EDITORIAL

Public Health in a Time of Government Austerity

Public health aims to provide the necessary conditions for a population to be healthy.[1,2] Public health balances such lofty ideals as health, happiness, and productivity with pragmatic problem solving—metaphorically, keeping its head in the clouds and its feet on the ground. Public health attempts to see health problems in their entirety, and there is often no better way to cope with the totality of a health problem than by preventing it from occurring in the first place. Therefore, prevention of illness is intrinsic to the work of public health.

New York City offers a prime example of what success can look like when a public health agency works at multiple levels, through multiple channels, with the aim of prevention. Reinforced by the strong support of the mayor, the New York City Health Department's efforts to reduce smoking and tobacco consumption have resulted in approximately 450 000 fewer smokers.[3] Fewer smokers mean better health at lower cost and higher workforce productivity. Ably led by Tom Farley, New York City's Health Department has demonstrated how ideals of disease prevention can be put into practice.

Embedded in the success of prevention, however, is a key weakness: when prevention succeeds, it is invisible. How can we count the number of people who did *not* have a heart attack because they stopped smoking, exercised more regularly, or made healthier food choices? Although no individuals can know what choices may have tipped the balance of prevention in their personal favor, comparison studies can measure what is being accomplished for the population as a whole. For example, a 2005 study projected that the seven basic childhood immunizations in the United States that year would save an estimated 33 000 lives and return $16.50 worth of value in reduced cost and increased productivity for every $1.00 invested.[4] These kinds of results often fail to gain the media attention they deserve. Instead, a moving story about an individual struggling to manage an illness will win the media prize over statistics demonstrating that 10 000 anonymous individuals avoided getting the disease thanks to preventive intervention.

Immunization provides a vivid illustration of why invisibility can be dangerous. In the United States, we have individuals and groups who resist immunization because of misplaced fears about vaccine side effects. The Institute of Medicine recently undertook a rigorous review in its report *Adverse Effects of Vaccines: Evidence and Causality*.[5] The committee found that of 158 vaccine-adverse event associations, very, very few were borne out in well-conducted studies. The underlying message from this intensive review of the scientific literature is how good vaccines are. Yet vaccine coverage is incomplete, and we still have measles and pertussis outbreaks in this country and elsewhere. Why? Because most people are not aware of the consequences of failing to immunize.

At a recent annual meeting at the Institute of Medicine, Bill Foege, a previous Calderone Prize winner, offered a solution: require parents and guardians to give written informed consent testifying that they understand the consequences of refusing to have their child immunized. He proposed that they ought to sign a form that reads, "I understand that I am not protecting my child against this disease. I understand I am putting other children at risk. I understand I am jeopardizing the health of my community." Perhaps such a declaration would make some parents think twice.

SEVEN DEADLY SINS OF PUBLIC HEALTH

Immunization refusal highlights the dangers of what I consider to be the seven deadly sins of public health. You are probably familiar with the seven deadly sins of Christendom. As enunciated by Pope Gregory I in AD 590, these are lust, gluttony, greed, sloth, wrath, envy, and pride. For the seven deadly sins of public health, I retain sloth, gluttony, and greed from the original list and suggest four others to fill it out.

Sloth is easily understood as a public health menace. What is keeping us from getting enough exercise? My 91-year-old mother swims every day, barring exceptional circumstances. If she can swim every day, why can't I find 30 minutes to exercise? Her dedication motivates me to make a better effort, but I do not do nearly as well as she does. Sloth is easy to succumb to—it is a problem partly of individual will and partly of convenience.

Gluttony is equally obvious as a public health sin. Overeating is a big problem for our society. In the past half century we've seen a doubling in the prevalence of obese adults aged 20 to 74 years, and the prevalence of extreme obesity is six times what it was 50 years ago.[6] An analysis published in 2009 found that the negative effects of obesity threaten to eventually overwhelm the positive effects of declining smoking rates, leading to an unprecedented decline in health and life expectancy in the United States.[7]

As for greed, why are tobacco companies still producing cigarettes if not for greed? Is there any other reason to produce a consumer product that kills people when used as intended?

Ignorance is the fourth deadly sin of public health. Ignorance is not knowing—not wanting to know, misunderstanding, misreading the evidence. Much about public health is knowable, but we must want to know it.

Complacency is number five on my list of sins. Complacency is a very serious problem in public health—it seems so easy to accept the status quo. Sure, one may think, people die from smoking and environmental smoke is harmful, but that's "just how it is." Before the laws banning smoking in restaurants and on airplanes, those were simply public places where one smoked. It takes public health leaders who are restless for improvement to overcome the sin of complacency.

Public health officials must also overcome the sixth deadly sin of public health, timidity—the fear of being opposed, the fear of being wrong, the fear of standing out, the fear of making change. Decisive leadership is the opposite of timidity, and public health needs decisive leaders. When first broaching the idea to ban smoking in New York City restaurants, then City Health Commissioner Tom Frieden could not afford to be timid, and Mayor Bloomberg was a decisive partner.

Rounding out the seven deadly sins of public health is obstinacy. Even if you know what you should do, even if your leaders are trying to lead you, obstinacy may stand in the way of healthier habits. Maybe you've been gorging on junk food all your adult life and haven't had any health problems to date. Even if all the best evidence points to the need to change, obstinacy of habit can be an obstacle to healthful decision-making.

THE TRIPLE-A SOLUTION

In public health, we must find ways to overcome these seven deadly sins; we have to find ways to circumvent human tendencies toward certain unhealthy choices or beliefs. This is challenging enough in good times, and it is even more difficult when fiscal stringency limits programmatic latitude. As a guide for promoting public health in a time of government austerity, I would like to offer what I call the triple-A solution.

The first A stands for advocacy. Public health officials must galvanize the public and marshal like-minded citizens to achieve constructive change. Officials cannot be reluctant to speak out, organize, and mobilize. They cannot be reluctant to speak on behalf of public need. Advocacy must be managed deftly—skillful advocacy requires strong organization, sufficient resources, and a knowledgeable navigation of the appropriate communication channels. At the same time, public health advocates must avoid sounding self-righteous, as overtones of a nanny state can deafen listeners to the message. In his second volume on the history of public health in New York City, John Duffy pointed out that "the public can stand only so much virtue."[8(p632)]

Despite these challenges, take heart. Margaret Mead is often said to have observed that only a small group of thoughtful, committed citizens can change the world.[9] This sentiment is as true as ever regardless of whether Mead actually expressed it. Other science-minded organizations have led successful advocacy campaigns, and we can learn from them. Research!America, a nonprofit organization dedicated to research support in the United States, has a program called the 435 Project. The name comes from the number of US congressional districts, and the project's goal is to train science advocates on how to make the case for research to every congressional representative. The unified, authoritative voice coming from these scientist–advocates has persuaded many US representatives to support investment in research, and the advocates continue to make progress.

Public health is fortunate in that, despite workforce shortages and staffing cuts, we have a large number of respected professionals working in every jurisdiction in the United States. Because most successful national advocacy starts locally, a unified message coming from local public health officials has enormous potential for impact. When dealing with constrained resources, skillful advocacy can set in motion initiatives that would otherwise be nonstarters.

The second A is to analyze. Let's face it—every bureaucracy has some ineffective elements, some fat that can be pared, some programs ripe for streamlining. Financial crises present an opportunity to effect changes that would otherwise be politically or programmatically unacceptable. When the Centers for Disease Control and Prevention (CDC) lost 11% of its budget last year, the agency drew up an operating plan that included more than $60 million in administrative savings.[10] Although the cuts were painful, the changes minimized the damage to critical public health programs.

Such budget cuts are still a major concern for the future of public health. The imperative, when there is less to go around, is wise decision making. We must be prepared to trim from some programs and to terminate others. Constrained resources may preclude some of our pet projects that have not yet panned out. We in public health must be prepared to make those difficult decisions about what we can most afford to discontinue and what we can least afford to lose. In the long term, we have to maintain our core functions—key surveillance activities and the protection of population safety. Former aerospace executive Norm Augustine observed that when an airplane you are flying is overweight, you do not simply jettison the engine because it weighs the most; you carefully choose what cargo can go. A strong record in surveillance and public safety protection will be crucial for making the public health case when opportunities improve. And if history is any guide, eventually improve they will.

The third A stands for action. It is increasingly critical that public health officials act collaboratively and creatively to bring the entire community to bear on health challenges that will not be solved

by government alone. For example, the prevention and control of chronic diseases are intricately linked to the way our communities are physically constructed, the options our children have for physical activity inside and outside of school, and the food offered in nearby stores and available in restaurants. These problems cannot be solved by public health authorities working in isolation.

There are many opportunities to exponentially increase impact through novel partnerships. Because the purpose of public health is a healthy, happy, and productive populace, we are working in everyone's best interest. Whether we work with manufacturers and purveyors of foods, urban designers, school boards, or government officials, the key ingredient is partnership. Public health must weave itself into the larger fabric of societal decision making if we are to succeed. This idea has been wonderfully expressed through the Fund for Public Health in New York City. This fund, established eight years ago, represents an opportunity for private sector participation in setting and attaining public health goals. Since its inception, more than $30 million of private sector investment has been devoted to pilot programs and priority projects, enabling the New York City Health Department to innovate and achieve much more than would otherwise be possible.[11] In the end, public health is everyone's business.

To succeed, we need to devise creative ways to reach the public and to persuade the public to overcome these seven deadly sins. In October 2011, the CDC released a graphic novella—some of us might call it a comic book—titled "Preparedness 101: Zombie Pandemic."[12] It is a vivid explanation of how to prepare for the inevitable zombie crisis. This idea grew out of a CDC zombie preparedness blog post in May of the same year. The preparedness office realized that whereas pandemic preparedness is boring, boring, boring, zombies are endlessly fascinating. When no one from the office was fired after the original blog posting, and when the CDC's blog server crashed because it couldn't handle the more than 3 million views it had to manage, the CDC knew it had hit its mark. Building on that success, the graphic novella has reached even more individuals. And if it turns out that while preparing yourself for a zombie pandemic you are also preparing for an anthrax outbreak or a natural disaster, then so much the better.

In public health, we often get caught up in data, evidence, and statistics. We have learned so thoroughly that evidence is not the plural of anecdote that we fail to remember that numbers are not always the best way to communicate vital messages. This translation of evidence to public health message is a crucial part of our work—and one that must be included in our priorities for action. Bill Foege is fond of telling a story about the American humorist James Thurber. While on a sojourn in Paris, Thurber was approached by a woman who remarked, "Mr. Thurber, I want you to know your writing is even funnier in French," to which he responded, "Yes, it loses something in the original." Public health evidence loses something in the original. We must be able to translate it so it becomes more engaging and persuasive.

If we can manage the challenge of invisible success, if we can overcome the seven deadly sins, if we can advocate more effectively, analyze more critically, act more collaboratively, and communicate more creatively and persuasively, then public health will thrive, even in times of government austerity.

In the introduction to his first book on the history of public health in New York City, John Duffy points out that

> the fight against inertia, apathy, and vested interests is one that health-minded citizens have fought throughout recorded history. The success and failures of their predecessors should serve both to encourage and to console the present dedicated band of public health leaders.[13(pxix)]

I wish you encouragement and consolation, and I wish for all our sakes continued success in public health. With your leadership, public health can thrive, even in a time of government austerity. ■

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References

1. Institute of Medicine. *The Future of Public Health.* Washington, DC: National Academies Press; 1988.

2. Institute of Medicine. *The Future of the Public's Health in the 21st Century.* Washington, DC: National Academies Press; 2002.

3. Loesner S, Levine S. *Mayor Bloomberg, Speaker Quinn, Deputy Mayor Gibbs and Health Commissioner Farley Announce Number of City Smokers Has Hit an All-Time Low at 14 Percent. News From the Blue Room*; September 15, 2011. PR-327-11. Available at: http://www.nyc.gov/portal/site/nycgov/menuitem.c0935b9a57bb4ef3daf2f1c701c789a0/index.jsp?pageID=mayor_press_release&catID=1194&doc_name=http%3A%2F%2Fwww.nyc.gov%2Fhtml%2Fom%2Fhtml%2F2011b%2Fpr327-11.html&cc=unused1978&rc=1194&ndi=1. Accessed November 9, 2011.

4. Zhou F, Santoli J, Messonnier ML, et al. Economic evaluation of the 7-vaccine routine childhood immunization schedule in the United States, 2001. *Arch Pediatr Adolesc Med.* 2005;159(12):1136–1144.

5. Institute of Medicine. *Adverse Effects of Vaccines: Evidence and Causality.* Washington, DC: National Academies Press; 2011.

6. Ogden CL, Carroll MD. *Prevalence of Overweight, Obesity, and Extreme Obesity Among Adults: United States, Trends 1960–1962 Through 2007–2008.* Atlanta, GA: Centers for Disease Control and Prevention; June 2010.

7. Stewart ST, Cutler DM, Rosen AB. Forecasting the effects of obesity and smoking on U.S. life expectancy. *N Engl J Med.* 2009;361(23):2252–2260.

8. Duffy J. *A History of Public Health in New York City: 1866–1966.* New York: Russell Sage Foundation; 1974.

9. Lutkehaus NC. *Margaret Mead: The Making of an American Icon.* Princeton, NJ: Princeton University Press; 2008. Available at: http://books.google.de/books?id=20cZMZV0tI0C. Accessed August 27, 2012.

10. Centers for Disease Control and Prevention. *FY 2011 CDC Budget Summary.* Atlanta, GA; 2011.

11. The Fund for Public Health in New York. *Support a Record of Success*; 2011. Available at: http://www.fphny.org/donate/success. Accessed November 9, 2011.

12. Centers for Disease Control and Prevention. *ZombieComic. Preparedness 101: Zombie Pandemic*; 2011. Available at: http://www.cdc.gov/phpr/zombies_novella.htm. Accessed November 3, 2011.

13. Duffy J. *A History of Public Health in New York City 1625–1866.* New York: Russell Sage Foundation; 1968.