



Is investment in bioterrorism research warranted

The United States government has been boosting its investment in research to combat biological weapons threats, funding a broadening range of programs in public health and law enforcement (*Nature Med.* 6, 1304; 2000). Although many of the new programs may be helpful in improving disease surveillance and responses to outbreaks, public health experts are becoming increasingly critical of the government's overall approach, which some see as misdirected, uncoordinated and politically tainted.

"The current campaign to take action ... is vastly overstated, vastly overdrawn and can be extremely dangerous," says Victor Sidel, professor of Public Health at Albert Einstein College of Medicine. Sidel and others argue that other public health issues dwarf the threat of bioterrorism, and that the emphasis on biological warfare agents is feeding growing public hysteria.

So far, the statistics appear to support some of Sidel's claims. There has only been one documented incident of successful bioterrorism, in which members of a cult in Oregon caused a 1984 foodborne outbreak by inoculating salad bars with *Salmonella*, causing 751 illnesses but no deaths. The Japanese cult Aum Shinrikyo attempted to deploy biological weapons, but failed to cause any illnesses. At the same time, food-borne illnesses result in 325,000 hospitalizations and 5,000 deaths annually in the US.

Instead of bioterrorism research, "more money needs to be put into public health infrastructure programs. That should not

be in the context of preparation for bioterrorism, that should be in the context of a vastly underfunded public health infrastructure," according to Sidel.

Other experts are less severe in their criticism of current programs, but there is broad agreement about one problem: "there are a number of pork barrel projects with money flowing to entities with neither experience nor plans to deal with the problem. Very few of the expenditures are peer-reviewed," according to Donald Henderson, director of the Center for Civilian Biodefense Studies at Johns Hopkins University. Henderson adds, however, that "There is a [bioterrorism] threat, of that there is no question."

The exact nature and magnitude of the threat has remained a subject for speculation. According to Nicole Coffin, a spokeswoman for the Centers for Disease Control and Prevention (CDC), determining the risk of a biological attack on the US has been left to the Department of Defense and intelligence organizations, whose research methods have not been made public.

Bioterrorism researchers argue that the exact level of risk is irrelevant. "To me it's a pretty simple calculation. There's a threat out there, we know that people have [biological weapons], and we know that people don't like the US," says Samuel Watson, director of the Public Health and Bioterrorism Response Program at the University of Pittsburgh (Pittsburgh, Pennsylvania).

In the current federal budget, the CDC received \$177 million for bioterrorism-re-

lated projects, at least half of which is earmarked for distribution to state-level programs. The remainder funds efforts like the National Pharmaceutical Stockpile, a set of shipping containers filled with medications and supplies likely to be useful in responding to a biological attack.

Programs like the Stockpile may be appropriate for countering biological threats, but many state and local agencies may have a less useful response. As a result of the way public discussions have been framed, "I think there is a conceptual flaw in lumping nuclear, chemical, and biological threats together, where people talk about weapons of mass destruction and then pretend that you can have a uniform policy towards all three" says George Poste, CEO of Philadelphia-based Health Technology Networks, and author of a recent Royal Society report on bioterrorism. At the state and local levels in the US, for example, response plans have often focused on providing new training and equipment for firefighters and police, groups unlikely to be involved in the initial response to a biological attack.

Proponents of increased bioterrorism-preparedness funding contend that it has other benefits: "It's important to note that the country becomes better prepared to respond to any outbreak of emerging infectious disease," says Coffin. Sidel disagrees: "This is trickle-down of the worst sort. Only a very minor fraction of the money going to bioterrorism goes to support public health infrastructure, [and] it ties public health to the military and law enforcement."

Alan Dove, Philadelphia

US publishes records of HIV/AIDS efforts

Last month saw the release of two major reports on HIV and AIDS from the US government: Global AIDS Research Initiative and Strategic Plan from the National Institutes of Health (NIH) and Action Against AIDS: A Legacy of Leadership at Home and Around the World from the White House Office of National AIDS Policy (ONAP). Although neither document is a page-turner, together they present a solid record of what the US has achieved in the area and hopes to do in the future.

While the ONAP report is a self-congratulatory record of the Clinton Administration's AIDS-related activities, Anthony Fauci, director of the NIH's National Institute for Allergy and Infectious Diseases (NIAID), says the NIH's strategic plan is "less a question of what's new," rather it is a "plan of

what we're doing internationally." Fauci told *Nature Medicine* that he has "been pushing the global aspects of HIV in particular." Now, consolidated in one place, he says there is a plan that is "setting the blueprint for a much greater [international] emphasis over the next few years."

Within the plan are suggestions to establish centers of excellence for international collaboration, enhance translational research results and support dissemination of information, develop prevention programs, train foreign scientists, support international conferences and workshops and provide scholarships for local researchers and clinicians to attend, and organize a Global Strategy Group directed by the

heads of the Office of AIDS Research (OAR) and NIAID with international representation to determine critical research priorities. Despite offering little new, even those who sometimes criticize administration AIDS policy and initiatives are pleased that the document exists. "The encouraging thing to me is that they did this at all—that they went through and thought

about what we do for the international epidemic," comments Art Ammann, founder of the California-based Global Strategies for HIV Prevention. He makes a plea for the Global Strategy Group committee being set up by the OAR with the aim of determining international research priorities to be co-chaired by a leading individual from a developing country.

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