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W(h)ither Public Health?

I am more than a bit vexed and frustrated by recent events. There has been no more perilous a time in recent memory for the health of the public; no time at which the health of the public did not depend more on the health of public health; and no time at which the state of public health has been at greater risk. Not only are the threats to public health real and immediate, but the articles that have poured forth in response have done little to clarify the problems or identify their solutions.

A good deal of interest has been raised by the recent Milbank Report, "Leadership in Public Health" (*1*). It contains manuscripts from three respected leaders of public health. Unfortunately, much of what they've written compounds our predicament.

In the lead article, Molly Coye upbraids us for our "Culture of Entitlement." She writes: "We have a strong sense of what the world owes us.... This unattractive trait undercuts our ability to work with legislators, finance directors and even the press; we frequently come across as public health whiners."

This is an unbalanced characterization of public health practice, or at best, one that could just as well characterize other health professions. No one has visited the "whining" trough more frequently and with greater tenacity than have purveyors of sickness care, whether private practitioners, academic health centers, HMOs, or insurance companies.

In the second piece, Bill Foege rightfully insists on the need for a "vision," and urges us to: "...promote the idea that the interrelationships between people, both throughout the world and through time, are such that all decisions must be based on what is best for the greatest number of people over a long period of time; ...a horizon of centuries rather than years." Although such visions expand our horizons, they are so out of touch with today's societal and political reality that they contribute to our present problems rather than helping to alleviate them.

The third Milbank contribution, by Bill Roper, has much practical, useful advice, but repeats an oft-expressed opinion: "...prevention spending is discretionary (because of) a lack of clear-cut evidence for the effectiveness of preventive interventions...." "Clear-cut evidence" exists aplenty, if we'd only bring it to everyone's attention: eradication of smallpox and polio (from the western hemisphere) and virtual elimination of infectious gastroenteritis (a leading cause of death in turn-of-the-century America) to name the most obvious.

Symptomatic of public health's self-abasement has been mass acceptance of the Institute of Medicine's (IOM) assessment of the state of public health (*2*) and the widespread, mantra-like repetition of its central theme, that public health is in "disarray." Only a rare editorial has challenged the position (*3*).

Let us focus on the critical issues:

1. Public health is a victim of its own success. Having conquered past plagues associated with the public health enterprise, people have forgotten these ever existed and don't recognize new plagues it needs to address.
2. Public health has been its own worst enemy, by abrogating for itself everything that impacts on health, even if the major determinants are beyond our control.
3. Public health is not in disarray. It is far more diverse and complex than the public health agency model the Institute of Medicine would have us recreate; public health is not a discipline or a profession, it is a goal.
4. Public health has the unique opportunity to play a critical, central role in recapturing the initiative, but only if we relinquish some traditional roles; only if we focus on what we are really about; and only if we articulate these convictions loudly, widely, and convincingly.

Victim of Our Own Success

Bill Bridgers said it well: "We represent 'an invisible health system that promises, as an outcome, abstract non-events.' " The application and benefits of public health and prevention are often too remote and too impersonal to generate spontaneous grass-roots support. There's no sure way to reverse this process. But there's also no question we've allowed the public's belief in hyped, hoped-for, high-tech cures of marginal value to go unchallenged; we've allowed the public to place their hopes in future magic pills instead of societally-tested methods already at hand. In "Living in the Shadow of Death," Sheila Rothman argues that the road to tuberculosis prevention ended with the development of effective chemotherapy (*4*). Once "consumption" could be treated, why bother to prevent its spread?

Once it's made clear that there is no certain cure for

lung cancer or for AIDS, nor is one likely anytime soon, the public might respond, even if it means abandoning pleasurable behaviors and removing "politically correct" restrictions on proven public health practices.

If we're going to be effective in changing perception, we must personalize our accomplishments in ways people notice.

- Historically, tuberculosis and measles deaths declined before there was ever an effective vaccine or antibiotic.
- As recently as 1970, Americans were still dying from "smallpox," not from the wild virus, but from their vaccinations.
- Life expectancy has increased more than 30 years since the turn of the century, and more than 85 percent of this increase was in response to public health measures.

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We also must highlight what happens when the system fails.

- Airline passengers develop tuberculosis from a fellow passenger; more than 200 California high school students became infected with the tubercle bacillus from another student.
- Water-borne outbreaks of microbial disease, such as the cryptosporidium epidemic in Milwaukee that affected almost half a million individuals and killed a hundred.
- Measles deaths still occur in our inner cities.
- Sixty years ago the number of women dying of lung cancer was a barely perceptible blip on the graph; by 1990, the number of women dying of lung cancer exceeded the number dying of breast cancer.

The recent Ebola epidemic in Zaire has helped resensitize the public to the threat of untreatable infectious disease. But the message was already being brought home by the best seller, "The Hot Zone," and the movie blockbuster, "Outbreak." While both were spontaneous creations of our entertainment industry, we should look for future opportunities when a public health political action committee could help ensure the public gets the message.

We need to tout our success, reminding politicians old enough to remember, of

- the fear that caused swimming pools to close in summer, and its association with the iron lung;
- the sale of Christmas Seals, with their famous Cross of Lorraine, to help fight tuberculosis;
- visits to the dentist that inevitably meant painful filling of more cavities;
- cars that were once designed to protect cars rather than their passengers.

Public Health: Its Own Worst Enemy

Among his many memorable statements, William Henry Welch noted: "It is a well-known fact that there are no social, no industrial, no economic problems which are not related to problems of health." But we need to remember that just because these affect the health of the public does not mean that these are issues we can necessarily do much about.

We have claimed as "public health problems" violence, drug abuse, teen pregnancy, and homelessness, all of which are deeply rooted in societal determinants. Yes, we can and should research these problems. Yes, they impact on health. But no, we do not as yet have the technical understanding and tools, or the political support, to do much about them.

We've compounded the problem by identifying with marginalized populations. The Public Health Service has its roots in the Marine Hospital Service, which was established to care for indigent sailors from distant locales: patients no one else cared about.

Our philosophical grounding in social equity and justice has led us to serve as the clinical providers of last resort and champions of ever-expanding expenditures and programs for other marginalized segments of society. But society is now fragmented into tribes with narrow parochial interests. These tribes increasingly distinguish "us" from "them."

"Them," of course, includes the poor, the elderly, the homeless, and the disenfranchised. If the great middle class "us" cares little about the marginalized "them," it will necessarily care little about those who champion "public health."

We've exacerbated the situation by our own rhetoric. The Surgeon General has a great "bully pulpit," but only when he or she acts as the nation's first doctor. When the Surgeon General carried out polio trials, it was for the good of everyone's children; when the Surgeon General attacks smoking, it is for everyone's health; Everett Koop portrayed AIDS as a national threat. But lately we've been made to appear champions of marginalized causes of those same marginalized populations. How could we have been so foolish as to support a political process that proclaimed Dr. Henry Foster as "First Doctor" to pregnant teenagers, rather than to the core of the nation's health or the concerns of its average citizen?

I propose a modest response: expunge the words "public health."

Public Health is Not in Disarray

Public health is complex and multidisciplinary, and much of what we can do is constrained by public control of our enterprise. Why have we meekly accepted the restrictive, traditional "public health agency"—dominated mold the IOM prepared for us, and let its inevitable conclusions go unchallenged?

I propose a modest response: expunge the words "public health." They carry too much baggage: washing your hands, flushing the toilet, poor doctors for poor patients.

Let's speak instead of a complex, diverse, integrated and dynamic enterprise composed of many disciplines, whose goal is protecting and improving the "health of the public." This may come as a shock, but public health is not a "profession." Public health is a "goal" achieved through multidisciplinary teams composed of numerous professions, including physicians, nurses, lawyers, engineers, statisticians, molecular biologists, sociologists, and economists.

Unlike the IOM portrayal, schools of public health are not "ivory towers" out of touch with reality. Schools of public health train future health professionals: professionals concerned about the health of the public. Some of these will work in the public health sector (traditional health departments, regulatory agencies, congressional staffs, the National Institutes of Health or the Centers for Disease Control); while some will work in the private sector (managed care, academic enterprises, advocacy groups). Schools of public health also train future public health scientists, who work from "cell to society."

E.V. McCollum, the first professor and chair of biochemistry at the Johns Hopkins School of Public Health, is a paradigm for the public health scientist. He not only revolutionized nutritional science and discovered vitamins A and D but published more than 100 articles in McCall's magazine as his way of ensuring the public would utilize scientific discoveries to improve their health.

The great research schools of medicine have shown little interest in understanding and responding to the health of "populations." A recent population-based assessment of the magnitude and causes of visual impairment in east Baltimore indicated that unoperated cataract was the major cause of blindness (*5,6*). It's not as if those who were affected did not know they were blind. Nor did they lack conventional measures of "access:" most were older than age 65 and therefore had financial access; they all lived within a few miles of the Johns Hopkins Hospital and therefore had "geographic access." We do not yet understand the constraints that caused their predicament but doing so is critical to ensuring optimal health of the public. It's the public health, population perspective that will drive these discoveries and ensure much-needed adjustments to the delivery of health services.

Research endeavors using public health disciplines, particularly the core discipline of epidemiology, are just as sexy and often more immediately valuable than those traditionally pursued in schools of medicine. We've learned that smoking causes lung cancer and cardiovascular disease, extended-wear contact lenses dramatically increase the risk of infectious keratitis (*7*), mild vitamin A defi-

ciency dramatically increases childhood mortality (*8*), and presumably well-trained and well-meaning clinicians manage the same conditions in very different ways (*9*), resulting in widely different costs (*10*). The story, however, needs to be told in a way that the public can understand. Instead of talking about infectious agents as if they are "dirty germs," of "dirty people," in "dirty environments," let people know infections are responsible for at least three major cancers—stomach, liver and almost all cervical cancer.

By repackaging an important issue, we can break through existing blinders and public perceptions.

The need to focus on public perception is made all the more acute because public health is a public trust. As such, it is vulnerable to the public purse. "At present there is a pandemic cry for greater efficiency and less expensive government. This cry is being heeded and appropriations are being slashed wholesale. Health departments have felt the cut severely...." (*11*). This recurrent attack on the public health infrastructure is as true today as when this description was written almost 65 years ago.

Public health with its population perspective sits in the catbird seat.

Our Unique Window of Opportunity

The health care system in this country is in chaos, with its leadership up for grabs. The traditional, sickness care, one doctor-one patient perspective is poorly positioned to lead us through the revolution. Public health, however, with its population perspective sits in the catbird seat: it provides the key to preventing multiple drug-resistant tuberculosis; to mounting a multi-frontal attack on smoking (through education, regulation of advertising and sales, and taxing policies); to ensuring the quality of care (under traditional fee-for-service systems, quality assurance depended upon demonstrating that the cataract patients I'd operated on did well; under capitated systems, quality will depend upon the health of the population at large, which will be determined not only by how well I perform cataract surgery, but how many people who need cataract surgery receive it); identify imaginative opportunities for improving health services (only one-half of the children in east Baltimore are fully immunized by the age of two, yet almost all the unimmunized children have had six to eight contacts with the health system during the same period—unique opportunities for improving their immunization status that went unrealized).

At a recent meeting of graduates of the Hopkins School of Public Health one participant predicted HMOs might well take over public utilities traditionally considered within the realm of "public" health. It seemed rather foolish to me at the time. I subsequently discovered an innovative program of the Kennedy-Krieger Institute, which is responsible for treating all children with elevated lead levels in Baltimore. It proposed the government pay less funds annually, but do it on a capitated basis and let the Institute spend the money in ways they felt were most effective. Recognizing children who underwent chelation therapy returned to high-risk homes, the Institute moved chelation therapy out of the hospital and into renovated rowhouses, which cost far less and made for happier children.

With the remaining money, it made the homes from which they came lead-safe. As a result, everybody won: the city saved money, the children needed chelation less frequently, and the underlying health of the public improved.

To be effective, we must effectively communicate our centrality for improving and sustaining the health of the public in the same way as the Kennedy-Krieger Institute. We must grasp the initiative, but we must organize to do so. If private practitioners can organize networks, then public health, which is already an organized entity, can certainly move successfully in the same direction.

We must stop prescribing remedies for public health's salvation that are unattainable. One thoughtful piece suggested that "the task of reinventing public health not only involves changes in governmental organizations, but also means rebuilding consensus and val-

ues among citizens that affirms the importance of community as a whole" (*12*). Although it is a laudable goal, it will be a very long time before society rediscovers its "common humanity."

We must communicate better. Think of it: essentially all cervical cancer is caused by the human papilloma virus—and is therefore a sexually transmitted disease. If STD control is not public health, what is? Why not sell STD control, which the public generally considers someone else's problem (probably from a marginalized segment of society), as cancer prevention? Why leave the public's perception that successful control of cancer rests solely with the medical paradigm?

It is time to abandon some of our past accretions; time to find common cause and compromise with curative medicine. Let's not be sickness providers of last resort. That places us at the mercy of spiraling costs of care and detracts from the population-based mission for which we are uniquely trained. A capitated care system, which is rapidly evolving in this country, should care for the entire population. The job of public health should be to ensure that everyone's health in that capitated system is maximized. There is no better description of what we should be about than a headline that appeared in the Baltimore Sun in 1932: "Anne Arundel Health Department Will Try to Find Ills of '425 Square-Mile Patient.' " The article began, "About two years will be required to take the case history and make a physical examination for a public health diagnosis of the population of Anne Arundel County...." Consider the imagery of a "425 square-mile patient." Compare that with a recent headline in the New York Times: "Giuliani Seeks to Sell Three Hospitals,...Shrinking Public Health System." The Mayor of New York and the headline writer of the New York Times equated public health with publicly-funded and delivered sickness care.

We need to build our case the way the Baltimore Sun built its case almost 65 years ago: use clinical metaphors that patients and politicians can understand, but differentiated by their focus on the health of populations, whether those populations are geographic entities like east Baltimore or the workforce of General Motors.

None of this should be either surprising or problematic for the U.S. Public Health Service. It has always been charged with:

- The "physical diagnosis" of the entire population;
- Setting goals for protecting and improving its health;
- Devising and initiating programs to achieve those goals;
- Measuring whether those goals have been met.

The future of public health lies in developing a data system for measuring and tracking the health of the public more effectively; integrating curative and preventive services at both the individual and societal levels; and evaluating success and modifying the system when needed to achieve it.

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