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3 Essential Questions for Good Public Health Policy

By Alex Berezow — April 10, 2019

Credit: Sorens (talk) / Julia Sorenson/Wikipedia [1]

In many ways, science is easier than public policy. The reason is because the former is simply a matter of uncovering facts, while the latter involves not just facts but legal, ethical, and financial considerations as well.

This is one reason why there is such a fierce debate over vaccination. The science is crystal clear: Vaccines work and herd immunity is an effective way to protect society from infectious disease, implying that everyone who is healthy should be fully vaccinated. But implementing that policy is less straightforward.

For instance, is it ethical to force people to be vaccinated? (In my opinion, yes [2]. New York City just mandated vaccines [3] for unvaccinated people exposed to the measles virus.) But other smart, well-meaning people believe that America's dedication to individual liberty should prevent such a policy [4] and that there are better ways to "nudge" parents into doing the right thing.

Three Essential Questions for Public Health Policy

While there is no formula to determine the "correct answer" for public policy, there are guidelines that can at least point policymakers into the right direction. Ultimately, what separates good public health policy from bad public health policy is a satisfactory response to three essential questions.

Question #1: Are unnecessary illnesses or untimely deaths occurring? Amazingly, this question is often not answered adequately before politicians and activists start proposing solutions.

One of the best examples is the war against bisphenol A (BPA) due to its alleged "endocrine disrupting" ability. However, it's not even known if endocrine disruption is a legitimate health

concern. A review paper [5] published in 2013 concluded that the notion that human health is put at risk by these so-called endocrine disruptors "remains an unproven and unlikely hypothesis."

Question #2: Is the risk of doing something greater than the risk of doing nothing? Politicians and activists often suffer from "do something disease." If there's a problem, they insist we must *do something*. But sometimes, the solution is worse than the problem.

Consider smallpox. This is a very scary infectious disease that could cause widespread devastation if it were to be released into the public by, say, a bioterrorist attack. We also have an effective vaccine against smallpox, which is how we eradicated it. So, obviously, given the terrorist threat, every American should be vaccinated against smallpox, right?

No way. The reason is because the likelihood of a smallpox attack is incredibly low, while the likelihood of bad public health outcomes from a mass vaccination campaign is extremely high (by comparison). Research suggests that roughly one in a million people would die due to complications from the smallpox vaccine [6], which means if the entire U.S. population was vaccinated, about 320 Americans would die. This is why we don't vaccinate against smallpox today; the risk of doing something is greater than the risk of doing nothing.

Question #3: Is the proposed policy cost-effective? We like to pretend that every human life is invaluable and that it is not possible to put a price tag on human life. But that's completely wrong. In fact, we do that routinely without even realizing it.

Imagine a dangerous intersection in your town where one person is killed every year in a car accident. Then imagine that a solution has been proposed that will forever prevent car accidents at that intersection. The catch, however, is that it will cost $100 billion every year to implement. At this point, your town will either conclude that it can't afford or doesn't want to pay $100 billion every year. Your town just put a price tag on a human life: It's not worth $100 billion. These sorts of debates and calculations occur all the time, as Freakonomics [7] explains.

Answering these three questions won't guarantee smart public health policy, but it certainly makes it more likely. Let's hope future politicians and policymakers take note.

Links
[1] https://en.wikipedia.org/wiki/Health_care#/media/File:NewYorkPresbyterian-Cornell.jpg
[2] https://blogs.scientificamerican.com/observations/opting-out-of-vaccines-should-opt-you-out-of-american-society/
[3] https://abc7ny.com/health/measles-outbreak-nyc-orders-mandatory-vaccines-for-some/5239006/
[4] https://www.acsh.org/news/2019/01/30/proposal-reduce-vaccine-exemptions-while-respecting-rights-conscience-13772
[5] https://www.sciencedirect.com/science/article/pii/S0378427413013659
[6] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC194634/
[7] http://freakonomics.com/podcast/kenneth-feinberg/