TOPOFF 2: Public Health Gaps Are Real Disaster

by Linda Everett

The U.S. Department of Homeland Security, in conjunction with 100 Federal, state, and local agencies and the Canadian government, conducted a bioterrorism exercise over May 12-17, to simulate how the nation would respond in event of a weapons of mass-destruction attack. The exercise, dubbed TOPOFF 2 (for "top officials"), involved more than 8,500 people; it entailed the release of a pseudo-"dirty bomb" in Seattle, and the covert release of an infectious biological agent, "plague," in Chicago.

Such drills, to assess the nation's capabilities in a national emergency, are extremely important. A smaller simulation, TOPOFF 1, undertaken in June 2000, exposed that U.S. local health-care infrastructure (public health and hospital staff, facilities, hospital beds, etc.) was too downsized to cope. All hospitals participating in the first TOPOFF exercise were beyond capacity in less than 24 hours of the scripted "plague" epidemic. As one prestigious report found: "The capacities and responsibilities that would be demanded from the medical and public health communities in the event of a bioweapons attack are not commensurate with the resources now available." Later, after the Sept. 11, 2001 attacks, most of Congress *appeared* to recognize that a public health infrastructure build-up was required.

But three years after TOPOFF 1, the situation is even worse. There are thousands fewer hospital beds nationwide. The one public hospital in the nation's capital is now completely closed, eliminating decontamination capabilities and an an entire infectious disease ward that allowed isolation and treatment of those with tuberculosis and other infectious diseases. There is no national survey of whether counties have epidemiologists or not.

There is a dark irony in the fact that the $16 million, heavily scripted TOPOFF 2 simulation involved a "mystery" flu-like disease in Chicago, when a very real one, SARS (Severe Acute Respiratory Syndrome), is at our door. Specialists are warning Congress weekly, that we will see the increasing emergence of new infectious diseases like SARS and West Nile virus. Without exception, their urgent message is that of Dr. Micheal Osterholm, PhD, MPH, Director of the Center for Infectious Disease Research and Policy of the University of Minnesota, before the Senate Committee on Government Affairs Permanent Subcommittee on Investigations on May 21. "The United States remains underinvested in public health," Dr. Osterholm said, "even though terrorism and new diseases like SARS have raised the public health system's profile. The underinvestment is not just a function of financial resources, but involves a shortage of qualified and trained personnel who will serve on the front lines of our ever-increasing battle."

Missing 'Core' of Public Health

Consider the need for epidemiologists, who, as the core of the public health system, detect clusters of suspicious symptoms or disease. The Council of State and Territorial Epidemiologists (CSTE) found in a March 2003 nationwide assessment of epidemiology infrastructure, that compared to 1992, when there were 1,700 full-time epidemiologists in state and territorial health departments, we now have fewer than 1,400 in those positions. The shrinkage occurred despite a significant expansion in the scope of responsibilities for epidemiology (such as bioterrorism surveillance).

Worse, approximately 42% of those practicing epidemiology in state and territorial health departments have no formal academic training in that specialty!

The U.S. Health Resources and Services Administration found that epidemiologists working specifically in the core science of public health, comprised far less than 1% of the total public health workforce in 2000. All together, epidemiologists, infections control or disease investigators, and biostatisticians are just over one-half of 1% of this workforce.

The new CSTE survey found significant deficiencies in infectious disease and all other areas of epidemiology infrastructure, including environmental health (clean water), maternal-child health, injury, and occupational epidemiology.

CSTE calls for establishing standards for states' epidemiology capacity. Executive Director Pat McConnon told *EIR* that there do exist different estimates proposed by the Federal Centers for Disease Control and Prevention (CDC), of the need for epidemiologists based on population ratios. However, *none* of these reflect uniform standards or scientific estimates, such as those demanded in Democratic Presidential pre-candidate Lyndon LaRouche's proposed example: the 1946 Hill-Burton Act standards that assured the health-care infrastructure necessary to provide for the well-being of the population in every county in the country.

One CDC proposal in 2000 called for one epidemiologist per 500,000 population for bioterrorism surveillance. Another epidemiologist is necessary per 500,000 people to control food-borne diseases (this standard was proposed about 1998). Yet another per 500,000 is needed to monitor infectious and communicable diseases. This last, proposed in the late 1990s, would surely be insufficient for the level of emerging and re-emerging infectious disease we see today. For child health oversight, another epidemiologist is needed per million people.

But in the 1970s, some experts considered it necessary to have one medical epidemiologist per 25,000 population!

Many of the 3,064 U.S. counties have *no* epidemiologist

Illinois hospital staff members and patient "role player" take part in the TOPOFF 2 public health disaster exercise on May 13. Since TOPOFF 1 three years ago, the nation has fewer hospital beds and fewer public health specialized workers, and is not ready even for a major influenza epidemic.

at all. Many others have only one to cover all the above areas. For instance, consider DuPage County, Illinois—a county of 904,000 people. It was one of five counties that participated in the TOPOFF 2 drill; yet, it does not have a medical epidemiologist. The National Association of County and City Health Officials (NACCHO) found that many of its member local governments are urgently searching for qualified professionals in epidemiology and microbiology.

The CSTE survey found that Federal dollars account for 61% of total support for epidemiology and surveillance programs; state support accounts for 36%, but this is falling fast due to state bankruptcies. Again, look at DuPage County. It lost 75 public health workers in 2002 and expects to lose another 100 this year due to state and other budget cuts. The shortage of trained public health laboratorians and epidemiologists is about to get worse: A significant portion of that workforce will be lost in the next five years to retirement.

A 'Wartime' Emergency

The Institute of Medicine, in its 10-year report "Microbial Threats to Health: Emergence, Detection and Response" (March 2003), finds that the number of qualified individuals in the public health workforce required for microbial threat preparedness is "dangerously low." It found, for example, that in 2001, there was a need for at least 600 new epidemiologists in public health departments across the United States because of the requirements for bioterrorism preparedness alone. Yet only 1,076 students graduated with a degree in epidemiology in the year 2000 and are potentially seeking employment in government, academia, or private industry; the largest percentage are trained in chronic disease, not infectious diseases epidemiology. The Atlanta-based CDC is addressing the issue through its two-year epidemiology training program, the Epidemic Intelligence Service (EIS), which currently enrolls 70 new officers each year, who eventually take up state positions.

Still, there exists no national overview of existing public health workforce specialists per population in each U.S. county. With this intelligence, an assessment of how to expand the public health workforce is necessary, as a starting point for the major task of rebuilding the country's HMO-"downsized" public health infrastructure.

The other prong of public health must include a simultaneous drive for replenishing the counties' hospitals and medical professionals—especially registered nurses, pharmacists, and radiologists. As we saw in TOPOFF 2, the drill to deal with a scripted "plague" outbreak in the four counties in and around Chicago had the region's 160 hospitals close to saturation levels. The Department of Defense would have rescued them with portable hospitals—but would this be enough to deal with a broader crisis over several areas of the country?

This is exactly what we are likely to see occur if SARS hits full force this Fall, as is likely if it is a seasonal disease, as infectious disease expert Dr. Osterholm warned Congress.

This is, as LaRouche says, a "wartime emergency"—overcoming both natural and man-made threats to our posterity. Federal funding and extra workforce directed to assess this major task—with manifold returns to the country—have to be made available to the overworked CDC, the lead Federal agency reponsible for the health and safety of the American people.