

Good Intentions and the Road to Bioterrorism Preparedness

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In a report in this month's issue of the *Journal*,¹ Wetter et al. discuss a specific aspect of preparedness for bioterrorism, a topic that has received increasing attention in the medical and public health literature. As they note, we indeed questioned, in an editorial in the *Journal* in 1999, whether "the magnitude of government support for domestic terrorism initiatives may be disproportionate to the probability of terrorist incidents occurring, particularly in comparison to government support to initiatives to address existent public health problems that impact large segments of the population."² They fail to note, however, the totality of our opposition. We argued that vast public expenditures for bioterrorism preparedness, and failure to recognize the dangers inherent in the preparedness policies that have been proposed, are misleading those concerned about the health and well-being of the US population.

The aspect of bioterrorism preparedness that Wetter et al. analyze—the level of preparedness of hospital emergency departments

to deal effectively with terrorist incidents involving chemical or biological weapons, is a narrow one—but it illustrates the weakness of the broader arguments for preparations for bioterrorism. Their position uses hypothetical scenarios, lacks explicit data on the nature of the risk, and ignores the dangers inherent in the proposed approaches.

Risk Estimates

What does preparedness mean? Consider tourists visiting San Jose, Calif. Even warm locales may on some rare occasion experience a snow flurry. From this, one can imagine a hypothetical snowstorm. Conduct a poll of such travelers to determine if any have packed snowshoes and you might determine a woefully low level of preparedness for a blizzard. A more reasonable conclusion might be that owing to the low risk of snow and even much lower risk of a blizzard, the travelers were best prepared by leaving the snowshoes at home. Prepared-

ness does not make sense without an estimate of risk.

Wetter et al. try to establish the risk of bioterrorism by repeating the same pattern of "evidence" that appears in virtually every article on the topic. First, there is a reference to the salmonella attack in Oregon in 1984, with no fatalities, and sarin gas attacks in Japan in 1994 and 1995, with fewer than 20 fatalities.^{3,4} These are the only relevant examples that exist, and, however deplorable, they hardly constitute a major threat to public health. So, to make a stronger case, reality is supplemented with a

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hypothetical scenario. The reader is given a good scare with a so-called theoretic model of a catastrophic terrorist attack with 32 000 deaths from anthrax. No evidence is given to support an assumption that the catastrophic attack is any more likely than an August blizzard in San Jose.

We and others have published elsewhere some reasons why a catastrophic terrorist attack can be estimated to have a risk very close to zero.^{2,5} Wetter et al. do not seem to take the scary scenario seriously either. Their study considers a hypothetical model with 50 patients, not thousands. If the authors had calculated for their study the amount of medicines and equipment needed to cope with 32 000 patients, the quantities would have been absurdly large. Of note, Wetter et al. are not even sure that the programs they advocate would provide effective preparedness (on basis of their own criteria) even for 50, let alone 32 000.

Bioterrorism preparedness programs are public health interventions that should be examined with regard to efficacy, safety, and priorities.

Efficacy

The only effective way to reduce individual-sponsored and group-sponsored bioterrorism, we believe, is to reduce state-sponsored terrorism and to work for a world characterized by social justice and peace. If this goal is deemed utopian, our response is that it is no more utopian than the belief that the current and proposed US antibiotope terrorism programs will provide effective primary or secondary prevention. Just as the fallacies in proposals for a national missile defense, presented as a "defensive program" against nuclear weapons, have been purposely concealed by self-interested advocates,⁶ so too the questionable efficacy of specific "anti-bioterrorism initiatives" has been ignored or suppressed by self-interested proponents.

Safety

A major concern about current proposals for antibiotope terrorism is that they call for the marriage (or at least the cohabitation) of public health professionals and agencies with military, intelligence, and law enforcement agencies. We believe this will be destructive to public health efforts. Examples of military disregard of fundamental public health principles abound. The Department of Defense failed to obtain informed consent for the experimental use of pyridostigmine bromide for the prevention of chemical weapons casualties after being ordered to do so by the Food and

Drug Administration⁷ and conducted an ill-considered mandatory immunization program with the current vaccine against anthrax in the face of criticism from public health professionals⁸ and from Congress.^{9,10}

It should be noted that the facilities that Wetter et al. found to be more "prepared" were those hospitals located near US military chemical warfare facilities. Such facilities are inherently risky, and the nearby hospitals have prudently taken precautions for accidents. Opening up new Biosafety Level IV facilities to study biological warfare agents may increase the risk of accidents.

Such new facilities and other bioterrorism preparedness programs may even instigate a new arms race in biological and chemical weaponry. A generation ago, so-called civil defense and nuclear war preparedness facilitated the massive proliferation of nuclear weapons during the Cold War. Remarkably, the Federal Bureau of Investigation in that period used "disinformation" to convince the Soviet Union that the United States had developed advanced new chemical weapons, and it may have spurred Soviet investment in their chemical weapons program.¹¹ In addition, US intelligence agencies used double agents to convince the Soviets that the United States was planning to develop advanced biological weapons in circumvention of the 1972 Biological Weapons Convention, an action that seems to have prompted the Soviet Union to develop their own advanced biowar program—the very program now regularly cited by US officials as a major source of the bioterrorist threat.¹²

Priorities

Allocation of public funds for social wellbeing and for public health programs should not be a "zero-sum game." In the real world, however, priority setting for public resource allocation among many urgent needs is usually required. The funds so far allocated for bioterrorism are small compared with the bloated military budget of the United States. Yet investment of these funds in programs to improve education, nutrition, housing, and other measures for preventing disease among the world's people would be far more useful for public health and could indeed be considered the most effective primary prevention of terrorism in general.

In the United States alone, there are an estimated 76 million cases of food-borne illness each year, with 325 000 hospitalizations and 5000 deaths,¹³ and approximately 60 000 chemical spills, leaks, and explosions, of which about 8000 are considered "serious," with more than 300 deaths.¹⁴ In India during 1999, there were

2 million new cases of tuberculosis, causing about 450 000 deaths. Effective treatment for tuberculosis in India costs about US\$15 per person treated. An investment of \$30 million annually for a few years, compared with the current US contribution to India of \$1 million for this purpose, could virtually wipe out the disease and—by saving the lives of young people, who are frequent victims of the disease—could also be effective in combating poverty in India.¹⁵

The militarization of public health may hamper priority efforts at preventing disease among those who are poorly served by the US medical system. For example, racial profiling, police brutality, and persecution of immigrants by federal, state, and municipal law enforcement agencies have engendered deep suspicion among the poor, immigrant, and non-White populations. In June 2000, the National Commission on Terrorism, created by Congress in 1998, recommended that the US military rather than civilian agencies lead the response in the event of a terrorist attack in the United States and that the US government begin surveillance of foreign students in the United States.¹⁶ Such developments can only serve to further alienate populations at risk for disease who might otherwise be reached by creative, civilian-directed outreach programs that are more sensitive to their problems and needs.

With regard to the specifics of the Wetter et al. proposals to strengthen emergency departments by augmenting their preparation for bioterrorist incidents, we are led to wonder why the authors did not choose to survey emergency departments for their ability to respond to common complaints about long waits or to respond to increasing demands for primary care and continuing care. Both seem to us to be much more prevalent public health needs than preparation for a bioterrorist attack. To their credit, Wetter et al. acknowledge the concern that government support for bioterrorism initiatives is disproportionate to the probability of bioterrorism incidents occurring. In supporting more funding and efforts for bioterrorism preparedness, they caution that such funding should not compromise financial support "for other important health care and public health efforts."

But should we be guided by a perspective that focuses on hypothetical bioterrorism as a main concern while relegating to the background as "other" the monumental issues of infectious disease, food-borne illness, and chemical accidents, not to mention the daily problems that are inadequately attended? The road to bioterrorism preparedness may be paved with good intentions, but traveling down that road may be a disastrous detour for public health. □

References

1. Wetter DC, Daniell WE, Treser CD. Hospital preparedness for victims of chemical or biological terrorism. *Am J Public Health*. 2001; 91:710–716.
2. Cohen HW, Gould RM, Sidel VW. Bioterrorism initiatives: public health in reverse? *Am J Public Health*. 1999;89:1629–1631.
3. Torok TJ, Tauxe RV, Wise RP, et al. A large community outbreak of salmonellosis caused by intentional contamination of restaurant salad bars. *JAMA*. 1997;278:389–395.
4. Lockwood AH. The public health effects of the use of chemical weapons. In: Levy BS, Sidel VW, eds. *War and Public Health*. New York, NY: Oxford University Press; 1997:84–97.
5. Tucker JB. Bioterrorism is the least of our worries. *New York Times*. October 16, 1999:A19.
6. Broad WJ. Antimissile testing is rigged to hide a flaw, critics say. *New York Times*. June 9, 2000. Available at: <http://archives.nytimes.com/archives/>. Accessed March 26, 2001.
7. Myers SL. Drug may be cause of veterans' illnesses. *New York Times*. October 19, 1999:A18.
8. Anthrax immunization. Policy statement adopted by the Governing Council of the American Public Health Association, November 10, 1999. Available at: <http://www.apha.org/legislative/policy/policypdf1/pdf>. Accessed June 12, 2000.
9. Myers SL. Committee calls for suspension of military's anthrax shots. *New York Times*. February 18, 2000. Available at: <http://archives.nytimes.com/archives/>. Accessed March 26, 2001.
10. Subcommittee on National Security, Veterans Affairs and International Relations, House Committee on Government Reform. The Department of Defense Anthrax Vaccine Immunization Program: unproven force protection. Subcommittee report. Washington, DC, February 17, 2000. Available at: <http://www.house.gov/reform/ns/reports/anthrax1.pdf>. Accessed May 9, 2000.
11. Wise D. *Cassidy's Run: The Secret Spy War Over Nerve Gas*. New York, NY: Random House; 2000.
12. Garthoff RL. Polyakov's run. *Bull Atomic Scientists*. 2000;56(5):37–40.
13. Mead PS, Slutsker L, Dietz V, et al. Food-related illness and death in the United States. *Emerg Infect Dis*. 1999;5:607–625.
14. Environmental Protection Agency and Department of Justice. Accidental release prevention requirements; risk management programs under the Clean Air Section 112(8\7); distribution of off-site consequence analysis information; proposed rule. *Federal Register*. April 27, 2000;65(82). Available at: <http://www.epa.gov/swercepp/pubs/OCARule.pdf>. Accessed June 12, 2000.
15. Dugger CW. India wins battle in war on TB, but it has a long way to go. *New York Times*. March 25, 2000. Available at: <http://archives.nytimes.com/archives/>. Accessed March 26, 2001.
16. Loeb V. US is urged to preempt terrorists. *Washington Post*. June 4, 2000:A1.