



## CASE 12.3

### Whooping Cough Epidemic in Washington: The Importance of Public Health

A century ago, whooping cough spread dread across the country, causing more than 5,000 deaths a year. But after scientists discovered that the pertussis bacteria caused the awful respiratory disease, with its characteristic "whoop" sound, researchers produced an enormously effective vaccine. Then they went a step further and combined that vaccine and the antibodies to diphtheria and tetanus into a single shot (DPT), putting an end to the three diseases that had terrorized kids for decades.

But by the 1970s, parents were growing increasingly suspicious of the DPT vaccine, particularly that it was causing brain damage, including encephalopathy, a condition that can produce personality changes, tremors, and seizures. After a 1982 NBC documentary won an Emmy Award for its tale of children said to be injured by the vaccine, an antivaccination epidemic was born, spurred further by a 1998 study that suggested the measles, mumps, and rubella vaccine caused autism. (In 2010, that study was retracted by the journal that had published it.)

Today, untold thousands of children have never received these vaccinations. As a result, the dreaded diseases of the early 1900s are making a comeback. In May 2013, Washington State public health officials declared a health emergency as whooping cough galloped across the state. In just the first month, the disease infected more than 2,500 Washingtonians, with children ages ten to thirteen hit especially hard. Other states, including California and Wisconsin, have had outbreaks as well, but in Washington the infection rose to an epidemic.

How could a disease we thought we had licked have spread so fast? Part of the explanation comes from Washington parents who took advantage of a new law allowing them to opt out of vaccinations for their kids. Another part comes as a result of a new DPT vaccine designed in the 1990s to cause fewer side effects, but which declined in effectiveness over time, leaving adults with lower levels of protection.

Perhaps the biggest part of the problem, however, comes from underinvestment in public health. Financially strapped states, including Washington, have been struggling to support programs to immunize kids, advertise the benefits of the dreaded shots, track the spread of diseases of all kinds, and manage the consequences. Becky Neff, a registered nurse in Skagit County, along the Puget Sound near the Canadian border, told a reporter, "It's the largest epidemic I've ever seen." How large? No one really knows, she explained, because the county has just two nurses compiling disease reports, compared with five just a few years ago. The nurses who are left "don't have time to call and say who's positive and negative."  $\gamma$

The economic downturn left a trail of debris in its wake, and public health has been especially hard hit. Rhode Island's free breast and cervical cancer screening programs were suspended. In Washtenaw County, Michigan, budget cuts forced the government to suspend new enrollment in a health coverage program for low-income residents who didn't qualify for Medicaid. In 2010 and 2011, the local public health workforce dropped 15 percent, according to the National Association of County and City Health Officials.

Public health workers are usually the last noticed of the first responders. The public tends to dismiss them as disease-counters and shot-givers—until killer tomatoes strike (with a salmonella outbreak in 2008) or anthrax threatens (after the 9/11 terrorist attacks).

The recent whooping cough outbreak shows how fast disease can spread. The 1918 Spanish flu pandemic, which killed more than 50 million people around the world, showed just how serious that can be. And in today's super-linked world, any disease anywhere can deposit itself on anyone's doorstep in just hours. In fact, just one airplane passenger from Hong Kong brought severe acute respiratory syndrome (SARS) to Toronto in 2003. The resulting outbreak virtually shut the city down and killed forty-four people.

The Washington whooping cough emergency, fortunately, didn't rise to that scale. But it does raise two very worrisome points. First, disinvesting in public health now can pose serious consequences down the road. Whether we can accurately count the number of preteens struggling with whooping cough might not seem like a big deal, but if we suddenly have to track and manage the spread of a SARS-like disease, the lack of capacity would aggravate a grade-A crisis.

Second, if nervous parents push opt-out provisions on state policymakers, and if individual states loosen the requirements for vaccinations and other public health strategies, the individual decisions can quickly create far broader ripples. Many public health programs rely on the inelegantly named "herd" strategy. If almost everyone is immunized, a single whooping cough victim can easily be isolated. If large numbers of kids haven't been vaccinated, or if vaccines for their parents begin to wear off, one cough can quickly spread across the population.

Individual parents' decisions about vaccinating their kids might seem limited to their own families, but nothing could be further from the truth. It's no exaggeration to say that such parental decisions, sanctioned by individual states and repeated many times over, can have national consequences. Couple that with budget cuts at the heart of the

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### QUESTIONS

1. How do you think public health programs should be funded? What role should government play in ensuring that all children have access to necessary health services? How do you think the government should regulate the pharmaceutical industry to ensure the safety and effectiveness of drugs?



For residents of North Dakota, which is one of the poorest states in the country, the cost of health care is a major concern. By mid-2013, the state's health care costs were rising at a rate similar to the national average, but the state's ability to pay for them was limited. The state's health care system was in a state of crisis, and the state's health care officials were struggling to find ways to reduce costs and improve the quality of care.

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nation's public health capacity. We see evidence everywhere of the huge consequences of the Great Recession, but Washington's whooping cough outbreak shows an important break in our first-response lines of defense.

### QUESTIONS TO CONSIDER

1. How strong a stand should public health officials play in encouraging parents to vaccinate their children against whooping cough? Should aggressive regulations, like banning children from school, be part of the strategy?

2. What should be the public role of public health workers? What media briefing would you design in such a case?
3. What does this case say about the broader problem of homeland security, especially creating enough capacity in public health to deal with possible problems? Should the government invest more in state and local public health officials? How should they make that tradeoff?

Note: This case comes from my column in *Governing* (August 2012), <http://www.governing.com/columns/potomac-chronicle/col-whooping-cough-comeback-raises-troubling-questions.html>.

Answer



## CASE 12.4

### Better Numbers, Lower Crime

For residents of the Standing Rock Indian Reservation, which stretches across a large swath of the central Dakotas, crime was an enormous problem a few years back. By mid-2008, violence on the 3,500-square-mile reservation was six times the national average. Residents had so little confidence in the federal Bureau of Indian Affairs (BIA) to do anything about it that they often didn't even bother to report crimes.

It was part of a much bigger problem. According to data collected by BIA and the U.S. Department of Justice, there are 1.9 million American Indians and Alaska natives in the country. There are 566 federally recognized American Indian and Alaska Native tribes, on 310 reservations stretching across 55 million acres of land. And violent crime is 2.5 times higher on reservations than the national average.

Arnold Schott, both a mayor and coroner on the reservation, said at the time, "I can look out my door [and see] our little kids, 8, 9, 10 or younger, being lured into the drug trade. The director of the tribal health administration, Randy Bear Ribs, agreed that the crime problem was linked to drug and alcohol abuse. The reservation's chairman, Ron His Horse Is Thunder, added that soaring crime was fueling "a sense of hopelessness."

But the BIA didn't have any money to help, and they knew just throwing money at the problem wouldn't solve it, anyway. So along with the Department of the Interior, the BIA hatched a plan to take advantage of the Obama administration's management agenda, which challenged federal

leaders to set high-priority performance goals and seek big impacts. The Office of Management and Budget (OMB), which is leading the management program, required agencies not only to define goals but to develop metrics to gauge success—and hopefully produce real breakthroughs.

To get started, the Department of the Interior focused on reducing violent crime on four reservations: the Sioux Standing Rock Reservation in North Dakota and South Dakota, the Chippewa-Cree Tribe's Rocky Boy's Reservation in Montana, the Mescalero Apache Tribe's Reservation in New Mexico, and the Shoshone and Arapaho Tribes' Wind River Reservation in Wyoming. Given the big run-up in crime, any reduction looked like a very heavy lift, so the Interior initially set a very low crime-reduction target. OMB countered that if this goal really was a high priority, then the agency ought to aim for a significant cut. As a result, the Interior agreed to shoot for a 5 percent reduction in violent crime in 2010 and 2011.

Bending the crime curve was a hard enough problem. Making the job even tougher was the notorious short-staffing of the BIA's teams. Despite those huge hurdles, the BIA busted past its 5 percent target. In fact, the four reservations achieved an astounding 35 percent cut in crime. The Mescalero Reservation saw a whopping 68 percent reduction. Crime in Standing Rock dropped 27 percent; in Rocky Boy, the drop was 40 percent. Originally, the story wasn't as good in Wind River. Trust in the system was so bad that many citizens just didn't bother to report