Current Issues in Integrated Bioterrorism Response

By:
Bruce Costa, Environmental Health Director, Central Utah Public Health Department, Richfield, Utah
Scott D. Kerwood, MIFireE, CFO, EFO, CFPS, Fire Chief, Orange County Fire/Rescue, Emergency Services District #1, Vidor, Texas
Derek J. Marsh, Lieutenant, Westminster (California) Police Department
Sarah K. Miller, Emergency Preparedness Manager, City of Auburn, Washington

Note: The authors are all pursuing Ph.D. degrees in Public Policy and Administration from the School of Public Policy and Administration at Walden University. This paper was written for a public safety management course.
Abstract

The evolution of bioterrorism response has undergone dramatic changes in recent years. Bioterrorism response is no longer seen as being the responsibility of any single agency, organization, or level of government. It has become a combined effort of various levels and branches of government, as well as organizations that historically have no responsibility for emergency response. The federal government has taken an active role in ensuring cooperation among these various agencies and organizations by mandating the use of the National Incident Management System (NIMS) and the National Response Plan (NRP). Many issues still surround bioterrorism response however, including incident response, incident management, and pre- and post-incident funding.
History of Bioterrorism

The use of biological weapons, living organisms that cause harm to humans, animals, or plants (Buck, 1998), has been noted throughout recorded history. The first clearly recorded instances of their use appear in Persian, Greek, and Roman literature beginning about 300 B.C. (Christopher, Cieslak, Pavlin, & Eitzen, 1997) when animal and human bodies were used in an attempt to contaminate drinking water supplies. In more recent history, smallpox infected blankets were given as “gifts” to Native Americans by both American and British forces in the late 1700s (Byrnes, King, & Tierno, 2003, p. 21-22).

Modern times brought about government sponsored biological weapon development programs in a number of nations. These programs continued in the United States until 1969, when the president ordered a stop to all offensive biological and toxin agent research. In 1972, several countries, including the United States, signed a treaty prohibiting the further research of biological weapons and calling for the destruction of all existing stockpiles (Burke, 2000, p. 80). This treaty has not stopped all countries from researching or developing biological weapons however. Between 1975 and 1983, both Laos and Cambodia were attacked with suspected biological weapons (Byrnes, King, & Tierno, 2003, p. 22) and additional incidents have occurred in the former Soviet Union and England (Burke, 2000, p. 80). A great number of countries are suspected of having biological agents or research programs.

Biological weapons are sometimes referred to as “the poor man’s atom bomb” because they are cheap and easy to make and can often go undetected (Burke, 2000, p. 81). This makes them the theoretical ideal weapon for terrorists. Though large attacks require a certain amount of sophistication, smaller attacks do not. There have been several thwarted biological attacks in the United States since the early 1970s and two successful ones. In 1994, members of an Oregon cult
cultivated Salmonella bacteria and used it to contaminate salad bars in an attempt to “throw” a local election. Though there were no fatalities, hundreds of people became ill and 45 were hospitalized. In 2001, anthrax laden letters were sent to a variety of locations in the United States by unknown terrorists. In all, 37 people were exposed to the bacteria, with only 13 of those actually becoming infected. Five people died from the exposure (Byrnes, King, & Tierno, 2003, p. 4-9).

The possibility of a biological terrorist attack is one that remains at the forefront of discussions among public safety providers across the country. New partnerships are being formed and new players are being ushered into the field of bioterrorism response. As agencies of various sizes and with various functions continue to wrestle with the issues, some key points of discussion emerge: how will response be handled, how will incidents be managed, and who will be responsible for funding?

New Partners in Bioterrorism Response

Since September 11, 2001 public health has taken on a whole new role. Never before has public health been asked to be part of this country’s defense or be part of the first responder community. Since the attacks of 9/11, it has become apparent that public health, public safety, and health care organizations will have to become partners in the fight against bioterrorism. This country’s first responders, public health professionals, and health care workers will become the first line of defense against a bioterrorism attack.

Both state and local health departments will be taking a very active role in bioterrorism preparedness. Any incident will place a great strain upon the resources of the local health department, creating the need for coordination at every level. A primary question facing state
and local health departments is how much are they expected to do, and where will the resources come from?

Since 9/11, state and local health departments have been allocated additional funding to establish bioterrorism preparedness programs (Barbisch and Boatright, 2004). These resources have since been reduced. Public health has been a forgotten entity in this country for the last 40 years. A one-time increase in funding such as public health received immediately after 9/11 will not be sufficient to maintain an adequate bioterrorism program within the state and local health departments.

“In his 2002 State of the Union Address, President Bush noted that captured Al Qaeda documents included detailed maps of several U.S. municipal public drinking water systems” (Meinhardt, 2004). Public health, the medical community, and water utilities will each have major roles should this type of terrorist attack occur. Better communication and reporting will be essential in the early detection and diagnosis of this type of terrorist assault. It will demand a completely different way of thinking from public health professionals. Past catastrophes were easily determined to be common biological conditions and disorders normal in contaminated water systems. But the threat of bioterrorism has complicated public health response to these public health situations.

As public health assesses the capacity of local health departments, one of the major concerns is the capabilities of health departments to adequately manage and provide mass vaccination clinics. Smaller local health departments simply do not have the personnel to effectively vaccinate an entire population within the prescribed period of time. They are called upon to “vaccinate and distribute antibiotics around the clock to an entire population within 3 to 5 days” (Center for Disease Control, 2002). Bioterrorism response and preparedness is in its
infancy and will take the collective intelligence and cooperation of professionals in a wide scope of fields. Patience and diligence, along with listening to each other’s concern will be critical in the design and construction of bioterrorism response and preparedness in this country.

Managing Bioterrorism Response

Bioterrorism incident response management is unique in that much of the responsibility for an effective response relies heavily on the coordination with, and preparation of, the healthcare community (Department of Health and Human Services Centers for Disease Control and Prevention (DHHS-CDC), 2005, p. 7). While the predominant role of healthcare services is required for operational success in a bioterrorism event, all responders are expected to use and operate under the mandates of the National Incident Management System (NIMS) and the National Response Plan (NRP).

Both NIMS and the NRP, developed in a collaboration of national agencies coordinated by the Department of Homeland Security (DHS), were created in order to ensure effective coordination of all responders and resources to a terrorist event. NIMS establishes and explains the basic “components” involved in a terrorist incident of any kind, including the command and management systems, elements of preparedness, resource management, communications and information management, supporting technologies, and ongoing management and maintenance of NIMS (DHS, 2004a, pp. 3-6). The importance of NIMS revolves around its mandatory national use so that all agencies are responsible for learning and becoming conversant in its terms and practices. NIMS is concerned with how responses to incidents of national impact are operated, and not necessarily with the specific types of incidents to which agencies may respond.

The NRP was developed to supplement NIMS. The NRP “describes the structure and processes comprising a national approach to domestic incident management designed to integrate
the efforts and resources of Federal, State, local, tribal, private-sector, and nongovernmental organizations” (DHS, 2004b, p. xi). The NRP describes the federal agencies responsible for the different types of domestic incident management that may be experienced, and the structure they will assume during such an incident (DHS, 2004b, p. 17). Basically, this federal incident structure will supplement the first responders of an incident, or series of incidents.

The NRP separates the different configurations of federal agencies into 15 Emergency Support Function (ESF) annexes, that describe which agency, or agencies, coordinate and are designated primary agencies and support agencies involved with assisting in federal responses (DHS, 2004b, pp. ESF-i through ESF-vi). The NRP also describes federal support annexes which focus on the different roles federal agencies may participate in, such as financial management, international coordination, and logistics management; the NRP outlines nine different support annexes (DHS, 2004b, SUP-i). Finally, the NRP has different incident annexes, meaning scenarios, that “describe the policies, situation, concept of operations, and responsibilities pertinent to the type of incident in question” (DHS, 2004b, INC-i). For instance, there is a biological incident annex that describes which ESF(s) and support annexes should participate in a biological incident of national import (DHS, 2004b, BIO-1 through BIO-8).

To place the NIMS and NRP in summary perspective: NIMS provides the standardized structure used by all agencies during an incident of national significance, whereas the NRP describes how federal agencies will coordinate their efforts to supplement state, local, private, and nonprofit agencies responding to an incident, or incidents, of national import.

Financing Bioterrorism Response

The War on Terrorism is a war shared and financed by all sectors though which level of government is responsible for ensuring and financing the nation’s security is debatable.
However, according to Yim (2002) “[E]veryone cannot do everything, and everyone cannot and
should not do the same things” (p. 22). It is therefore imperative that each level of government
“...augment, foster, develop, and maintain what particular governments do best, and through our
national strategy integrate these actions with what the private sector and our local communities
do best” (Yim, 2002, p. 22). Yim (2002) also notes that “[I]nvolveing all levels of government
and the private sector...is essential to...preparing and defending our nation from terrorist attacks”
(p. 23).

When the federal government requires help, the local government first responders will
always be there. The problem with federal funding towards homeland security is that with any
type of federal funding come federal strings, and problems. This has been the case with any of
the monies coming from the Office of Domestic Preparedness. This money, which is passed on
to the local organizations through the states, is not easily making its way to the emergency
responders. And when it does, typical of any type of federal spending program there are
obstacles and wasted money. Equipment is not being purchased when it should be, equipment is
being purchased for too high a price, the wrong equipment is being purchased, etc. According to
a DHS taskforce empanelled to address this issue, while “...state governments met their statutory
deadlines in distributing homeland security grants to county and local governments...various
impediments to rapid distribution of funds were found” (Peyser Associates, 2004, p. 1). This
report noted that the funding process could be improved by implementing such things as
“...alteration of state and local procurement processes, the establishment of national standards for
grant tracking and management and more effective use of DHS grants for securing short-term
and urgent-threats” (Peyser Associates, 2004, p. 1). Yet even with all of the stipulations placed
on the monies by the feds, state and local governments continue to push for more federal spending and accept more federal dollars.

However, taxes are taxes regardless of which level of government they come from. The bottom line is they all come from the United States taxpayer. Lum (2004) notes that “[W]hile Washington is not fiscally obligated to reimburse the states each time the terror alert is raised, each occurrence required millions of dollars spent on heightened security of the nation’s ports, airports, bus terminals, key buildings and historical landmarks” (p. 2). Yet Lum (2004) proposes “…it would be unfair to merely label the shortage of funding at the state and local level as Washington’s responsibility” (p. 2).

Summary

Though bioterrorism response is a complicated issue, it is one that is also fundamental to first responder organizations throughout the country. Issues of incident response, management, and funding will remain at the forefront of discussion and action for the foreseeable future. Continued cooperation and collaboration between both established and new response agencies will contribute to the overall success of any bioterrorism related response.
References


