. The scientific evidence unequivocally shows that the benefits of vaccinations far outweigh the costs. Parents should vaccinate their children.

But, there are shades of grey here. Some diseases, like polio, have much more serious consequences for the unvaccinated children and for the society as a whole, than others, such as measles. A one size fits all policy would be divisive and might not be necessary. Before a panicked rush down the slippery slope of government mandates, it is better calmly to evaluate the danger posed by each disease individually and explore the scope for compromise. Finally, let us remember that the progress humanity has made over the ages has by and large resulted from a discourse that was open and scientific, not from political mudslinging.

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