

Bioterrorism Preparedness

Terrorism, Biological Weapons, and Bonanzas: Assessing the Real Threat to Public Health

Terrorism, both domestic and international in origin and location, has become a growing concern to the American public, its representatives in Congress, the executive branch, and the military. Meanwhile, fears of the global threat posed by the thousands of nuclear weapons in the US and Russian arsenals—still targeted on them and on us—have, prematurely, diminished. Those fears have been largely replaced by a sense of vulnerability in the wake of such events as the bombing of the federal building in Oklahoma City, the attack on the World Trade Center in New York, the destruction of American embassies in Africa, and the attack on an American warship in Yemen. In newspaper headlines, congressional hearings, military pronouncements, academic think tanks, and professional journals, there is talk of “rogue nations”; speculation about ominous but undefined stockpiles of weapons, global terrorist networks, and the resources possibly available to fanatical or deranged individuals; and, above all, allegations of lack of preparedness in the face of what are described as looming threats of massive casualties among an unprotected citizenry.

But it is not just talk. Billions of dollars—some of it specified in presidential directives¹ but other funds surely hidden in military and counterintelligence budgets—have already been allocated to antiterrorism proposals ranging from surveillance of all immigrants and foreign students to construction of a national missile defense system: Star Wars redux.

Preparedness for mass casualties, whatever their cause, is an established and legitimate mandate of public health. One component of the burgeoning campaign to protect against terrorist attacks on civilian targets, however, is of direct and immediate concern to public health and its practitioners: the

threat of biological and chemical attack and proposals to defend against it. As is the case with other aspects of the antiterrorism campaign, both the threat and the proposals have provoked sharp debate.

The Critical Questions

These issues might best be summarized by a series of questions. Is there a realistic threat of biological and chemical warfare attacks? Can it be quantified with any precision or even characterized as to the agents likely to be used, the scale of attack, and the magnitude of effects? Can there be an effective response? Are the “preparedness” efforts now proposed, or actually under way, proportional to the hazard? Do they meet the criteria of efficacy, safety, and cost? Do these efforts promise gains, losses, or both for public health departments and practitioners? What is the proper relationship of public health institutions to the Department of Defense, the Department of Justice, and even such agencies as the Federal Bureau of Investigation? Finally, have we heard all this before, and are there lessons from the not-so-distant past that we might ignore, as Santayana warned, only on peril of repetition?

There is agreement by most parties to the controversy that the probability of biological or chemical attack is extremely low, though not zero.² Only 3 such incidents have been documented in the past 16 years: deliberate salmonella poisoning in Oregon in 1984, with hundreds of illnesses but no fatalities, and 2 attacks using sarin gas in Japan in 1994 and 1995, with fewer than 20 casualties. Consequently, almost every article warning of unpreparedness refers to these incidents, mentions the same agents, and then invokes alarming, dramatic, and entirely hypothetical

scenarios. Consider, for example, the following excerpt from a recent report in the “Medical News and Perspectives” section of the *Journal of the American Medical Association*:

Last May [2000], nearly 1000 people “died” in Denver after a terrorist sprayed airborne plague bacteria at a concert. . . . a hastily convened expert panel struggled to contain the outbreak. . . . Fortunately, it was all a simulation, run by the Department of Justice at the behest of Congress, designed to test the United States’ ability to respond to bioterrorism. Officials called the 3-day, \$3-million exercise a success.³

Hypothetical Casualties and Existing Data

The contribution of Wetter et al. to this issue of the *Journal* similarly invokes a theoretic terrorist attack, this one involving anthrax and causing 32 000 deaths. The study demonstrates, on the basis of a survey of a substantial sample of hospital emergency departments in 4 northwestern states, a lack of preparedness for effective treatment of as few as 50 casualties.⁴ The authors thus extend to emergency services and front-line practitioners a lack of capacity that has already been observed for public health departments hampered by obsolete and inadequate surveillance systems, underfunding and understaffing, and inability to recognize a new epidemic.² In rebuttal, Sidel et al. point out that the neglect of public health infrastructure is a chronic and worsening reality and that—in consequence, and in comparison with the near-zero probability of such a terrorist attack—there are the following non-hypothetical costs in the United States *each year*: 76 million cases of food-borne illness, with 5000 deaths, and some 60 000 chemical spills, leaks, and explosions, with more than 300 deaths.⁵ These data recall the famous con-

clusion of Pogo, cartoonist Walt Kelly's political philosopher of the 1950s: "We have met the enemy, and he is us."

Henretig, in contrast, argues that vast programs for biowarfare preparedness will be a bonanza for public health, with increases in funding, personnel, information systems, training, and equipment that will remedy these deficiencies and make it easier to deal with all those unintentional food-borne and chemical incidents and new or reemerging infectious diseases.⁶ A "partnering" of public health departments with military medical experts in "coordinating" preparation for biowarfare (both terms in quotes are undefined by Henretig) is envisioned as part of "a broad array of government agencies, both military and civilian, as well as with concerned academic and professional organizations." Schools of public health may envision rich new sources of income for the addition of courses on biological and chemical warfare defense, the creation of biowarfare research centers, and the funding of a wide variety of grant proposals. In sum, a new biowarfare-military-academic-industrial complex. Whether a richer—but militarized—public health infrastructure is in the national interest is open to question, the more so since these plans would at best mitigate or ameliorate potential national catastrophes.

Remembrance of Things Past

It is in this connection that the historical review by Fee and Brown is uniquely useful.⁷

They recall another episode of fear and a frenzy of "preparedness," the false promise of civil defense against the real consequences of a nuclear attack: shelters, duck-and-cover exercises, stockpiles of food and medicine, hypothetical mass evacuations. We were told, famously, that "with enough shovels" most of us would survive.⁸ It is important to remember that it was sustained, clear-headed, and rigorous critiques by public health analysts that convincingly refuted these exaggerations.⁹ Certain parallels with the current debate over preparedness for biological and chemical attack are obvious.

That debate will surely continue. It should be noted, finally, that it will occur in what may be a radically changed national political context. A new administration has repeatedly expressed its preferences for such policies as "voluntary" industrial compliance with environmental laws and regulations, limitations on gun control, kinder and gentler implementation of the Clean Air Act, and further erosion of the right to reproductive choice. There is nothing hypothetical about these threats to the public health, and they may be far more immediate and consequential than the risk of bioterrorism. With limited resources, the public health community needs to set its priorities with care. □

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