Legislative Program Review

& Investigations Committee

Preparedness for Public Health Emergencies

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PREPAREDNESS FOR PUBLIC HEALTH EMERGENCIES

Introduction

Being ready in advance to handle an emergency can lessen the damage to people and property from the incident. The scope and success of the preparation affects the degree to which the damage is reduced.

On March 25, 2004, the Legislative Program Review and Investigations Committee (LPR&IC) voted to study the status of Connecticut's preparedness program for public health emergencies. In particular, the committee wanted to evaluate recent assessment, planning, and implementation activities related to improving the public health infrastructure in order to prepare for and respond to acts of bioterrorism, infectious disease outbreaks, and other similar serious public health threats.

Two important elements of a public health emergency are the unpredictability of its onset and the potential it has to affect the well-being of a large number of people. Unexpected incidents involving harm to people or property occur every day (e.g., a robbery or a hail storm), but only some require the involvement of health-related personnel (e.g., an automobile accident or a house fire). Even then, such incidents generally are limited in scope to a few people.

In 2003, the Connecticut General Assembly adopted Public Act 03-236, which defines a "public health emergency" as:

> an occurrence or imminent threat of a communicable disease, except sexually transmitted disease, or contamination caused or believed to be caused by bioterrorism, an epidemic or pandemic disease, a natural disaster, a chemical attack or accidental release or a nuclear attack or accident that poses a substantial risk of a significant number of human fatalities or incidents of permanent or long-term disability.

The broadness of that definition points out the variability of the events that can create a public health emergency. A primary focus of preparedness efforts in Connecticut and the rest of the United States since September 11, 2001, has been on incidents resulting from bioterrorism.[1] However, during that same period, outbreaks of SARS raised the possibility of the worldwide spread of a contagious disease for which there is no vaccine, while volatile weather systems disrupted public drinking water and sanitation systems. Thus, the nature of the public health risks of greatest concern for which the state is preparing may change over time.

Ideally then, public health preparedness efforts reflect an "all hazards" approach that enables responders to handle many different kinds of incidents. A successful preparedness effort is based on sufficient resources (e.g., equipment and trained personnel) to allow specific tasks to be performed, the existence of appropriate legal authority, and tested plans that outline who is responsible for what tasks. There also needs to be a recognition that

while a comprehensive response may involve all levels of government, initially it is those at the local level who must handle the situation. Therefore, interagency communication and coordination are essential.

Since all the elements of a preparedness program need to be maintained at a certain level of readiness indefinitely, one can never say the job of being prepared is complete. Indeed, the federal Centers for Disease Control and Prevention (CDC) describes public health preparedness for emergencies as a *continuous* process of improving the health system's capacity to detect, respond to, recover from, and mitigate the consequences of such events.

Scope of Review

Since 2001, the federal government has distributed $3 billion across the country for health related bioterrorism preparedness activities.[2] Connecticut has received approximately $56 million, which is described in more detail in Chapter Five. An indirect benefit of this funding has been the opportunity it provides to improve the basic public health infrastructure in the state, which supports routine public health services as well as emergency preparedness efforts.

The program review committee study focused on two aspects of preparedness. One was the *current status* of preparedness for public health emergencies in Connecticut. In this sense, preparedness refers to the existence of plans, procedures, policies, training, and equipment to maximize the state's ability to respond to and recover from a public health emergency. A key issue, therefore, was the condition of the major components of public health preparedness (e.g., lab capacity and hospital surge capacity).

The other aspect was the process of *building capacity.* Specifically, the committee examined the activities undertaken to date by various public health related entities in Connecticut, especially the Department of Public Health (DPH), as they work to prepare for and respond to public health emergencies. (Other important entities examined included local public health departments, acute care hospitals, and emergency medical service (EMS) providers.) A key issue, therefore, was to determine if there is a process in place that adequately identifies the state's preparedness deficiencies and addresses recognized needs. In particular, the committee looked at the status of efforts to:

- assess the availability of specific health related resources;
- develop, test, and refine emergency preparedness plans that describe operating procedures for various types of incidents;
- install enhanced surveillance systems that allow the detection of clusters of suspicious symptoms and diseases;
- increase laboratory capacity (i.e., equipment and staff) to allow the prompt testing of suspected biological, chemical, and radiological agents;
- ensure hospital capacity is adequate to appropriately treat patients;
- set up effective communication systems that enable all organizations involved in an emergency response to convey information to each other by voice or text mode;
- develop a risk communication program to inform health care workers and the general public about potential public health risks and how to respond in the event of a public health emergency; and
- provide adequate training opportunities for public health and other health related professionals.

Methods and Limitations

The program review study has important limitations. At the outset, it is critical to recognize there are no agreed upon national measures for public health preparedness and no standards for assessment that can be applied.

In addition, without a comprehensive, realistic assessment of threats the state is most likely to face, it is difficult to define how much preparation is enough and hence specify what appropriate preparedness is for the state or any region. The federal government has been a driving force in determining goals for preparedness, and Connecticut has accepted the goals established by the federal government as reasonable and realistic. These goals are in part based on a combination of data and expert judgment. By design, the programs sponsored by the federal government give priority to preparing for biological events before using funding for chemical, radiological, nuclear, or explosive incident planning. Despite the ultimate goal of an all-hazards approach to planning, the availability of these federal dollars has shifted current preparedness efforts toward bioterrorism.

The program review committee did not conduct independent comprehensive reviews of individual local health departments, hospitals, or related health care entities or conduct drills and exercises of emergency plans. In addition, few written evaluations of such drills and exercises were available to provide information about how well the components of the public health emergency preparedness system work together. Assessment methods did include the following.

- Benchmarks and required activities established by the federal government through the CDC and the Health Resources and Services Administration (HRSA) grant programs were reviewed. As the CDC has pointed out, the achievement of any benchmark does not guarantee that a jurisdiction is fully prepared, but absence of meeting any benchmark "is a near certain indicator that the jurisdiction is inadequately prepared."[3]
- Assessments of public health departments and various health care agencies conducted by the Department of Public Health and their contractors were examined.
- After-action reports (AARs) were analyzed. Exercises provide the best proxy for a real situation, but the reports may have some

limitations as the identified gaps in preparedness are often self-reported by members of sponsoring organizations.

• Formal surveys of local health directors and hospital emergency plan coordinators were conducted, as well as interviews within the Department of Public Health and of many people in the health care and public health community. Some reliance on perceptions of program participants was necessary to augment other methods.

The committee also sought to examine how Connecticut's public health preparedness efforts compare with those in other states. However, no up-to-date state-by-state comparisons of performance under the CDC and HRSA grants are available. Multiple attempts were made to contact CDC and HRSA directly to obtain information about the grant review processes as well as data about Connecticut's efforts to meet critical capacities and benchmarks versus those of other states. Neither agency would discuss its grant program with legislative committee staff.

A December 2003 report by Trust for America's Health looked at 10 indicators to assess the public health emergency preparedness capabilities of the individual states, but only some of the indicators were from the federal grants, Three states scored the highest, meeting seven of the 10 indicators. Connecticut had achieved four of the indicators, matching the rate of 10 other states and exceeding the rate of 17 states.[4]

Report Format

The first five chapters in this report contain descriptive material about efforts in Connecticut to assess, plan, and respond to public health emergencies. Chapter One describes the participants in the process, while Chapter Two provides an overview of the federal grants. Chapter Three discusses the process used to evaluate capacity, Chapter Four describes the various types of plans being developed, and Chapter Five outlines expenditures. Chapter Six summarizes the overall status of preparedness for public health emergencies in Connecticut. Chapter Seven discusses key areas of preparedness in more detail and presents the committee's findings and recommendations.

Appendices A and B list the specific critical capacities, benchmarks, and priority areas for the CDC and HRSA grants respectively. Appendix C lists preparedness advisory committee participants, while Appendix D provides information about selected emergency plans. Appendices E and F present the results of the program review surveys of local health departments and acute care hospitals.

Agency Response

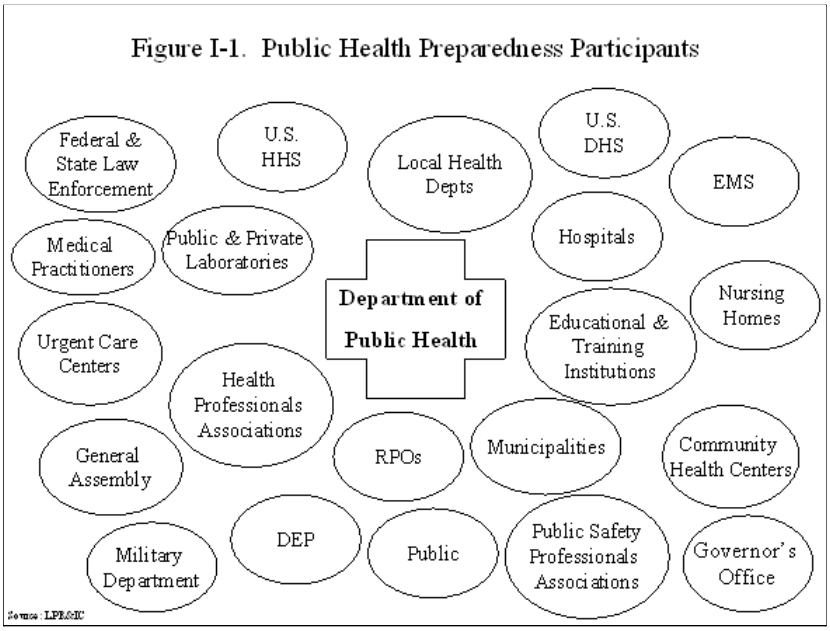
It is the policy of the Legislative Program Review and Investigations Committee to provide agencies subject to a study with an opportunity to review and comment on the recommendations prior to publication of the final report. Appendix G contains the response from the Department of Public Health.

Chapter One

Public Health Preparedness Participants

Because the U.S. public health system is composed of a complex network of institutions, preparing for a public health emergency requires the coordinated efforts of local, regional, state, and federal governments, as well as private organizations. Figure I-1 illustrates many of the participants involved in public health preparedness.

Figure I-1. Public Health Preparedness Participants



Both the Institute of Medicine (IOM) and the Centers for Disease Control and Prevention have documented a general deterioration over the last two decades of the infrastructure that underlies the public health system (i.e., the foundation supporting the planning, delivery, and evaluation of public health activities), within which the entities in Figure I-1 operate.[5] The deficiencies in this fragmented system are magnified when facing broader

threats that require a coordinated response to a multi-jurisdictional emergency.[6] Below is a description of the principal agencies and organizations involved in public health preparedness in Connecticut.

Federal Government Agencies

In recognition of the gaps identified by IOM and CDC, especially following the terrorist attacks on September 11, 2001, and the subsequent anthrax attacks, the U.S. federal government began a large-scale investment in the public health infrastructure to respond to a variety of concerns, including terrorism (principally bioterrorism) as well as infectious diseases and other similar serious public health threats. These federal grant programs have become the driving force to fund public health preparedness efforts.

Primarily, four federal agencies, in two federal departments, have provided funding and guidance to state and local governments to enhance emergency preparedness planning and infrastructure capacity building activities.

- Department of Health and Human Services (HHS) Agencies

  - *Centers for Disease Control and Prevention* provides funding and resources to state health departments through its Public Health Preparedness and Response for Bioterrorism Cooperative Agreements to support preparedness and response efforts in six major areas -- planning and assessment, surveillance and epidemiology response, lab capacity, communications and information technology, risk communications, and education and training. The CDC also oversees the Strategic National Stockpile (SNS), which contains pharmaceuticals and other medical supplies that can be delivered anywhere in the U.S. within 12 hours of the decision to deploy.

  - *Health Resources and Services Administration* provides funding to state health departments through its Bioterrorism Hospital Preparedness Program to enhance the capacity of hospitals and associated health care entities, such as emergency medical services, home health care centers, urgent care centers, etc., to respond to bioterrorist attacks.

- Department of Homeland Security (U.S. DHS) Agencies

  - *Federal Emergency Management Administration (FEMA)* is traditionally the lead federal agency that provides assistance to state and local governments in preparing for, responding to, and recovering from both natural and manmade disasters and emergencies. The agency has provided funding to Connecticut's Office of Emergency Management (OEM) to review local emergency operations plans and develop regional emergency response plans.

  - *Office for Domestic Preparedness (ODP)* administers programs that were formerly part of the Department of Justice. It is the principal federal agency responsible for preparing the nation against terrorism by assisting state and local governments in preventing, responding to, and recovering from terrorist acts. This agency awards funds to every state calculated on a population-based formula, as well as funding to other regions based on vulnerabilities and symbolic importance. A particular focus of this office related to public health preparedness is its role in ensuring first responders and public safety officials are properly trained, equipped, and prepared to handle a terror-related event.

State Level Departments

On the state level, the Governor's Domestic Preparedness Senior Steering Council created by the governor in 2000 was established to advise the governor on specific plans, policies, and resources necessary to improve the state's emergency preparedness efforts. It contained several commissioners of state departments as well as local and federal public safety officials. The steering council has apparently been superceded by the newly created Emergency Management Homeland Security Coordinating Council described below.

There are three principal state level agencies that have direct emergency preparedness responsibilities and several other agencies that have important but smaller roles to play in emergency preparedness and response. The primary agencies are the Department of Public Health, the Office of Emergency Management, and the Division of Homeland Security (DHS).

Department of Public Health. The main public health preparedness agency at the state level is the Department of Public Health, which is the grant recipient for a majority of the federal bioterrorism dollars the state receives under the CDC and HRSA grant programs identified above. Both those grants and Public Act 03-236 require DPH to develop a comprehensive public health emergency plan with oversight from an advisory committee. The state statutory planning and federal preparedness requirements are described further in Chapters Two and Four. The department, in addition to regulating various health professions, is also a public health policy advocate and provides a range of health-related technical and consultative services to local and state agencies not available elsewhere in the state.

Office of Emergency Management and Division of Homeland Security. Two other state entities with broad emergency preparedness responsibilities are the Office of Emergency Management, currently within the Military Department, and the Division of Homeland Security, currently within the Department of Public Safety (DPS).

OEM is the modern day "civil preparedness" agency that coordinates a wide range of activities to minimize the effects of various disasters, emergencies, or attacks on the country, often referred to as consequence management. It is responsible for developing a statewide comprehensive (all hazard) emergency response plan (C.G.S. Section 28-5) and for coordinating state resources in response to a wide range of natural and manmade hazards. The office is also responsible for acting as the state's liaison with the federal emergency management agency and directs the operation of the emergency operations center. In addition, the director of OEM is required to coordinate the preparedness activities of the state's municipalities and approve local emergency management plans that are required under statute.

Connecticut's Division of Homeland Security was formed in 2001 in reaction to the events of September 11. The mission of DHS is "to utilize all available resources within state government to develop and implement unified safety and security measures to prevent, mitigate and manage incidents threatening the quality of life of the citizens of the State of Connecticut."[7] The division is responsible for overseeing the state's homeland security and strategy program as well as administering the state homeland security grant program.

In January 2005, OEM and DHS will be combined into a new state agency -- the Department of Emergency Management and Homeland Security (DEMHS), within the Office of Policy and Management (OPM) for administrative purposes only. The consolidation effort and the new department are being guided by a 24-member statewide Emergency Management Homeland Security Coordinating Council that includes representatives of 12 state departments as well as fire chiefs, police chiefs, municipal associations, local civil preparedness agencies, local health directors, EMS providers, hospitals, and 9-1-1 answering point managers. The new agency is to be a focal point for planning and preparedness functions related to emergency management and homeland security, as well as a central place for the distribution of federal funds for those purposes.

Other state agencies. While nearly all state departments are assigned explicit duties during an emergency, a few departments have roles crucial to the state's response to certain types of public health emergencies.

• The Department of Environmental Protection (DEP) has two divisions that, in addition to providing technical assistance, developing and reviewing various response plans, and participating in drills, exercises and training, support emergency responders on a 24-hour per day, seven days per week basis to minimize any impact on the public health that may result from natural or manmade disasters. Specifically, the Oil and Chemical Spills Response Division maintains a statewide emergency response network for spill incidents and releases of hazardous materials as well as providing coordination of on-scene spill response. The spills division responds to about 1,700 to 2,100 spills per year, 61 of which last year were suspected weapons of mass destruction. The Division of Radiation responds to all suspected radiological incidents that may occur in Connecticut, which since 2001 have totaled about 140 to 150 per year.

• The Emergency Services Unit, within the Department of Public Safety, contains the Hazardous Devices Unit ("bomb squad") and the Hazmat and Radiological Response Unit. The Hazardous Devices Unit is responsible for the handling and removal of explosive ordinance and explosive chemical mixtures. The hazmat group performs police functions such as evidence collection and sampling in the event a suspected chemical or biological agent is found, and it maintains radiological monitoring devices to be used during a radiological release.

Local, Regional, and Private Entities

In addition to the state and federal government agencies listed above, local governments, regional entities, and private organizations are essential participants in public health preparedness and response efforts. Because terrorist events and infectious diseases do not recognize political boundaries, recent years have seen increased efforts to build up regionally oriented resources related to planning for various types of emergencies, with specific requirements related to public health issues.

• *Municipalities and local health departments*. Connecticut's 169 local governments are each required to develop local emergency operations plans, usually in conjunction with local emergency planning committees. The 96 local health departments and districts that serve those municipalities are responsible for the health components of those plans.[8] Local health departments have been given the responsibility to oversee and implement mass vaccinations clinics in the event of an emergency where a vaccine would mitigate the spread of disease, such as smallpox. In addition, municipalities are responsible for ensuring emergency responders (police, fire, and emergency medical services) are trained and available for a potential disaster. Emergency medical service responders include public, nonprofit, and for profit entities that provide different levels of service depending on the training and skills of the personnel.

• *Hospitals*. Connecticut's 31 acute care hospitals serve multiple towns within their catchment areas and provide medical direction to EMS providers. Hospitals, of course, are central to providing complex medical care including diagnostic capabilities, trauma care, and the capacity for advanced life support. The state has contracted with each of the state's 31 acute care hospitals and the federal veteran's hospital in West Haven to participate in preparedness activities. Two hospital systems, Hartford Hospital and Yale New Haven Health System, have been designated as Centers of Excellence (COEs) and function as resources to the other hospitals by taking leadership roles in research, planning, regional coordination, education and clinical care.[9]

• *Regional Planning Organizations (RPOs)*. The state of Connecticut created 15 regional planning organizations to promote regional cooperation and planning in the areas of transportation, environmental issues, and economic development. Based on the 15 regional planning areas, DPH created 10 public health preparedness planning regions to develop regional bioterrorism response plans consistent with local resources and the overall state plan.

• *Allied health entities*. Community health centers, nursing homes, school-based health centers, home health care agencies, and urgent care centers are also important participants in ensuring the state has the necessary capacity to respond to and recover from a public health emergency. These entities can provide additional personnel, beds, and medical supplies to treat new patients or those discharged from acute care hospitals to make room for more critically ill patients affected by a public health emergency.

Subsequent chapters describe the roles of many of these entities in more detail as well as the various inter-relationships during a public health emergency.

Chapter Two

Federal Public Health Preparedness Grants

As mentioned previously, public health emergencies can arise from natural or manmade causes. In the past few years increased emphasis and funding have been directed toward preparedness for terrorist incidents and bioterrorism in particular. This has greatly influenced how states perform preparedness functions.

Biological threats are not the only terrorist threats that affect the public heath. Terrorist threats and actions can be delivered through chemical, biological, radiological, nuclear, and explosive (CBRNE) means. While federal funding is largely directed at preparing for and responding to a bioterrorist incident, the improvements can also reinforce certain capabilities that affect the state's ability to respond to other major public health threats. Indeed, a covert release of a biological agent by a terrorist would probably initially unfold and present itself as a naturally occurring infectious disease. Recently, some attention in federal grants has been drawn to improving each state's ability to guide the public health management aspects of a chemical terrorism incident. A specific emphasis on other forms of terrorist threats may in fact require different strategies and additional capacity building.

Because of the influence exerted by federal funding on public health preparedness, it is necessary to examine in some detail federally funded bioterroism programs that have guided most of the public health preparedness activities in Connecticut since 2001, keeping in mind the limitations imposed by concentrating on biological threats.

Grant Descriptions

Federal grants. The federal Department of Health and Human Services distributes funding for bioterrorism, chemical, and other public health emergency preparedness through two main programs using cooperative agreements with states.[10] The Centers for Disease Control and Prevention's Bioterrorism Preparedness and Response Program is intended to "upgrade state and local public health jurisdictions' preparedness for and response to bioterrorism, other outbreaks of infectious disease, and other public health threats and emergencies."[11] While this program has been in existence since 1999, the funding and requirements associated with it have increased dramatically since September 11, 2001. The other program, administered under HHS's Health Resources and Services Administration, began in 2002 to upgrade the nation's health care system to respond to bioterrorism, outbreaks of infectious disease, and other public health threats and emergencies.

The central focus of both these grants is on improving the state's capacity to detect, respond, and recover from a terrorist threat and other health emergencies. The way in which public health capacity is improved takes a number of different forms and results in many different types of products and outcomes with varying levels of cost and complexity. For example, assessments of various health care entities are mandated, general and disease specific plans involving various levels of government and other health care partners are required, and culturally appropriate public information campaigns on what to do during a public health emergency must be developed. As will be detailed below, the federal government has identified certain capacities and milestones that it deems critical as indicators of progress but also cautions that achievement of any particular milestone "does not guarantee preparedness, {but} failure to achieve any one of them is a near certain indicator that the jurisdiction is inadequately prepared."[12]

CDC requirements. To enhance public health preparedness, both CDC and HRSA grants require the state to complete specific activities and meet certain benchmarks. The 2002 CDC grant, focusing on state and local public health departments, outlined seven focus areas to improve public health preparedness capacity. Sixteen specific capacities were identified within the focus areas considered critical for states to be prepared for a public health emergency. In order to build these "critical capacities," CDC developed certain requirements and designated some of the requirements as "critical benchmarks." In the subsequent grant years, the number of requirements and benchmarks increased. CDC has stated it will move from critical capacities to evidence-based performance goals and measures in the near future. Focus area descriptions are provided in Table II-1. Specific critical capacities and benchmarks related to the CDC grant are presented in Appendix A.

Table II-1. CDC Public Health Preparedness Grant Focus Areas

Focus Area	Focus Area Name	Purpose/Description
A	Strategic Direction, Coordination, and Assessment	Establish strategic leadership, direction, assessment, and coordination of activities (including Strategic National Stockpile response) to ensure statewide readiness, interagency collaboration, local and regional preparedness (both interstate and intrastate) for bioterrorism, other outbreaks of infectious disease, and other public health threats and emergencies.
B	Surveillance and Epidemiology Capacity	Enable state and local health departments to enhance, design, and/or develop systems for rapid detection of unusual outbreaks or illness that may result from bioterrorism, other outbreaks of infectious disease, and other public health threats and emergencies.
C	Laboratory Capacity – Biological Agents	Ensure that core diagnostic capabilities for bioterrorist agents are available at all state and major city/county public health laboratories. Enable laboratories to develop the capacity to conduct rapid and accurate diagnostic and reference testing for select biological agents likely to be used in a terrorist attack.
D	Laboratory Capacity – Chemical Agents	Ensure all state public health laboratories have the capacity to measure chemical threat agents in human specimens or to appropriately collect and ship specimens to qualified laboratories for analysis. Note: Only applicable to five states in 2002; minimum level capability applicable to all states in FY 2003 and beyond
E	Health Alert Network (HAN)/ Communications	Enable state and local public health agencies to establish and maintain a network that will: (a) support exchange of key information and

	and Information Technology	training over the internet by linking public health and private partners on a 24/7 basis; (b) provide for rapid dissemination of public health advisories to the news media and the public at large; (c) ensure secure electronic data exchange between public health partners' computer systems; and (d) ensure protection of data, information, and systems with adequate backup, organizational, and surge capacity to respond to bioterrorism and other public health threats and emergencies.
F	Risk Communication and Health Information Dissemination	Ensure that state and local public health organizations develop an effective risk communications capacity that provides for timely information dissemination to citizens during a bioterrorist attack, outbreak of infectious disease, or other public health threat or emergency. Such a capacity should include training for key individuals in communication skills, the identification of key spokespersons (particularly those who can deal with infectious diseases), printed materials, timely reporting of critical information, and effective interaction with the media.
G	Education and Training	Ensure that state and local health agencies have the capacity to: (a) assess the training needs of key public health professionals, infectious disease specialists, emergency department personnel, and other health care providers related to preparedness for and response to bioterrorism, other outbreaks of infectious disease, and other public health threats and emergencies, and (b) ensure effective provision of needed education and training to key target audiences through multiple channels.
Source of Data: *A National Public Health Strategy for Terrorism Preparedness and Response 2003-2008*, Centers for Disease Control and Prevention, March 2004		

HRSA requirements. The HRSA grant focuses on upgrading hospital and related health care entity preparedness. State and U.S. territorial health departments along with the three largest U.S. cities are eligible to apply for grant funding. Individual hospitals and other health care organizations work with the state health departments for funding through the program.

Beginning in 2002, the HRSA grant required states to develop a needs assessment and an implementation plan for a bioterroism preparedness program for hospitals and related health care entities. The initial applications had to be filed by February 25, 2002. The grant also required the submission of a detailed implementation plan that addressed three critical benchmarks and four top priority areas by April 15, 2002. The current grant (August 31, 2004 – August 30, 2005) contains six priority areas and 16 critical benchmarks, many of which are carried over from the initial grant. The priority areas are outlined in Table II-2; detailed benchmarks are listed in Appendix B.

Table II-2. HRSA Hospital Preparedness Grant Program Priority Areas

Number	Priority Area	Description
1	Administration	Ensure appropriate program direction, accurate tracking of costs, and flow of funds to intended subrecipients.
2	Regional Surge Capacity	Develop regional hospital plans and meet 10 specific benchmarks related to the sudden rise in demand (surge) for health care following an incident, such as the provision of a minimum number of hospital acute care and isolation beds, trained and credentialed personnel, pharmaceutical caches, personal protective equipment (PPE), decontamination capabilities, behavioral health, trauma and burn care, and communications and information technology.
3	Emergency Medical Services	Develop a mutual aid plan for upgrading and deploying EMS units to ensure capability of providing EMS triage and transportation in a ratio based on the population of the state.
4	Linkages to Public Health Departments	Ensure hospital laboratories coordinate with public health departments and ensure optimal capacity to respond to terrorism and other public health emergencies.
5	Education and Preparedness Training	Ensure availability of competency based education and training programs for health care personnel.
6	Terrorism Preparedness Exercises	Conduct exercises and drills to test the plan for hospital surge capacity, the needs of special populations, and risk communication plans.

Source of Data: HRSA, *National Bioterrorism Hospital Preparedness Program, FY 2004 Continuation Guidance*, May 2004

Cross-cutting requirements. Because public health preparedness and emergency response requires the cooperation of a broad spectrum of health care entities, both HHS grants encourage the integration of the public health and health care communities' efforts. To that end, the CDC and HRSA grants identify cross-cutting benchmarks and activities that recipients of both grants are expected to attain. Specifically, by now states should have achieved four out of five cross-cutting benchmarks identified in previous grants regarding incident management, a joint advisory committee,

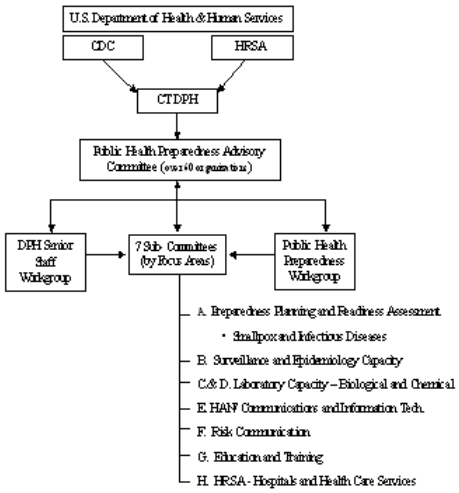
laboratory connectivity, and certain jointly funded health department and hospital activities. States are currently working toward completing one remaining benchmark regarding laboratory data and a new benchmark regarding the development of a pandemic influenza plan.

A number of activities are also identified that require the Department of Public Health to explain how its efforts are coordinated between the state and other health care entities in specific areas such as disease surveillance systems, coordination with Indian Tribes, and special needs populations. A more detailed discussion of the status of critical capacities and benchmarks in Connecticut is presented in Chapter Seven.

DPH Preparedness Planning and Grant Process

Figure II-1 illustrates DPH's structure for preparedness planning. As discussed above, detailed direction about specific capacities and benchmarks that states are expected to achieve come from the CDC and HRSA cooperative agreements with each state health department.

Figure II-1. Department of Public Health Preparedness Planning Structure



Overall state strategic leadership and direction comes from the commissioner of public health. The department has created the Office of Public Health Preparedness (OPHP) to assist in implementing the activities related to the CDC and HRSA agreements. This office includes a director, an attorney, a hospital preparedness coordinator, a medical director, and a Strategic National Stockpile coordinator.

Advisory committee. As required under the federal grant agreements, DPH's planning process strives to be collaborative with representatives of both private and public entities that have significant roles in preparedness and response for public health emergencies. To this end, the department created the Public Health Preparedness Advisory Committee (formally called the Advisory Committee on Bioterrorism Preparedness) to review and advise DPH on cooperative agreement activities.

The committee was originally created by DPH in July 2002 and later established in statute. The committee contains over 60 representatives from government (state, local, and tribal), private, and nonprofit organizations related to preparedness. The committee includes representation from local health districts, hospitals and other types of health facilities, EMS providers, and 14 state agencies as well as 18 legislators. (Member agencies are listed in Appendix C). DPH's chief of staff chairs the committee. The vice-chair is the president of the Connecticut Association of Directors of Health and the secretary is a member of the Connecticut Hospital Association. This committee meets quarterly.

Principal coordinating health care partners within this structure include the Connecticut Association of Directors of Health (CADH) and the two hospital-based Centers of Excellence for Bioterrorism Preparedness, Hartford Hospital and Yale New Haven Health Systems. The health directors' organization represents local health departments in various planning forums and performs as a contractor for specific tasks, such as designing and implementing assessments of local health departments. Similarly the Centers of Excellence represent the health care community in preparedness efforts and are under contract to DPH to provide coordination of regional planning efforts directly with acute care hospitals and other health care providers, establishment of the emergency credentialing database for hospitals, and assistance to the state laboratory in both chemical and radiological response planning.

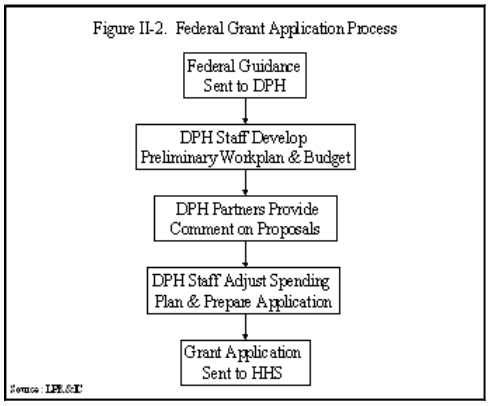
Staff group and working group. Advisory committee members are invited to send representatives to the "Public Health Preparedness Working Group" and the "Smallpox/Infectious Disease Preparedness Workgroup," both of which meet at least monthly to discuss existing and emerging planning issues. There is also a DPH senior staff group, which is an internal department coordinating group that monitors the grants and prepares the actual grant applications annually; it usually meets twice a month.

Subcommittees. The large advisory committee is broken down into seven subcommittees. Six oversee the focus areas outlined in the CDC grant, and one subcommittee is dedicated to the HRSA grant. Each subcommittee is co-chaired by a DPH staff member and a local health director, except the HRSA subcommittee, which is co-chaired by a member of the hospital association. These subcommittees typically meet monthly.

Grant process. Figure II-2 illustrates the federal grant process. While grant activity is on-going, each grant process officially begins with the receipt of a guidance document from CDC or HRSA that sets out explicit direction on what is to be accomplished during the next grant period. There is a

federal mandate for grant guidance to be released no less than 30 days before the beginning of a grant period. This year DPH received the guidance document on June 14 for the CDC grant, which was due on August 1 for a grant year that begins on August 31, 2004. In previous years, the department has been given as little as four weeks to respond. Similarly, the HRSA guidance document was received at the end of May, and the application was due on July 1, 2004.

Sometimes the grant will specify what proportion of the funding must go to a particular area or entity; other times DPH makes those decisions. For example, HRSA restricts state administrative funds to 10 percent and up to another 10 percent may be allocated to statewide planning efforts conducted by the awardee or contractor. On the other hand, CDC does not restrict the proportional allocation of state administrative funding versus local funding.



The focus area subcommittees usually meet monthly during the year but may meet biweekly during the grant application time frame. Using the grant guidance as a framework, DPH will invite proposals from the subcommittees. Drafts of a work plan and a budget are developed by DPH staff and circulated among the subcommittees. Discussions also occur among the working group and the larger advisory committee, though usually no vote is taken on priorities.

Then, a negotiating dynamic ensues. While DPH is the primary entity responsible for driving the grant process, the CDC grant does require that the applications demonstrate consensus, approval, or concurrence between the state and local health departments. Specifically, a significant number of local public health officials must concur with the proposed use of funds. Practically, this is demonstrated by the overall planning structure and a letter of support from the Connecticut Association of Directors of Health. For both HRSA and CDC Cooperative Agreements, there is concurrence with public health and health care partners on the proposed use of funds.

A final document is assembled and submitted to the governor's office for notification purposes; then the application goes to CDC or HRSA. The application is submitted electronically over a secure web site operated by the federal government. The federal grant agencies that review the documents may ask DPH for clarifications, and they generally approve the grants before the start of the grant period. DPH provides the granting agency status updates throughout the year.

Chapter Three

Evaluating Capacity

An important element of a successful public health preparedness program is the ability to respond to a variety of events. Depending on the nature of an incident, there might be a need to provide immediate medical treatment to victims, identify the biological or chemical composition of a substance, provide vaccinations to thousands of people, or quarantine individuals. Such activities will be performed by a variety of public and private health care related workers.

In order to ensure that a timely and comprehensive response appropriate to a particular emergency will be available, a certain level of response capacity is required. Accordingly, an important part of the emergency preparedness process is an assessment of the resources currently in place versus an estimate of what is likely to be needed to respond to various types of emergencies. At a minimum, this evaluation of capacity would include a review of:

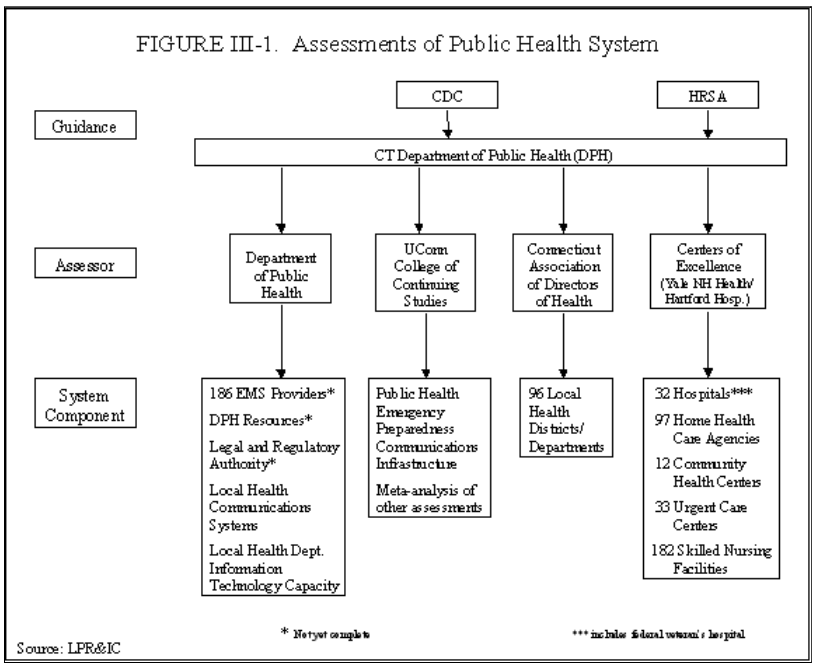
- facilities (e.g., hospital beds, vaccination clinics, and decontamination sites);
- equipment and supplies (e.g., ventilators, pharmaceuticals, and water);
- personnel (e.g., physicians, nurses, lab technicians, and security staff); and
- systems (e.g., voice communication, internet access, and disease surveillance).

Needs Assessments

Under the federal CDC and HRSA grants Connecticut has received, the state was supposed to assess the capacity of specific health care entities to respond to public health emergencies involving bioterrorism. The state also had to examine communication systems, information technology infrastructures, and legal authorities.

Although the Department of Public Health was the primary grant recipient, it was allowed to subcontract out tasks. DPH staff performed the analysis of the state's legal authority to respond to public health emergencies and surveyed local health departments regarding their information technology capacity. The department also took responsibility for the assessment of emergency medical services. A local communications assessment was prepared by an outside consultant, while the University of Connecticut (UConn) College of Continuing Studies was hired to assess the Public Health Emergency Preparedness Communications Infrastructure.

The Connecticut Association of Directors of Health carried out the assessment of the local health departments. The two hospital-based Centers of Excellence compiled the assessments for the hospitals in their regions as well as the other entities in their areas that make up what is referred to as the Healthcare Provider Continuum (e.g., urgent care centers, nursing homes, and home health care agencies). All of the assessments were carried out under the direction of DPH. Figure III-1 summarizes the number and type of entities evaluated as well as the organization coordinating the assessment.



CDC provided sample assessment tools, but they were based on county government systems and had to be modified in Connecticut to reflect the public health structure here. Representatives of DPH and the two COEs revised the various survey instruments for the entities being assessed by the COEs to clarify and categorize questions. Others, such as the Connecticut Hospital Association, statisticians, and epidemiologists, provided input during the process of developing a weighting system to determine preparedness levels within individual topic areas as well as overall preparedness ratings for the entities.

The Connecticut Association of Directors of Health convened a working group of local health directors and DPH staff to review and revise the form for local health departments. The data entry company also provided feedback regarding the design layout of the instrument.

The assessments for the hospitals and other providers reviewed by the COEs were divided into 16 sections. Table III-1 indicates which providers were rated on each category.

TABLE III-1. Scope of Capacity Assessments By Health Care Provider

Category	Hospital	HHC	CHC	UCC	SNF	EMS
Education and Training	X	X	X	X	X	X
Emergency Management Planning	X	X	X	X	X	X
Workforce/Human Resources	X	X	X	X	X	X
Infection Control	X	X	X	X	X	X
Media Relations	X	X	X	X	X	X
Telecommunications	X	X	X	X	X	X
Exercises and Drills	X	X	X	X	X	X
Financial Implications	X	X	X	X	X	X
Information Technology	X	X	X	X	X	X
Facilities	X		X	X	X	X
Surge Capacity and Staffing Information	X	X	X	X	X	X
Laboratory Capabilities	X	X	X	X		
	X	X	X	X	X	X

Isolation Capabilities						
Pharmaceutical Stockpile	X		X	X	X	
Materials Management/Equipment	X				X	X
Emergency Operations Center	X		X			

HHC = Home Health Care Providers; CHC = Community Health Centers; UCC = Urgent Care Centers; SNF = Skilled Nursing Facilities; EMS = Emergency Medical Services

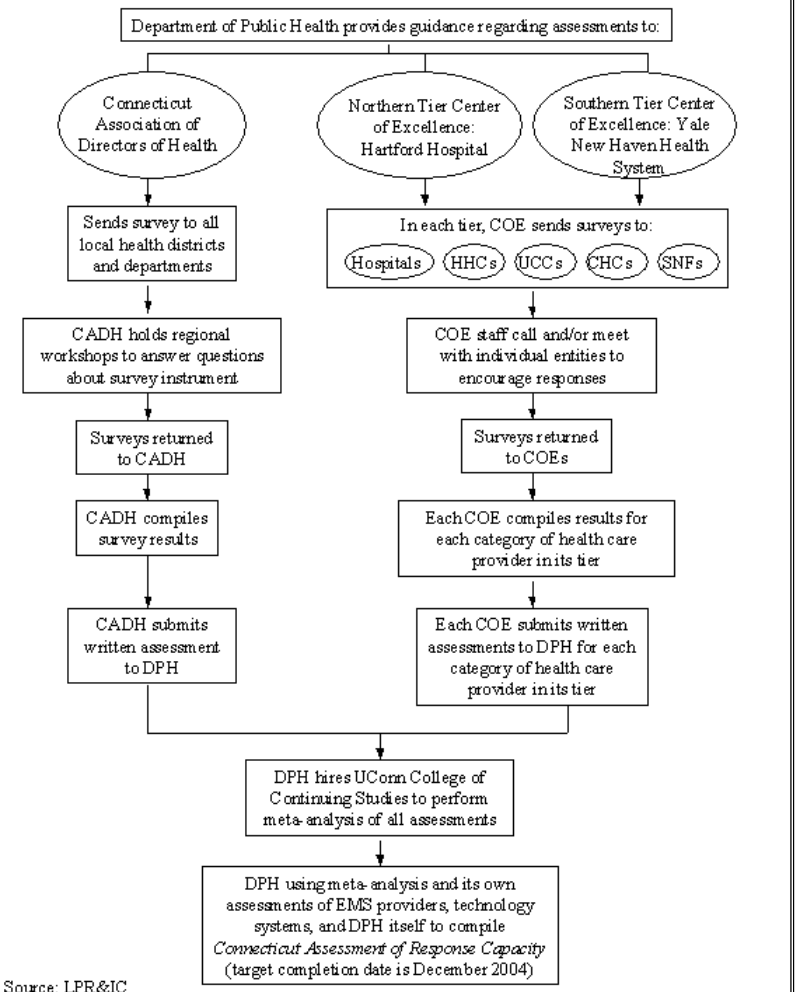
Source of Data: individual assessment reports

The questions on the assessment survey sent to local health departments were organized around the focus areas defined in the CDC grant. The questions were categorized according to seven cross-cutting issues. Those issues were:

- staffing;
- planning;
- relationships;
- surveillance;
- communication;
- exercises/drills; and
- training.

Figure III-2 summarizes the major steps in the assessment process. All of the survey instruments were self-assessment tools. Most were distributed at the end of 2002 or the beginning of 2003, seeking information for calendar year 2002.

FIGURE III-2. Needs Assessment Process



In an effort to increase response rates, after the initial mailing, COE staff made follow-up visits to individual hospitals and relevant trade associations as well as telephone calls to facilities that received a survey. After CADH e-mailed the assessment tool to all local health directors, it held three regional workshops where local health department staff could get answers to any questions they had about the survey instrument. Table III-2 lists the response rates for the various assessments.

TABLE III-2. Response Rates for Individual Needs Assessments

Resource	Response Rate
Local Health Departments/ Districts (LHDs)	92 of 98 LHDs -- 44 of 52 part-time departments, 28 full-time departments, 18 full-time districts -- and two sovereign nations (covering 98% of state's population)
Emergency Medical Services	131 of 186
Acute Care Hospitals (including the federal veterans' hospital in West Haven)	North: 15 of 15 South: 17 of 17
Nursing Homes/ Skilled Nursing Facilities	North: 53 of 76 -- another 8 indicated parent facility in southern tier responded for them South: 71 of 106
Community Health Centers	North: 2 of 5 -- one other said parent facility in southern tier responded for it; two that closed during assessment not included South: 4 of 7 (for 20 of 52 separate sites)
Urgent Care Centers	North: 10 of 17 -- 9 respondents managed by same administrator South: 5 of 16

Home Health Care Providers	North: 20 of 31 -- agency that closed after responding not included South: 38 of 66
Information Technology	96 of 98 LHDs -- 50 of 52 part-time departments, all 28 full-time departments, and all 18 full-time districts
Sources of Data: individual assessment reports, except EMS, which is not yet completed, was provided by DPH	

Returned surveys were entered into computerized databases, and the responses tallied. The coordinating entities analyzed the results in the aggregate as well as by individual facility or subset (e.g., part-time health district, full-time health district, and full-time health department), depending on the type of resource being evaluated. Then, they prepared written reports describing their findings (including the level of preparedness of respondents) and recommendations. Although the northern and southern COEs used the same data collection instruments, the formats of their final reports differed with respect to how results are reported. Most of the final assessment reports were submitted to DPH in August 2003; a few were not completed until spring of 2004.

The overall goal of the surveys was to identify existing resources related to bioterrorism preparedness. In the case of hospitals, the effort also sought to assess the ability of each to respond to and manage a biological, chemical, incendiary, or explosive mass casualty event and to identify areas for future training and planning on the regional and statewide level. The local health department assessments were aimed at measuring progress toward meeting critical capacities and benchmarks specified in the CDC bioterrorism grant.

After the health provider assessments were completed in 2003, DPH contracted with the UConn College of Continuing Studies to conduct a meta-analysis of the various assessment instruments and responses, looking for commonalities. UConn delivered its report in October 2003, including a cross-comparison of assessment results, identification of gaps in the instruments and results, and suggestions for future assessment efforts.

The final product in this initial assessment process will be a comprehensive assessment of Connecticut's capacity to respond to a bioterrorism incident. That document, known as "The Connecticut Assessment of Response Capacity," will identify areas of need and recommend capacity enhancements to strengthen the response infrastructure in the state. DPH is responsible for producing the final report, which will include an assessment of its own capacities. The projected completion date for the document is December 2004.

More detailed information about the contents of the capacity assessments are presented in Chapter Seven. One ongoing concern about the lengthy process leading to the comprehensive assessment is the fact most of the data that will be in it reflect the status of public health preparedness in 2002. Many of the entities that returned surveys have subsequently experienced turnover of personnel and/or replaced equipment, while others took steps to improve their emergency response capabilities. None of that information will be reflected in the final assessment report prepared by DPH.[13]

Chapter Four

Preparedness and Response Plans

A written plan is one of the main elements of a public health preparedness program. Without a plan, the parties responding to a public health emergency will not have a shared understanding of their individual roles and responsibilities and how those intersect with the duties of others also providing assistance. In order for a response plan to be successful, it must be tested and evaluated periodically, and the command structure must be clear. This chapter examines the major emergency preparedness plans in Connecticut, command structures, and plan evaluation.

Emergency Plans

A wide variety of public health response plans have been developed at all levels of government by a number of different entities. Some address specific situations (e.g., smallpox) or aspects of an incident (e.g., mitigation), while others serve as addendums to the general emergency plan of the particular entity. An Emergency Operations Plan (EOP) is the key document for most organizations that respond to emergencies. That plan, which is designed to cover all types of hazards, identifies the functions common to all emergencies and indicates which agencies are responsible for each function. An EOP:

- assigns responsibility to organizations and individuals for carrying out specific actions at projected times and places;
- sets forth lines of authority;
- describes how people and property will be protected in emergencies and disasters;
- identifies available resources; and
- identifies steps to address mitigation concerns during response and recovery.[14]

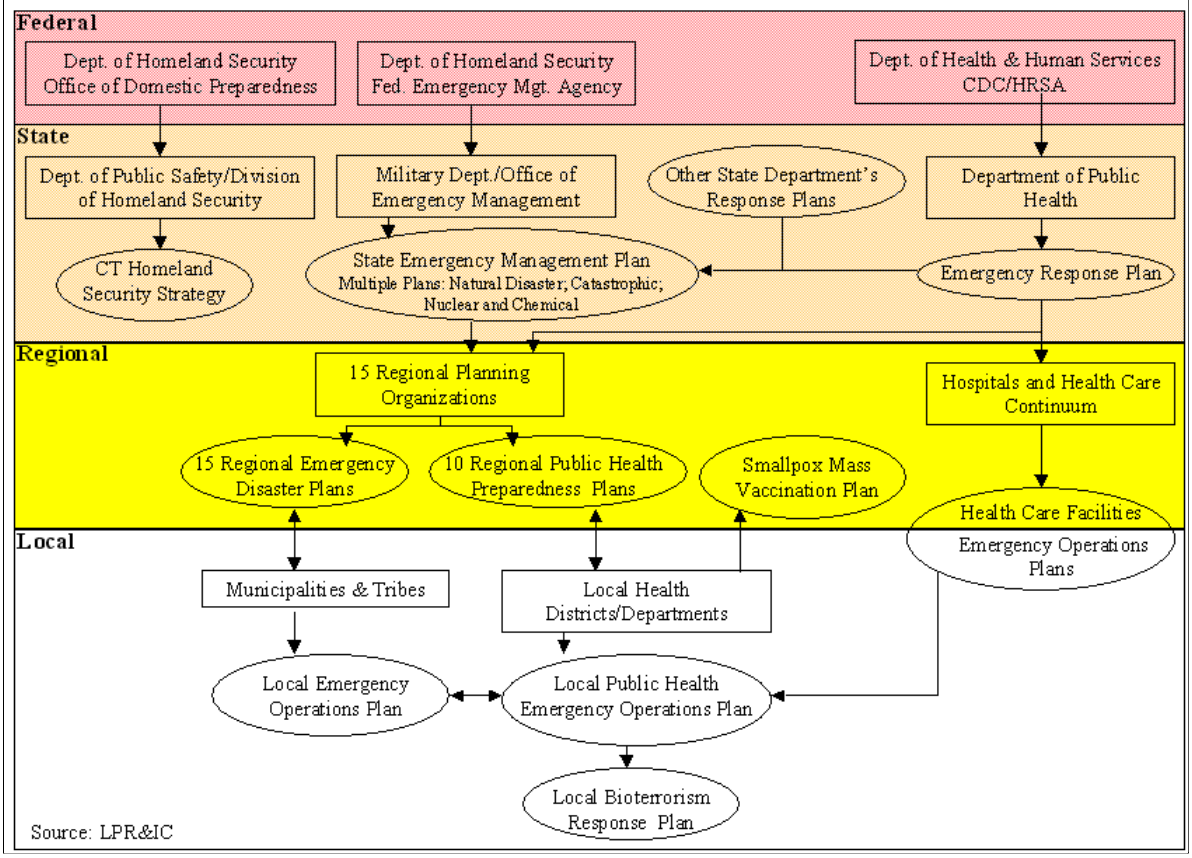
An EOP also includes appendices that provide detailed information specific to particular hazards (e.g., terrorism, tornado, hurricane, etc.). The focus of a specific EOP will be on the actions of the governmental entity creating that plan, but the response plans of other entities will be incorporated by reference.

Organizational Levels of Planning

Figure IV-1 displays the many entities currently involved with the preparation of emergency plans in Connecticut. The top row lists the key federal agencies that support the planning process in Connecticut through grants and mandates.

The federal agencies provide guidance and technical assistance to the states and to local governments regarding development of preparedness capabilities and response plans as well as

Figure IV-1. Entities Involved In Plan Development



capacity building. As noted in Chapter One, two important divisions in the federal Department of Homeland Security are the Office of Domestic Preparedness and FEMA. Both provide funding for broad emergency preparedness efforts. The principal source of public health specific funding is the Department of Health and Human Services through various CDC and HRSA grant programs.

State plans. The second row from the top in Figure IV-1 shows the major state agencies in Connecticut involved in the development of a variety of emergency plans with a public health component. The plans cover a range of potential problems from natural disasters to specific diseases. Other plans are linked to specific events, such as the arrival of the millennium. Still others detail how the resources needed to respond to an emergency will be obtained rather than the logistics of how the response will be carried out.

Table IV-1 lists examples of state operational plans with public health related components that have been developed during the past decade or are nearing completion. (See Appendix D for a more detailed description of some of the major ones.)

TABLE IV-1. Examples of State-Level Plans

- Emergency Management Plan (EMP)
- Natural Disasters Response Plan
- Emergency Alert System Operational Plan
- Y2K Emergency Response Plan
- Health Care State Support Plan 2001
- Catastrophic Disaster Plan
- Consequence Management Guide For Deliberately Caused Incidents Involving Chemical Agents
- Statewide Public Health Emergency Communications Plan
- Smallpox Preparedness and Response Plan
- Pandemic Influenza Preparedness Plan
- Plan for Distribution of Strategic National Stockpile
- Conn. Helps Oversight Council Operations Manual
- West Nile Virus Surveillance & Response Plan

Several of the plans were prepared under the direction of the Office of Emergency Management as part of its civil preparedness responsibilities. Two key OEM documents are the *Emergency Management Plan* and the related *Natural Disasters Response Plan*. They provide the framework for Connecticut to put forward a coordinated and effective response to a wide range of natural and manmade hazards, with a key goal of maximizing the

preservation of life and property. Other plans contain public health components that represent an adjunct to the broad goal of minimizing the effects of major disasters on the citizens of the state.

Several of the plans listed in Table IV-1 were prepared by DPH in anticipation of or in response to federal mandates (e.g., pandemic influenza). In addition, the department is currently working on its own *Emergency Response Plan*, which will outline the department's operational responsibilities during a natural or manmade emergency.

The Division of Homeland Security developed the *Connecticut Homeland Security Strategy*, based on a statewide assessment of emergency response capabilities that it coordinated. The strategy document is the basis for the state's Initial Strategy Implementation Plan, which details how Connecticut will spend the money it is receiving under the State Homeland Security Grant Program.

The process of creating these state plans involved many people over an extended period of time. It also required coordination with regional and local governmental entities as well as private health care providers, all of whom are responsible for developing emergency response plans of their own.

Regional plans. Because a disaster will not affect just one community, there is a recognition that local efforts must be integrated on a regional basis. The third row in Figure IV-1 highlights several public health related planning efforts currently underway at the regional level.

Currently, regional public health emergency plans are not mandatory in Connecticut. Regions are encouraged to develop general *Emergency Disaster Plans*, but to date only two regional workgroups -- Capitol Region and Southeastern Connecticut -- have done so. However, under the CDC and HRSA grants, DPH has made a commitment to develop a comprehensive plan that includes regional response strategies. DPH has contractual agreements with CADH, local health departments, the two Centers of Excellence, and the acute care hospitals to support creation of regional *Public Health Preparedness Plans.* To further help the effort, DPH compiled a directory of preparedness planning partners grouped into 10 previously defined preparedness regions. To date, only one plan has been completed.

The Office of Emergency Management contracted with the Regional Planning Organizations in the state to help develop emergency response plans. These plans cover a variety of incidents including those involving chemical, biological, radiological, and conventional weapons.

Local *Smallpox Mass Vaccination Plans* are also being prepared under contractual agreements with DPH. For that purpose, Connecticut is divided into 42 regions, and the plans have to be coordinated with the other local emergency plans in the geographic area. The smallpox plans also could be used as the framework for dealing with other situations that require a mass vaccination effort. DPH is reviewing the documents to verify they are complete.

Also operating at the regional level are the two hospital-based Centers of Excellence. Each provides assistance to multiple hospitals, based on a division of the state into northern and southern regions. Individual hospitals are responsible for their own facility emergency management and smallpox plans, but the COEs provide guidance documents and templates to help the individual hospitals with those tasks.

Local plans. Long before the current emphasis on bioterrorism, local governments were developing emergency operations plans to help them deal with a broad range of situations. Plans dating back to the 1940s, for example, discuss what to do in the event of an invasion by a foreign enemy as well as how to deal with a natural disaster. The need to address an increasing range of public health related issues and mesh those efforts with existing local plans results in the volume of activity displayed in the bottom row of Figure IV-1.

This component of the system is crucial because it brings so many people into the process. It is the foundation on which all other efforts should build, and it is the organizational level most directly concerned with ensuring recovery efforts are completed. In many parts of the U.S., much of this activity would occur at the county level. In Connecticut, a state with strongly independent towns and no county government, the preparedness planning process has been adjusted to reflect that situation while encouraging multi-town activities as much as possible.

For local public health purposes, Connecticut's 169 towns currently are grouped into 96 departments/districts, ranging in size from one town to 18 towns. All local health departments and districts have been asked to produce a *Local Bioterrorism Response Plan*. In addition, using the contractual process, DPH required each department or district with a full-time health director (currently numbering 50 and covering 123 towns) to develop a *Local Public Health Emergency Operations Plan* that includes a description of the working relationships between the towns, first responders, and hospitals in the geographic area.[15] Each of these plans is then supposed to become a supplement to the *Local Emergency Operations Plan* that every town is statutorily mandated to prepare.

In conjunction with all of these local government based plans, every hospital and health care facility in the state has to prepare a *Health Care Facility Emergency Operations Plan* in order to meet national accreditation standards. Like the plans prepared by local towns, these documents address a variety of events including incidents that affect routine operations (e.g., a power outage), result in an unusually large number of severely injured patients (e.g., a bus crash), or require treatment of highly infectious patients (e.g., a SARs outbreak). Depending on the service area of the facility, these plans may cover a wide geographic area that crosses multiple town lines.

Command Structure

An important factor in the successful implementation of an emergency response plan is clarity among responders concerning who is in charge. When an emergency occurs, the first people on the scene will be representatives of the local response team. Depending on the nature of the incident, this may include fire, police, EMS, and other specialized personnel. They are responsible for determining what resources the situation requires.

In Connecticut, under C.G.S. Sec. 7-313e, the highest ranking local fire official at the scene of an emergency is authorized to take charge. Except for special situations such as a hazardous materials spill, state resources are called to the scene only if local resources are overwhelmed by the scale or nature of an incident. Even then, if a local fire official is on the scene, that person remains in charge. On-site involvement of federal personnel occurs even less frequently. Generally, intervention must be at the invitation of state officials, and usually this is done only if state resources are overwhelmed.[16]

Given the potential for multiple government agencies to be involved in a situation, answering the question "Who's in charge?" before an emergency exists reduces confusion and expedites the response process. In an effort to provide a consistent nationwide approach to incident management for federal, state, and local governments working together, Homeland Security Presidential Directive-5 instructs the secretary of homeland security to develop and administer the *National Incident Management System* (NIMS). All federal agencies must adopt NIMS, and beginning in federal fiscal year 2005, states and local organizations that want to receive federal preparedness assistance also must adopt NIMS.

One short-term way state and local governments can demonstrate their commitment to NIMS is by adopting the *Incident Command System* (ICS), a process management system already in use throughout the country. ICS allows a flexible response to an incident based on common terminology and structure. It incorporates five functions -- logistics, finance, administration, planning, and operations -- although not all are activated during every incident.[17]

When more than one agency has jurisdiction over some aspect of an incident, ICS relies on a *Unified Command* (UC) structure. In such a case, the agencies work together through a designated member from each agency, with a single commander overseeing the operation. Collectively, those representatives form the unified command. Depending of the specifics of the situation, at various stages in the response different participants may play a larger role.

In Connecticut, the Department of Public Health indicated it has incorporated the principles of NIMS and ICS into its emergency response plan, and it has provided basic ICS training for its staff. Likewise, the Office of Emergency Management has the goal of ensuring its plans are consistent with federal NIMS requirements by January 2005.

After-Action Reports

Another important component of the public health preparedness program that complements the planning process is the wide range of exercises and drills conducted by the various entities with public health responsibilities. Drills and exercises provide an opportunity to test previously developed plans that specify how participants will respond to an emergency. These training activities can involve theoretical discussions off-site (e.g., "table-top exercises") or live practices carried out on-site, partially or completely in real time, depending on the skills and equipment to be tested. The goal is to learn what does and does not work when a misunderstanding will not result in physical harm to anyone. These training sessions also give participants an opportunity to meet people they will be working with if there is an emergency and familiarize themselves with the command structure.

A common product of such training is an "after-action report." Shortly after the conclusion of the exercise or drill, representatives of the major participants prepare written summaries of the event from their perspective, including elements that worked and those that need improvement. The reports frequently address issues such as who was authorized to make decisions and whether activities occurred with or without proper authorization, the workability of radio and other communication systems, the conditions under which medical care was provided, and the adequacy of staffing at the command center and other satellite locations.

The purpose of after-action reports is to identify resource deficiencies and help participants understand what actions they need to take to improve their response when a real event that is similar in nature arises. The reports also can be a valuable reference tool for non-participants.

Chapter Five

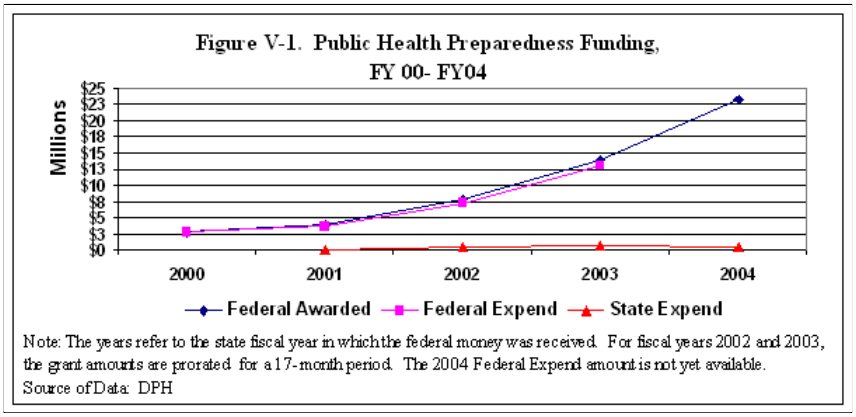
Public Health Preparedness Expenditures

Primarily, it is the Department of Public Health, the Office of Emergency Management, and recently the DPS Division of Homeland Security that manage programs that directly or indirectly support public health preparedness. This chapter identifies the major funding sources and expenditures for public health preparedness and related programs.

Department of Public Health

The program review committee asked DPH to indicate the amount it spends annually on public health preparedness and to identify the sources of revenue for such expenditures. The department, however, does not maintain its financial records in a way to easily retrieve that information. The department instead provided funding amounts based on federal grants received whose purpose is or is reasonably related to public health preparedness. Similarly, the amount of state funding directed toward preparedness is estimated based on approximations of state employee time associated with federal grant initiatives.

Overall funding. Over the last five years, DPH has received funding from the federal government through seven grant programs related to public health preparedness, though funding for some programs was for a shorter specified period of time. These grants include: Epidemiology and Lab Capacity for Infectious Diseases; Public Health Laboratory Biomonitoring; Emerging Infections; Water Protection Coordination; Training for Improved Response to Bioterrorism; Public Health Preparedness and Response to Bioterrorism; and Hospital Preparedness for Bioterroism. (The latter two grants were described in detail in Chapter Two.) Figure V-1 shows the trend in preparedness funding since 2000.



• Overall, federal funds awarded to the state for preparedness, based on the seven main federal grants, have increased since 2000 from about $3 million per year to $23.3 million in 2004.

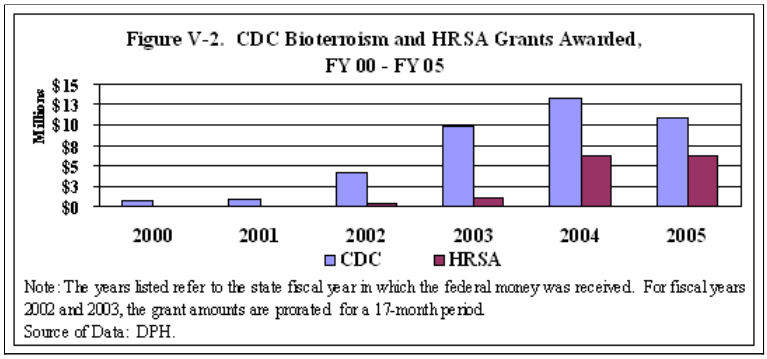
• The amount actually spent in any year has been somewhat less than the amount awarded, but the federal government has allowed DPH to roll the unexpended amounts forward into succeeding fiscal years.

• There is no requirement for a state match for any of these grant programs, but federal funds cannot supplant existing state funding commitments.

• DPH has estimated the value of state-funded staff time dedicated to preparedness at about $70,000 in 2000 and about $450,000 in 2004. While the estimate is not a completely accurate reflection of total costs to the state, it does indicate the state contributes considerably less than the federal amount.

• Capital and equipment expenditures have been fairly limited and most involved communications and laboratory equipment. The state has authorized about $60 million in bond money to this effort. The majority of the bond money ($50 million) is for a new state laboratory. It is important to note the current state lab is outdated, and a new state lab would be necessary regardless of the recent focus on terrorism. Other bond items include about $8.6 million for the purchase of a mobile hospital, $1.6 million for hospital physical plant modifications, and $0.8 million for equipment for DPH's command center and the state's disaster medical assistance team.

CDC and HRSA funding. The CDC public health preparedness and HRSA hospital preparedness grants are the largest federal grants DPH receives for emergency preparedness and represent about 83 percent ($19 million) of total federal funding awarded the agency for preparedness in 2004. Figure V-2 shows the trend in awards for these grants.



Both grants increased from 2002 through 2004. In 2005, the CDC grant will decline to about $10.8 million from $13.2 million in 2004, while the HRSA grant will remain level for 2005 at $6.2 million.

The calculation to determine the grant amount each awardee receives involves a base amount plus an amount equal to its proportional share of the national population. Sixty-two jurisdictions were awarded funding from both grants, including major cities, U.S. possessions, and territories. In the most recent grant year, Connecticut ranked 32nd and 34th respectively for HRSA and CDC funding. The overall amount available under the CDC grant has declined nationwide from $870 million in FY 04 to $844 million in FY 05. HRSA funding has remained the same in the last two grant years at about $498 million.

Connecticut has been one of the slower states in terms of spending the money it has received from the CDC and HRSA grants. A November 2004 report prepared by the Association of State and Territorial Health Officials found that one-third of the states had spent or obligated 98 percent of their CDC funds, and half the states had spent or obligated a similar proportion of their HRSA funds as of August 31, 2004. Only 10 states ranked below Connecticut's overall rate of 87 percent "spent or obligated" for the two grants as of that date, but the worst state -- Pennsylvania -- had only "spent or obligated" 66 percent of the two grants. (Connecticut had spent 79 percent of the CDC grant and obligated an additional 9 percent. It had spent 61

percent of the HRSA grant and obligated an additional 25 percent.)[18]

DPH and contractor funding. Table V-1 shows the amount of funding from the CDC and HRSA grants that went to the Department of Public Health and to contractors for FY 04 and FY 05. Primarily but not exclusively, the contractors are other health care system partners such as hospitals, community health centers, school-based health centers, the Connecticut Poison Control Center, local health departments, regional planning entities, the UConn Health Center, and the EMS council. In part, the extent that funding is being directed to contractors demonstrates that capacity building is focused to some degree on local public health and hospital development, but improvements to DPH's capabilities can benefit all health partners.

Table V-1. CDC and HRSA Grants: Amounts Received by DPH and Contractors

	Budgeted FY 04	*Percent*	*Budgeted FY 05*	*Percent*
CDC Preparedness Grant	**$14,836,497**	**100%**	**$13,907,135**	**100%**
Total Contractual	**7,481,508**	**50.4%**	**6,243,280**	**44.9%**
Total DPH	**7,354,989**	**49.6%**	**7,663,855**	**55.1%**
HRSA Hospital Preparedness Grant	**$6,197,207**	**100%**	**$6,197,207**	**100%**
Total Contractual	**5,550,551**	**89.6%**	**5,256,830**	**84.8%**
Total DPH	**646,656**	**10.4%**	**940,377**	**15.2%**
TOTAL FUNDS	**$21,033,704**		**$20,104,342**	

Budgeted figures include any unexpended amounts carried forward from previous years. FY 05 began on August 31, 2004, for the CDC grant and September 1, 2004, for the HRSA grant.

Source of Data: DPH

Table V-1 shows the portion of the grants retained by DPH increased between FY 04 and FY 05 -- from about a 50 percent split in CDC money in 2004 to 55 percent in FY 05. For HRSA, there was a 90 percent split to contractors and 10 percent to DPH in FY 04 with an 85/15 percent split in FY 05.

Preparedness partner funding. The amounts received under the CDC and HRSA grants by the principal preparedness partners -- hospitals, Centers of Excellence, health departments, and health districts -- for FY 03 and FY 04 are shown in Table V-2.

Table V-2. CDC and HRSA Grant Amounts Received by Hospitals, Local Health Districts/Departments, and CADH

	FY 03	**FY 04**
Acute Care Hospitals	**$2,155,032**	**$4,616,986**
Acute Care Hospitals (Each)	$22,100	$36,552
Northern Tier COE	$796,241	$1,365,406
Southern Tier COE	$789,091	$2,081,916
Local Health Districts	**$422,972**	**$1,633,036**
Health District Average	$23,498	$90,724
Local Health Departments	**$654,460**	**$2,481,846**
Health Department Average*	$9,349	$85,581
CT Assoc. of Directors of Health	**$1,028,560**	**$1,091,529**

*Health Department Average in FY 03 based on all health departments; in FY 04 only full-time health departments received funding.

Source of Data: DPH

• Funding to acute care hospitals has been fairly low. Each of the acute care hospitals received $22,100 in FY 2003 and $36,500 in FY 2004 for preparedness funding. FY 05 funding to hospitals increased by 100 percent and included allocations to non-acute care, specialty hospitals (e.g., Gaylord Rehabilitation Center) for planning, drills, and exercises.

• Funding for the two Centers of Excellence, which serve as preparedness models in research, planning, and training, increased from about $800,000 in FY 03 to between $1.4 million and $2.0 million in FY 04.

• The average amount received by local health districts and local health departments has increased. The reasons for this include the fact all health departments received some funding in FY 03, but in FY 04 only full-time departments did. DPH decided, with the support of CADH, that each district and full-time department would receive enough funding to support a health preparedness planner. Even though the CDC grant decreased for the year beginning on August 31, 2004 (FY 05), the total amount going to local full-time health departments and districts was budgeted to increase slightly.

• The Connecticut Association of Directors of Health received just over $1 million per year in both 2003 and 2004. The amount declined in FY 05 because their contractual responsibilities decreased, notably performing an assessment of districts, which was submitted in August 2003.

Department of Public Health employees and preparedness funding. While not all state-funded staff time dedicated to preparedness has been fully accounted for, it is clear the federal government funds a large number of DPH employees devoted to this effort. Figure V-3 shows the trend in the number of DPH full-time equivalent (FTE) employees dedicated to preparedness by funding source. The number of FTEs overall has increased from 8.5 in 2000 to 74 in 2004. The estimate for the number of FTEs supported by state funding is about four, but as noted above because of the accounting system this estimate probably does not capture all the time state employees devote to preparedness.

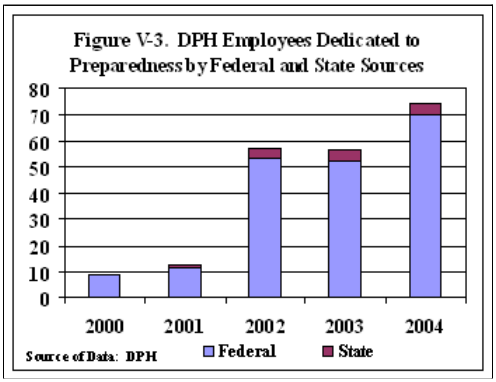


Table V-3. Expenditures by Focus Areas

Focus Area	*Description*	*Percent Expenditure*
A	Preparedness Planning and Readiness Assessment	30%
B	Surveillance and Epidemiology	19%
C	Laboratory Capacity – Biological	8%
D	Laboratory Capacity – Chemical	9%
E	Health Alert Network/ Communications	17%
F	Risk Communication	5%
G	Education and Training	12%

Source of Data: DPH

CDC focus area expenditures. Table V-3 shows the percentage of preparedness money spent by focus area. Focus areas A, B, and E have consumed two-thirds of the funding over the last two years. These areas support a number of diverse preparedness activities.

For example, focus area A supports the work of 14 DPH employees dedicated to public health preparedness leadership and planning activities, including a project manager, a smallpox coordinator, an attorney, a Strategic National Stockpile coordinator, and various support personnel. Major contractors under this area include local health departments required to develop, exercise, and evaluate local and regional emergency response plans, and CADH, which provides support, technical assistance, and coordination for all local health departments in the development of public health emergency management plans.

Focus area B supports the work of 15 DPH employees dedicated to public health emergency surveillance and epidemiologic activities, including nine epidemiologists, a toxicologist, sanitarians, and various support personnel. Major contactors with responsibilities in this area include the full-time local health departments. Each is required to ensure epidemiologic scenario-specific response planning for biological agents and coordinate this effort with overall emergency planning. Funding is also provided for the development and maintenance of mass vaccination clinics in 42 areas of the state.

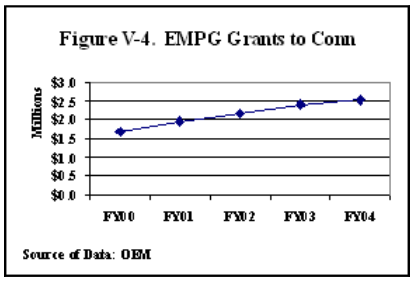
Focus area E supports the work of seven DPH employees dedicated to public health preparedness communications activities, including a planning analyst, an epidemiologist, and several technical positions. Major contractors under this area include various companies that provide support for communications equipment and software, including telephones, cell phones, satellite phones, and fax machines. In addition, this focus area supports the development and testing of local health alert networks that will allow local health department directors to provide emergency public health notifications and alerts to key stakeholders (e.g., physicians, pharmacies, police, and fire departments).

Related Federal Grants

Under the broader designation of emergency management, Connecticut receives additional federal funding that directly or indirectly benefits public health preparedness. The Emergency Management Performance Grant (EMPG) program, operated by the Federal Emergency Management Agency,

is based on an "all hazards" approach to preparedness. The program is designed to help state and local governments put an emergency management system in place. The grant money, which must be matched on an equal basis, can be used for planning, training, and public education purposes as well as emergency operations personnel, based on the needs of the grant recipients in the areas of disaster mitigation, preparedness, response, and recovery.

In Connecticut, the Office of Emergency Management, which is responsible for developing the governor's emergency response program, oversees allocation of the grant. Typically one-quarter of the money is disbursed at the local level; the rest is retained at the state level. Figure V-4 shows the amount of the Connecticut grant annually since FY 00.

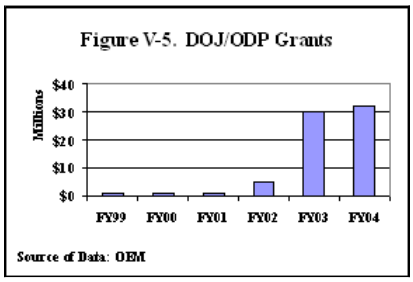


OEM uses about half to two-thirds of its share to pay for staff who provide planning and training assistance to help municipalities and the two tribal nations prepare for and respond to natural and manmade disasters. Local allocations, which are based on population and program participation, are used to develop plans and prepare staff for emergencies. In federal fiscal year 2003, individual local grants ranged from $1,000 to $58,000. Preliminary allocations for federal FY04 range from $600 to $44,000.

OEM also receives approximately $1 million annually for Nuclear Safety Emergency Preparedness. This money, which utility companies are required to provide, pays for preparedness planning and training activities as well as communications and equipment upgrades related to emergencies at nuclear power plants. Additional money is allocated to towns in the vicinity of a nuclear power plant, based on the role they would be expected to play in the event of an incident.

Another federal program that supports public health preparedness is the Domestic Preparedness/State Homeland Security Grant Program, established to provide money for enhanced detection equipment, mobile decontamination trailers, and personal protective equipment for first responders. Funding is provided to the states through the federal Office of Domestic Preparedness, which initially was with the Department of Justice (DOJ), but has since moved to the Department of Homeland Security.

In Connecticut, OEM manages the FY 99 through FY 02 equipment grants provided through the Department of Justice. Beginning with the FY 03 grant, the program was transferred to the Division of Homeland Security. Figure V-5 shows the amount of money Connecticut has received from this program since FY 99.



In the early years of the program, all of the money went for equipment. Priority recipients were state and regional entities that provide field emergency response services, followed by municipalities with large populations, and then smaller towns. Hospitals in highly populated areas also were eligible to receive funding.

In federal FY 03, program funding grew dramatically as the allowable uses expanded to cover equipment for more municipalities, increased security measures at critical infrastructure sites, updated state and local needs assessments, and additional training. In Connecticut, approximately two-thirds of the FY 03 grant was allocated to equipment.

Chapter Six

Status of Preparedness

Preparing for a public health emergency is an ongoing process. Even if all required plans, personnel, and equipment are put in place, things change. New health threats arise, equipment goes out-of-date, and people leave their jobs. A successful public health preparedness program must incorporate procedures that routinely re-examine the system to ensure resources are adequate and plans remain valid. Public safety and health personnel will always find a way to respond to an unexpected incident, but, without a continuous process, the response may not be as thorough or prompt as it could be, possibly resulting in the unnecessary loss of life.

This chapter looks at the overall status of preparedness for public health emergencies in Connecticut. Chapter Seven discusses key areas of preparedness in more detail as well as presenting the program review committee's findings and recommendations.

Overall Conclusion

The Department of Public Health and its related health partners have made significant progress over the last three years in improving the state's ability to prepare for, respond to, and recover from various types of public health emergencies. However, a number of components that would enhance these efforts need to be further developed, especially as preparedness efforts shift from planning to system performance.

Status of Specific Areas

To determine the status of specific areas of preparedness, multiple sources of information were analyzed including:

- compliance with federally determined preparedness benchmarks and other grant requirements;
- activities of individual focus area subcommittees and other planning entities;
- formal assessments of public health and health care entities conducted or overseen by the department;
- after-action reports for preparedness drills and exercises; and
- interviews of various program participants and stakeholders.

Immediately below, is a summary of the Department of Public Health's progress against the critical benchmarks established by the federal government for its two main preparedness grant programs. Also presented are selected results of surveys administered by the program review committee to local health department directors and hospital emergency plan coordinators.

CDC requirements. To enhance public health preparedness, both the CDC and HRSA grants require states to complete specific activities and meet certain benchmarks. The 2002 CDC grant, focusing on state and local public health departments, outlined seven broad focus areas to improve public health preparedness capacity. Sixteen specific capacities considered critical for states to be prepared for a public health emergency were identified within the focus areas. In order to build these "critical capacities," CDC developed certain requirements and designated 14 of the requirements as "critical benchmarks."

These 14 benchmarks should have been met by June 2004. Analysis of these benchmarks as of November 2004, is presented by focus area in Table VI-1. The committee found that nine of the 14 have been completed in Connecticut, while five are partially or nearly complete.

The nine benchmarks achieved by the Department of Public Health involved the establishment of a broad-based advisory committee and an organizational structure to support its preparedness efforts, as well as a system to receive and evaluate urgent disease reports and other communication enhancements. A number of plans were also developed, such as an interim plan to distribute pharmaceuticals.

Table VI-1. Status of CDC Benchmarks for Program Year Three

(8/31/01-8/30/03)*

Focus Area	*Description*	*Total Benchmarks*	*Completed*	*Partial*
A	Preparedness Planning and Readiness Assessment	7	3	4
B	Surveillance and Epidemiology Capacity	2	2	0
C	Laboratory Capacity – Biological Agents	1	0	1
D	Laboratory Capacity-Chemical Agents**	0	0	0
E	Health Alert Network/ Communications and Information Technology	2	2	0
F	Risk Communication	1	1	0
G	Education and Training	1	1	0
	TOTAL	14	9	5

*Status as of November 2004.

CDC required these benchmarks to be completed as of June 2004. Program Years One and Two were initiated prior to 9/11/01 and had different requirements that were more limited in scope.

** There were no requirements under this focus area for this program year.

Source of Data: LPR&IC analysis of CDC Bioterrorism Preparedness and Response Program

The department has acknowledged that two benchmarks within Focus Areas A and C are only partially complete. These relate to the development of a statewide plan for responding to bioterrorism and other public health threats and emergencies (which is in draft form), and the development of a plan to improve the working relationship between and among laboratories in the state. Program review believes the following Focus Area A benchmarks are also only partially complete:

- the overall assessment of state capacity to respond to a public health emergency (though assessments of individual public health and health care entities are complete);
- the assessment of local ordinances regarding authority to execute emergency public health measures; and
- the development of regional plans to respond to bioterrroism and other public health threats (though DPH believes the regional plan requirement is fulfilled because it, along with its local partners, has developed 42 regional mass vaccination plans).

Current benchmarks. Subsequently, new requirements were added to the federal agreements for the next two years and the number of benchmarks has increased to 25. These requirements incorporate or expand some of the previous benchmarks as well as add new mandates. These benchmarks and related activities must be completed by August 2005.

Analysis of these benchmarks as of November 2004 is presented by focus area in Table VI-2. Five of the 25 appear to be substantially complete, while 12 are partially complete. Seven of the benchmarks relate to the development and conduct of specific drills or exercises to test aspects of the state's preparedness efforts and should all be completed by the end of the program year.[19]

Table VI-2. Status of CDC Benchmarks for Program Years Four and Five

(8/31/03-8/30/05)*

Focus Area	*Description*	*Total*	*Substantially Complete*	*Partial*	*Drill*	*N/A*
A	Preparedness Planning and Readiness Assessment	6	3	2	1	0
B	Surveillance and Epidemiology Capacity	5	1	2	2	0
C	Laboratory Capacity – Biological Agents	3	0	2	1	0
D	Laboratory Capacity-Chemical Agents**	3	1	0	1	1
E	Health Alert Network/ Communications and Information Technology	5	0	4	1	0
F	Risk Communication	2	0	1	1	0
G	Education and Training	1	0	1	0	0
	TOTAL	25	5	12	7	1

* Status as of November 2004. CDC requires these benchmarks to be completed by August 2005

** One benchmark is not applicable to Connecticut because the state does not have a high level (Level 3) chemical lab.

Source of Data: LPR&IC analysis of CDC Bioterrorism Preparedness and Response Program

The department appears to have substantially completed benchmarks that include the development of a financial tracking system and a 24/7 emergency notification system, as well as enhancements to existing benchmarks involving the system used to receive and evaluate urgent disease reports and the program to distribute pharmaceuticals.

HRSA requirements. The HRSA grant focuses on upgrading hospital and related health care entity preparedness. Beginning in 2002, the HRSA grant required states to develop a needs assessment and an implementation plan for a bioterrorism preparedness program for hospitals and related health care entities.

In Year One (FY 2002), five critical benchmarks were established that should have been completed by the end of August 2003. DPH completed four of the five benchmarks, including the designation of a coordinator for hospital preparedness, establishment of a hospital preparedness planning committee, completion of a statewide needs assessment, and ensuring funds are properly distributed to hospitals. The fifth benchmark, the creation of a statewide plan for hospitals to respond to an epidemic, was not completed. This benchmark was not completed by many states, and a similar requirement was incorporated into subsequent grants.

Current benchmarks. The current grant (Year Three, September 1, 2004 - August 31, 2005) and the previous year's grant (Year Two) contain six priority areas and 16 critical benchmarks. The department has about two and one-half years remaining to complete these benchmarks.

Table VI-3. Status of HRSA Benchmarks for Program Years Two and Three

(9/1/03-8/31/05)*

Number	*Priority Area*	*Total*	*Substantially Complete*	*Partial*	*Drill*
1	Administration	1	1	0	0
2	Regional Surge Capacity	10	3	7	0
3	Emergency Medical Services	1	0	1	0
4	Linkages to Public Health Departments	2	1	1	0
5	Education and Preparedness Training	1	0	1	0
6	Terrorism Preparedness Exercises	1	0	0	1
	TOTAL	16	5	10	1

* Status as of November 2004.

Note: The CDC grant year runs from August 31 to August 30, while the HRSA grant year runs from September 1 to August 31.

Source of Data: LPR&IC analysis of HRSA National Bioterrorism Hospital Preparedness Program

As shown in Table VI-3 (above), the department appears to have substantially completed five benchmarks in the areas of financial tracking, isolation, decontamination, communications capacity, and health surveillance systems. It continues to develop several areas related to the ability of hospitals to accommodate a large sudden influx of patients (regional surge capacity), the development of a mutual aid plan for the emergency medical services system, hospital lab capacity, and training of health care workers.

Survey of local health departments and hospitals. Another source of information about the status of public health preparedness efforts on the state and local level from the perspective of those working in the field were program review surveys of local health department directors and hospital emergency response plan coordinators.[20] The results of each survey are presented in full in Appendices A and B, while relevant questions are summarized below and discussed further elsewhere in the report.

The consensus among those two groups is that Connecticut is better prepared today than it was three years ago. They also believe they are somewhat prepared to well prepared in the major public health preparedness areas.

• Ninety-two percent of respondents to the hospital survey and 89 percent of the respondents to the local health directors survey thought preparedness for a public health emergency in Connecticut has improved since August 2001.

• A majority of respondents to the hospital survey believed that their hospitals were “well prepared” in the areas of up-to-date emergency response plans, participation in drills and exercises, and redundant communication systems. A majority thought their hospitals were “somewhat prepared” in a number of other areas such as staff trained to recognize symptoms of biological agents, adequate decontamination resources, and adequate stockpiles of antibiotics for hospital staff. The areas that received the most “not prepared” answers included adequate capacity to address a mass casualty event (29 percent) and procedures in place for the discharge of patients in order to increase the number of staffed beds available for a public health emergency (25 percent).

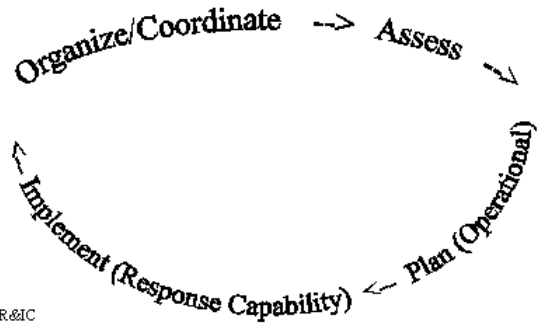
• A majority of respondents to the local health director survey believed their departments/districts were “well prepared” to “somewhat prepared” in various preparedness areas from planning to communications. The areas that received the most “not prepared” answers included sufficient number of volunteers to provide services for a mass vaccination clinic (50 percent), adequate number of personnel trained to perform public health functions in the event of an emergency lasting several days (48 percent), and a quarantine plan (38 percent).

Chapter Seven

Findings and Recommendations

The process of preparing for public health emergencies involves completion of a variety of activities. The major tasks can be grouped within the four stages shown in Figure VII-1.

FIG. VII-1. Phases of Emergency Preparedness Process.



Source: LPR&IC

During the first phase of the process, participants identify the types of emergencies they may be called upon to deal with and initiate contact with others who might be involved in the response. This stage is followed by compiling assessments that catalog existing resources and identify gaps. During the third phase, the roles of the various individuals, agencies, and institutions expected to respond during a public health emergency are defined, and written plans are prepared detailing their responsibilities in the event of general and certain specific incidents. Successful resolution of an emergency is heavily dependent on a carefully thought out plan that has been tested, with specific tasks practiced regularly. By the final stage, participants are ready to act in a coordinated manner when an emergency occurs.

Since preparedness is a fluid condition, going through the four stages of the process just once is not enough. After all of the stages are completed the first time, the process should repeat itself routinely. Subsequent cycles would adjust the scale of activities in each segment as appropriate, acknowledging the base work completed in the initial effort, accommodating new threats and information, and recognizing that some aspects of the process are harder and will take more time. For example, building relationships and crafting new plans is more complex than renewing agreements and updating existing plans. However, all aspects of the preparedness system should be reviewed periodically and updated if necessary.

Because of national events and the subsequent focusing of federal grant programs on bioterrorism, Connecticut's recent efforts to prepare for public health emergencies involved jumping into all of the areas described above simultaneously rather than sequentially. Consequently, progress has occurred within all stages of the process, but none are totally complete.

The remainder of this chapter looks at how much progress Connecticut has made in completing the elements of the preparedness process described above. It represents a status report on the ongoing public health emergency preparedness process underway in Connecticut. Some issues that are discussed do not include recommendations because the specific activities that need to occur have already been identified and are underway. The specific issues areas addressed are:

- Planning and Grant Process;
- Assessments: Capacity and Performance;
- Key Public Health Plans;
- Planning Regions;
- Local Health Departments;
- Hospital Surge Capacity;
- Emergency Medical Services;
- Mass Vaccination Clinics;
- Isolation and Confinement;
- Laboratory Capacity;
- Education and Training;
- Communications;
- Contract Process; and
- Future Availability of Federal Funding.

Planning and Grant Process

The Department of Public Health's overall public health preparedness planning and grant development processes demonstrate an inclusive and collaborative goal setting and monitoring effort across governmental levels and among public and private partners. However, resource allocation decisions are closely controlled by DPH, and overall direction to hospitals and local health departments does not always appear to be clear.

The Department of Public Health has established a collaborative planning and grant process with representatives of private and public entities that have significant roles in preparedness and response to public health emergencies. The department created the Public Health Preparedness Advisory Committee, including over 60 representatives of various organizations, which meets regularly to advise the department on its preparedness activities. The committee structure involves a number of working groups and subcommittees devoted to particular preparedness issues, such as preparedness planning, lab capacity, and infectious disease preparedness. It also includes representatives of the key coordinating partners, the hospital-based Centers of Excellence and the Connecticut Association of Directors of Health. Many participants in the process have noted that public health and health care partners are finally being recognized as an important part of the emergency response community, and this is reflected on both the state and sub-state levels of government.

The results of two program review surveys of local health directors and hospital emergency response plan coordinators found two-thirds of respondents believe the perspectives of local health departments and hospitals are sufficiently represented in the state's planning process. However, both groups were split on the overall direction and leadership provided by the department regarding public health emergencies, with about half of each group rating DPH as somewhat effective to not effective.[21]

In addition, written comments attached to the surveys and interviews with local health directors by committee staff indicated dissatisfaction with certain aspects of the planning process that require stronger direction and leadership from DPH, such as better coordination of regional planning efforts, lack of mutual aid agreements, better integration of local and state response efforts, and contracting. For example, 59 percent of respondents to the program review survey of local health departments/districts, said DPH was somewhat effective to not effective in providing useful feedback on local public health emergency response plans. Some local health directors, in written comments, indicated a preference for a stronger top-down approach to the planning process, while many others emphasized that the planning process should be more flexible in accommodating unique local and regional needs.

Respondents to the hospital survey also emphasized the need for a better integrated process for regional planning. In addition, they cited the need to better define the role of administrative agencies, who guide planning efforts, and operational entities, who have implementation responsibilities, in the planning process.

A number of local health directors and other active participants in DPH's grant process have noted the department's practice of developing grant priorities and presenting them to the planning group as a near "done deal" that effectively precludes them from meaningful participation in the budget allocation process for the two federal preparedness grants. Required letters of support from local health directors, however, accompany federal grant applications indicating concurrence with the proposed use of funds, and funding to local health departments has not decreased as it has in other areas. Unfortunately, the complexity and cost of public health preparedness efforts compared to the funding available may make priority differences among planning partners inevitable, but ideally participants should feel like true "partners" when budget decisions are made.

Assessments

As of November 2004, the Department of Public Health still had not completed all of the capacity assessments of specific health care entities required by the federal CDC and HRSA grants. The ones that have been done vary in comprehensiveness, and the department has no specific schedule for updating them, making it difficult to determine public health emergency preparedness levels statewide.

In the event of a public health emergency, the state needs to know what response capabilities will be available in areas such as personnel, communications, and legal authority. A key mechanism for compiling that information is a formal evaluation of the parties, facilities, and systems already in place. Such an assessment is usually summarized in a written report. There are two types of assessments: capacity, which focuses on quantifying existing physical assets such as personnel and equipment; and performance, which examines the timing and manner in which people and organizations respond to an emergency, based on real or test situations. Both types should identify changes needed to enhance future capacity and performance.

Capacity assessments. Staff from DPH conducted some of the required assessments, while others were performed by contractors under the direction of the department. Table VII-1 lists the assessments, who conducted each, and where applicable the proportion of each group being evaluated that supplied data.

Table VII-1. Capacity Assessments Related to Preparedness for Public Health Emergency

Subject of Assessment	*Entity Conducting Assessment**	*Calendar Year*	*Responses*
Information Technology -- Local Health Departments	Department of Public Health	2001 and 2002	98% of 100 in 2002
State and local legal authority	Department of Public Health	2002	NA
Emergency Medical Service Providers	Department of Public Health	data collected 2003; analysis underway	70% of 186
Department of Public Health	Department of Public Health	still underway	NA
Acute Care Hospitals	Centers of Excellence	2002	100% of 32
Community Health Centers	Centers of Excellence	2002	50% of 12
Urgent Care Centers	Centers of Excellence	2002	45% of 33
Nursing Homes	Centers of Excellence	2002	68% of 182
Home Health Care Providers	Centers of Excellence	2002	60% of 97

Local Health Departments (and tribal nations) re: - ability to respond to incident - local communications	Conn. Assoc. of Directors of Health Conn. Assoc. of Directors of Health	2002 2004	92% of 100 98% of 98
Communications Infrastructure	UConn College of Continuing Studies	2003	NA
Meta-analysis of other assessments	UConn College of Continuing Studies and Department of Public Health staff	data collected 2003; analysis underway	NA
Risk Communications	Consortium for Risk and Crisis Communications	2004	NA
* When DPH not specified, conducted with guidance from department staff. NA = not applicable Source of Data: individual assessment reports			

Some differences within the capacity assessment process are appropriate. For example, the assessments for the health care providers listed in Table VII-1 examined a total of 16 issues. The same 11 issues were covered for every group, while the remaining issues (e.g., laboratory capacity and pharmaceutical stockpile) were only examined for relevant entities. Other differences are of concern, however, including the following:

• The speed with which the results became available (i.e., from distribution of the survey instrument to completion of the written report) ranged from seven months for local health departments to over two years for Emergency Medical Service providers, which is currently targeted for completion in January 2005. Since resource capacity and response capability are evolving elements of the preparedness system that change regularly, delaying analysis of data about the status of these components increases the potential for the results to be out of date before an individual assessment is finished. It also prevents completion of a statewide assessment.

• The time periods covered by the evaluations varied, with a few focusing on calendar year 2001, most looking at 2002, and some more recent service-specific ones examining 2003 or 2004. Using data from multiple years makes it difficult to compile an up-to-date statewide assessment.

• The response rates to the surveys that were the primary source of data for the seven public health or health care provider assessments ranged from half or less (two groups) to 60-70 percent (three groups) to all or nearly all (two groups). Questions about the validity of the results can be raised in cases where there is a low response rate.

• The format used to present the results for the six health care provider assessments differed across entities as well as for the northern and southern tiers within each entity type. Consequently, it is difficult to compare the preparedness status of different types of resources statewide as well as the same types of resources in different regions of the state.

• The assessment for the Department of Public Health itself was still in progress in November 2004, despite the department beginning work on it in January 2003. The absence of a written evaluation of the capacity of the lead agency for public health emergency preparedness means information about a key piece of the system is unavailable.

• For some entities, new information is being collected to update the original assessment, but the efforts are not uniform. For example, in January 2004, the Northern Tier COE sent out a follow-up survey to the acute care hospitals in its region to obtain data for calendar year 2003. The Southern Tier COE asked the hospitals in its region only for information about trauma burn services. While updates on any elements of the system are valuable, a scattered approach to obtaining them makes them less useful.

Recommendation: **The Department of Public Health should establish a timetable for periodically updating capacity assessments of key public health emergency response partners such as the department itself, acute care hospitals, local health departments, and emergency medical services. DPH also should identify other statewide issues that have not been examined so far (e.g., hazards vulnerability to determine the probability of particular events occurring in Connecticut) and develop a schedule for completing assessments of those topics.**

Since the completion of the formal assessments listed in Table II-1, other tools have been put in place to gather some of the desired data on a more regular basis. This includes web-based daily bed capacity counts for all acute care hospitals in the state, which are accessible to the hospitals and DPH.

Performance assessments. Conducting periodic drills to test written response plans enables participants to judge the overall workability of the plans and the feasibility of performing the specific duties assigned to them when actually needed. After-action reports, formal evaluations used to examine the results of such events, provide information about readiness for public health emergencies. Prepared subsequent to exercises and drills as well as many real incidents, ideally an after-action report briefly describes the purpose or objective of the event, the nature of the incident that took place, who was involved, elements of the operation that worked well, and areas that need improvement.

The format and level of detail contained in the after-action reports prepared by Department of Public Health staff vary considerably. In addition, the department does not appear to have a formal process in place to ensure steps are taken to correct problems identified in the reports.

Program review examined 11 after-action reports prepared by DPH staff between January 2003 and September 2004.[22] Several issues recurred during the 21-month period covered by these reports, including:

• coordination of roles and responsibilities;

- communications -- systems equipment, content of information being shared, and timing of notifications;
- understanding of the incident command structure; and
- staffing levels.

Examples of differences in the formats of the individual reports examined by program review include:

- seven identified participants by name or organization, while four did not;
- two did not include any description of the event;
- five did not identify the objective of the event;
- four presented "lessons learned/recommendations" in a brief, bulleted format, two used bullets with slightly more detail, two contained commentary from multiple participants in a mix of short narratives and bullets, and three contained detailed narratives with a few bullets; and
- two did not indicate who prepared the report.

After-action reports can be an important management tool helping to identify problems and solutions, as more drills are required in the current program year. Although the reports are prepared for various types of events (e.g., program site visits, tabletop exercises, drills, and medical support at events with large crowds), a certain degree of consistency regarding the types of information provided and the manner of presentation would be useful. Indeed, DPH is developing a standardized AAR form for outside partners such as hospitals to complete after they participate in drills and exercises.

Recommendation: **The Department of Public Health should develop a standardized template for after-action reports prepared by agency staff. The document should indicate the format and minimum content of such reports. In addition, the department should disseminate the results of after-action reports more widely within the agency, implement corrective actions to reduce the reappearance of the same issues in the reports, and document the results of those efforts in a written report prepared annually for the Public Health Preparedness Advisory Committee.**

Key Public Health Plans

Key core public health preparedness and response plans have been completed, though some incomplete plans that are required have been under development for years. Most operational plans are only beginning to be developed.

Table VII-2 contains a description and status of key plans the Department of Public Health is responsible for developing or overseeing.

Table VII-2. Status of Key Public Health Preparedness and Emergency Response Plans

Plan	*Description*	*Status*	*Date Mandated*
DPH Public Health Emergency Response Plan	Outlines DPH's responsibilities during a public health emergency	Final Draft	2001
Local Health Department/ District Emergency Response Plans	Outline local health department responsibilities during a public health emergency	48 of 50 completed	2001
Local Bioterrorism Response Plans	Outline local health department responsibilities during a bioterrorism event	25 of 56 completed*	2001
Regional Public Health Emergency Response Plans	Incorporate local response plans and outline responsibilities of municipalities and institutions that respond on a regional basis to public health emergencies; include mutual aid agreements	In process	2001
EMS Statewide Mutual Aid Plan	Addresses upgrading and deploying EMS units in jurisdictions they do not normally cover	Beginning stages	2002
Regional Smallpox Mass Vaccination Clinic Plans	Describe responsibilities of regional mass vaccination clinics	42 of 42 completed	2002
Statewide Smallpox Preparedness and Response Plan and Supplemental Smallpox Plan	Describes responsibilities for establishing mass vaccination clinics to vaccinate health care workers and the general population	Under revision	2002
Connecticut Strategic National Stockpile Distribution Plan	Specifies process to distribute federally funded and supplied vaccines and medicines during a public health emergency	Interim plan	2002
Crisis and Emergency Risk Communication Plan	Provides framework for timely and accurate information dissemination before, during, and after a public health emergency or other disaster	Draft Plan (August 2004)	2001
Laboratory Response Plan	Ensures proper analysis, identification, and transfer of suspect substances among lab network	In process	2001
Pandemic Influenza Plan	Describes how the state will respond to a pandemic influenza outbreak	Under revision	2004
Post Office Biohazard Detection	Outlines the state's response if a biohazard event	Completed	2003

System Plan	occurs at certain postal distribution facilities		
Anthrax Community Exposure Plan	Defines responsibilities in response to a large population anthrax exposure	Beginning stages	2004 (not mandated)
* Originally, all 96 local health departments were to complete bioterrorism plans, but DPH scaled back the requirement for part-time districts. Source of Data: LPR&IC interviews with DPH and analysis of CDC, HRSA, and DPH documents.			

Planning participants, outside of DPH, have expressed frustration over the fact that several plans that have been under development for years are still incomplete or in a draft form, especially the statewide EMS mutual aid plan, the crisis and risk communication plan, and the DPH emergency response plan. It should be noted that DPH's emergency response plan has only recently been completed and is currently being circulated after being under development for three years. It will in all likelihood remain in draft form, because it is part of the state's overall response plan maintained by the Office of Emergency Management. That plan is in draft form because OEM believes this protects the plan from public disclosure.

Most of the plans described above identify basic roles and responsibilities of participants and overarching goals. True operational plans, which specify procedures and protocols, especially those for biological agents with the greatest potential for adverse public health impact from mass casualties (i.e., Category A agents), have yet to be developed. With the notable exception of the statewide and regional smallpox plans, which are fairly mature in their development, the Department of Public Health is just beginning to work on such plans.

Not only are plans important because they are required under federal grant applications and in some cases state statute, they also improve decision-making, clarify roles, and enhance organizational responsiveness during a crisis. Absence of a plan does not mean an agency would not rise to the demands of an emergency but it does raise serious doubts. An organization that has neither developed plans nor practiced a plan calls into question whether it can respond effectively to an incident to mitigate losses.

Planning Regions

The various local, regional, and state entities working to develop broad and incident-specific public health emergency response plans in Connecticut do not all use the same geographic configurations, which complicates the process of integrating those plans.

In the event of a public health emergency, entities at the local level will be called upon to deal with the situation first. However, given the small geographic size of Connecticut, it is likely that any significant public health emergency will ultimately require at least a regional response. To ensure that those additional resources are smoothly integrated into the response effort, pre-event regional planning is important.

Complicating coordination is the large number of different regional configurations used in Connecticut. At least 14 different maps currently define governmental planning and service regions within the state. The configurations that divide the state range from two to 42 regions. For example, fire service responders use three regions, EMS uses five regions, and state police use 11 districts within three regions. Table VII-3 lists some of the key plans related to preparing for public health emergencies in Connecticut and the geographical configuration each is based on. Many of these plans are intended to be incorporated into broader emergency plans prepared by other entities.

Table VII-3. Geographic Coverage Areas of Selected Plans

Name of Plan	Prepared By	Area Covered
DPH Public Health Emergency Response Plan	Department of Public Health	statewide
Facility Emergency Operations Plan	31 acute care hospitals	towns in facility catchment area
Local Public Health Emergency Response Plan	96 local health departments/districts	ranges from 1 to18 towns
Local Bioterrorism Response Plan	56 local health departments/districts	ranges from 1 to 18 towns
Smallpox Mass Vaccination Clinic Plans	towns and local health departments/ districts jointly	42 regions (1 to 18 towns)
Local Emergency Operations Plan	169 municipalities and 2 sovereign nations	most prepare their own; a few towns do joint plans
Regional Public Health Emergency Response Plans	Regional Planning Organizations (under contract with DPH)	10 regions (6 to 37 towns)
Source: LPR&IC		

Eighty-nine percent of the local health department directors who responded to the program review survey agreed somewhat or strongly that the use of different regional planning configurations hinders the process of developing public health emergency response plans. Seventy-nine percent of respondents to the survey of hospitals expressed the same view.

Given that participation in the plan development process for some public health preparedness partners is voluntary, these participants may need to be motivated to become involved in the process. Requiring them to do so within a system that uses multiple planning regions is just one more complication to overcome.

It is important to note that the use of multiple planning regions is an ongoing issue that is not unique to emergency preparedness. To address the problem in the areas of transportation, the environment, and economic development, the state has been using 15 regional planning organizations to promote regional cooperation and planning.

Recommendation: **A long-term goal of the state of Connecticut should be the development of a single set of geographic boundaries for all emergency preparedness purposes. The Department of Public Health should work with the new Department of Emergency Management and Homeland Security on a proposal to implement this goal.**

A variation of this recommendation was adopted by the coordinating council for the new Department of Emergency Management and Homeland Security with respect to overall preparedness planning. The council recommended creation of defined regions for emergency planning and preparedness purposes that at least initially would not impact service delivery.[23]

Local Health Departments

Recent efforts to prepare for public health emergencies in Connecticut have magnified the degree to which part-time local health departments lag behind full-time departments/districts in terms of capacity to respond.

The role of a local public health department today includes identifying health problems and hazards in the community, educating people about health issues, enforcing laws and regulations that protect health and ensure safety, and assuring a competent public and personal health care workforce.[24] Preparation for public health emergencies cannot be separated from this broader role since the ability of a local health department to sustain emergency preparedness efforts depends on a strong overall public health infrastructure being in place for the area it serves. As discussed in Chapter One, a general deterioration in the infrastructure that underlies the public health system (i.e., the foundation supporting the planning, delivery, and evaluation of public health activities) has been documented over the last two decades. Concerns in Connecticut include the following:

- An August 2003 capacity assessment of local public health departments in the state noted the ability to ensure that minimum public health standards are met in the 21st century will require full-time health departments with adequate numbers of well-trained staff. The report stated that given the high number of part-time health departments in Connecticut currently, one solution would be the pooling of existing resources by adjoining towns to create new districts, each of which would be run by a full-time director who would serve residents on a regional basis.[25]

- Three-quarters of respondents to the program review survey of local health directors said preparing for bioterrorism and other public health emergencies has diminished the ability of their departments/districts to carry out routine responsibilities.

- The development of formal mutual aid agreements among public health responders to provide for additional staff in the event of an emergency has been limited. While such agreements are a recognized mode of operation among local fire and police units, the concept is not as evolved for local health departments. Forty percent of the respondents to the program review survey of local health directors said their departments were somewhat prepared with formal agreements with neighboring jurisdictions to provide assistance during a public health emergency, 25 percent were well prepared, but one-third were not prepared. Indeed, union contracts covering some local health department employees might prevent staff from being assigned to work outside their designated territory under any circumstances.

- The fact that one-quarter of the towns in Connecticut do not currently have a full-time health department or are not part of a district increases the possibility the state will have to step in to help the residents of those towns in the event of a public health emergency. Such a scenario is exemplified by recent activities involving the distribution of flu vaccine.[26] Throughout the state, local health departments were involved in efforts to distribute additional doses of flu vaccine to residents in their respective areas. However, in northeastern Connecticut, part-time health directors serving several towns indicated they would not be able to participate in such efforts without assistance. As a result, DPH had to find another partner to ensure the residents in those towns had the same opportunity to access the vaccine as residents in other parts of the state. DPH ended up working with the Visiting Nurses Association in that area to carry out tasks local health departments in other parts of the state were performing.

- With respect to planning activities, only 20 percent of the respondents to the program review survey of local health directors agreed with a statement that the public health emergency needs of towns served by part-time departments are adequately addressed under the current planning process. Sixty-two percent disagreed, while another 18 percent said they didn't know.

- The impact of part-time departments on planning efforts is even more pronounced when such departments represent a majority of the towns in an area that is supposed to develop a regional plan. DPH provides funding to full-time departments to enable them to hire staff to work on planning and other related public health preparedness activities. The limited staff employed by health departments in such regions to carry out all of their required functions means even the combined resources several departments could assign to planning efforts are likely to be insufficient to complete required tasks on time.

Recommendation: **The Department of Public Health and the Office of Policy and Management shall develop a strategy to improve the emergency response capacity of areas served by part-time health departments through the direct provision of additional resources or the creation of additional full-time local health districts. DPH shall submit the strategy to the committee of cognizance for public health matters by January 1, 2006.**

The Department of Public Health should also identify mechanisms to increase staff resources for any local health department that is involved in a public health emergency. The department should consider whether the state's public health emergency powers need to be amended to facilitate such surge capacity.

Hospital Surge Capacity

The state's hospitals have made progress on many of the basic elements of preparedness; however, some aspects of surge capacity are lacking.

Acute care hospitals would play an essential role in any large-scale chemical, biological, radiological, nuclear, or explosive event, as well as an infectious disease outbreak. Many victims would no doubt first seek treatment at emergency departments. Hospital preparedness efforts must take into account the need to accept and treat a sudden, large increase in the number of patients that may occur. The ability to do this is referred to as surge capacity.

The federal government has provided some direction in this area, and while the federal guidance does not fully define all aspects of hospital preparedness, it is an attempt to identify what can be realistically achieved in a relatively short time period. In Connecticut, a number of federally defined readiness indicators aimed at insuring aspects of surge preparedness such as decontamination capabilities, availability of personal protective equipment, redundant communication systems, and isolation capacity have been met or are very close to being met. However, there are a few areas in particular where surge capacity is lacking.

• *Planning*. Planning and coordination activities are on-going. All hospitals have updated their emergency response plans, but regional plans that detail how hospitals would work with state and local officials to manage and coordinate an emergency response have only begun to be developed.

• *Staffed bed surge capacity*. According to HRSA, the staffed bed surge capacity benchmark for Connecticut is about 1,700 beds. Essential components to ensuring that adequate staffed hospital beds are available during an emergency include the physical beds, appropriate staff to provide health care, and an information system that can track both bed and staff availability.

- Physical bed count. The total number of licensed hospital beds in the state should meet the physical number of beds required. In total, the state has over 9,000 *licensed* hospital beds, though only about 7,000 are usually *staffed,* and less than 1,000 are usually available at any given time. Sometimes many fewer are available, for example, during the flu season when most staffed hospital beds are occupied. There are a number of ways to increase bed capacity. Hospitals can open up staffed beds by moving less intensive patients to other facilities (such as nursing homes) and canceling elective surgery. Coordinated regional hospital plans and mutual aid agreements that assist in developing off-site (non-hospital) options in each region are being developed. In addition, DPH is in the process of purchasing a 100-bed mobile hospital that can augment bed capacity anywhere in the state.

- Staffing. The state has developed an advanced registration and credentialing system for health care personnel, but has only recently begun to expand the system and initiate recruitment efforts for volunteer health care personnel other than doctors. In addition, the state has encouraged the development of a voluntary Disaster Medical Assistance Team and a Medical Reserve Corp to assist in providing surge personnel.

- Information systems. During the events of September 11, 2001, the state was using telephones to communicate and identify Connecticut bed capacity. The state has greatly improved its ability to monitor hospital bed capacity on a daily basis through a web-based application and has developed an advanced registration program for health care practitioners. The bed monitoring system greatly enhances the state's ability to be able to direct the appropriate health care personnel to a facility experiencing an increase in patients. Further improvements to the system will track various resources, such as ventilators, to enable the state to identify spare resources and direct them where they are most needed.

• *Trauma and burn care.* The most common tool of terrorist attacks nationally and globally that has caused the most injury has been explosive devices. An organized and developed system of trauma care is essential to preparing for this eventuality. Connecticut is in the process of evaluating its trauma and burn capacity and is revising its overall statewide trauma system plan. The state still needs to evaluate trauma data, develop a strategy to address needs, and develop a revised plan.

In response to the program review survey, 92 percent of hospital emergency plan coordinators believed preparedness for a public health emergency in Connecticut has improved, but some specific elements need more attention. Regarding surge capacity, only 33 percent of respondents said their hospitals are "well prepared" in having procedures in place for the discharge of patients to make room for victims of a public health emergency, and only 21 percent are "well prepared" in having the capacity to address a mass casualty incident. Half of the respondents rated DPH as somewhat effective to not effective in planning for a sufficient statewide surge capacity for hospitals in the event of a public health emergency.

Emergency Medical Services

A number of initiatives relating to the preparedness of emergency medical service providers are incomplete or have not been timely.

Emergency medical services are a crucial element in a comprehensive response to many public health emergency scenarios, such as a mass trauma event, as well as providing transportation services to and from hospitals that are trying to increase surge capacity by freeing up beds for victims of a public health emergency. According to hospital preparedness coordinators who responded to the program review survey, emergency planning efforts between their hospitals and EMS providers in their regions are well coordinated. Half strongly agreed, while one-third agreed somewhat. Seventeen percent disagreed somewhat.

Unfortunately, a number of initiatives relating to EMS preparedness are incomplete or have not been timely, as indicated by these examples.

• *The capacity assessment of EMS is not yet complete and may be outdated, while significant gaps in EMS preparedness most likely exist*. An EMS assessment begun in 2002, using calendar year 2001 data, and designed to measure preparedness of EMS providers to respond to a bioterrorism event has not been completed. According to DPH, preliminary analysis in June 2003 indicated significant gaps in the capabilities of EMS providers. The assessment is scheduled to be completed in January 2005. Given that any analysis would be based on 2001 data, the utility of such analysis is questionable.

• *A statewide EMS mutual aid plan has not been completed*. A mutual aid plan would detail how EMS units would be deployed in response to a public health emergency that occurs in a jurisdiction they do not normally cover. While individual EMS units and regions in the state already drill for mass casualty incidents, a statewide EMS mutual aid plan, as required under the HRSA grant, is just starting to be developed.

• *A number of EMS standardization issues are outstanding.* EMS personnel have not received consistent training in bioterrorism and other weapons of mass destruction, although some initial and refresher training has begun to change. Other standardization issues that need to be resolved include: dissimilar treatment protocols in different EMS regions, communication interoperability with other local responders, incident command systems, and mass casualty scene care (see below).

• *The mass casualty incident (MCI) program, which provides standardized training and command kits to assist in emergency scene management, has not been fully implemented*. While all EMS personnel have some level of training in mass casualty care, the training has not ensured there will be a uniform and standardized response to a mass casualty incident throughout the state. DPH had stated it would begin standardized MCI training in FY 2003 and then distribute standardized MCI command kits, which include equipment to manage a mass casualty scene. Now, the department has decided a training program will be implemented in the spring of 2005, and it continues to develop, with the EMS Advisory Committee, a supply list for the MCI command kits.

• *It is not known how many EMS personnel have received personal protective equipment and training in how to use that equipment.* DPH and the Division of Homeland Security within the Department of Public Safety have responsibilities in ensuring preparedness of EMS personnel. Over the last two years, the Division of Homeland Security has been purchasing and distributing personal protective equipment for first responders to municipalities throughout the state. It has been the responsibility of the individual municipalities to distribute that equipment to the EMS providers that serve their municipalities. It has been reported to program review that not all municipalities have distributed the equipment to their EMS providers. Part of the reason involves the federal prohibition against commercial and nonprofit providers receiving reimbursement for training. Neither DPH nor DHS know which EMS units have not been given personal protective equipment nor how many EMS personnel have yet to receive training.

Recommendation: **The Department of Public Health should establish a timeline for the accomplishment of key tasks related to facilitating EMS preparedness for a public health emergency. The state should determine which EMS providers have personal protective equipment and have received the required training. In addition, the state should work jointly with municipalities to identify funding sources to pay for personal protective equipment training for those providers not trained. The state should include in its funding agreements with municipalities an assurance that the appropriate training and distribution of equipment has occurred.**

Mass Vaccination Clinics

Progress has been made in developing the state's capacity to respond to a biological event (especially smallpox) where protective treatment (i.e., prophylaxis) is possible through the development of mass vaccination clinics and certain preparations in the state's hospitals, but preparedness efforts in this area still fall short of what is required.

In November 2002, the federal government mandated that recipients of bioterrorism preparedness money redirect certain funding to plan and implement the National Smallpox Vaccination Program. This program targets key public health, health care, and emergency response personnel to form the backbone of smallpox response teams who would investigate outbreaks, care for patients, and vaccinate members of the public. Elements of the program such as the development of mass vaccination capabilities and underlying infrastructure may also be useful in response to other biological agents where prophylaxis is possible, such as a pandemic flu outbreak.

In Connecticut, the key strategies for implementing the smallpox program and protecting the public in response to similar events involve the creation of 42 regional mass vaccination clinics for the public and various activities related to preparation of the state's 32 acute care hospitals, including the West Haven Veterans' Administration Medical Center. This includes pre-vaccination of response personnel.

Important elements of a successful mass vaccination clinic include comprehensive plans, recruitment and training of teams, pre-vaccination, development of public communication plans and messages, and evaluation of plans and staff through drills and exercises.

• *Plans*. The 42 local response plans and the DPH statewide smallpox response plan are essentially completed, but facility-specific hospital plans to vaccinate staff and patients within 48 hours of notification are still under development. In addition, protocols that describe certain operating procedures specific to certain types of outbreaks, like anthrax and pandemic flu, are just beginning to be developed.

• *Recruitment and Training*. Both public clinics and hospitals rely on the development of response teams that include workers representing a variety of specialties from doctors and nurses to security, supply, and investigative personnel. To date, no response team has identified a full complement of staff (from vaccinators to support staff) to carry out an actual mass vaccination clinic. Vaccinator training has been offered, but goals have not been met. For example, as of July 2004, approximately 2,200 vaccinators will be needed for mass vaccination clinics statewide, but only 434 people have been trained; 405 hospital vaccinators are needed, but only 135 have been trained. In a survey of local health directors, only 8 percent said they had sufficient volunteers to provide services for a mass vaccination clinic.

• *Pre-vaccination for smallpox*. The initial nationwide strategy for smallpox was to have all response team personnel vaccinated in a 30-day time period and eventually vaccinate a wide array of health care workers. In fact, in January 2003, four physicians from Connecticut became the first civilians in the country to receive the smallpox vaccine as part of the National Smallpox Vaccination Program. Connecticut's original goal was to vaccinate 6,000 people, but to date only 704 (12 percent) have been vaccinated statewide. While this is low, it does exceed the national experience of 8 percent. Contributing to the low number of vaccinations are concerns regarding the liability of vaccinators and health issues regarding the vaccine itself. Liability concerns have largely

been addressed in recent federal and state legislation. The smallpox vaccine cannot cause smallpox, but it does contain a related virus that can produce a range of reactions from mild (e.g., a rash) to severe (in people with compromised immune systems). There is also a very small potential that those who are vaccinated may transmit the vaccine virus to other people. DPH still encourages response team members to pre-vaccinate, but given the low numbers of those actually vaccinated, planning for smallpox has now been adjusted to accommodate the vaccination of response teams just before the public. This situation is the same around the country.

• *Communications*. Smallpox communication requires extensive pre-event preparation and comprehensive development of public messages. Communications activities must address the needs of state and local public health professionals, local health care providers, and key partner organizations. Such communication should be aimed at increasing state and local readiness for a smallpox outbreak. DPH has been developing a communications plan and messages, but has not yet competed this essential task.

• *Drills and exercises*. Drills are essential to testing response capabilities. Drills require plans be in place first, and local response plans have only recently been completed. While two notification drills were performed recently and some local health districts held a mass vaccination clinic drill, few comprehensive drills have been preformed, though several are planned for the coming year.

Isolation and Confinement

The governor and the Department of Public Health have statutory authority (P.A. 03-236) to restrict the movement of people within the state in the event of a public health emergency. Local health departments can restrict movement within a narrower area. However, protocols regarding the manner in which such orders would be implemented have not been established. In addition, Connecticut is relying heavily on voluntary compliance with local confinement orders because the law carries no specific penalties for violation of those orders to isolate or quarantine people.

A public health emergency that involves a communicable disease or contamination by certain substances (e.g., biological toxin or chemical or radioactive substance) may necessitate placing individuals under quarantine or in isolation. A person who is or is reasonably believed to be infected or contaminated may be isolated from other people in an effort to reduce the spread of the disease. Likewise, someone who has been exposed to a communicable disease or contamination may be asked to remain physically separate from other people in a confined place (i.e., quarantined).

How a quarantine or isolation order would actually be implemented is still unclear. Many details about how an individual would be quarantined, including their ability to access food, health care, and social services as well as the specific roles of public safety personnel need to be developed.

For larger outbreaks, the availability of sites in Connecticut where a significant number of individuals can be isolated or quarantined for an extended period of time is limited. The state is in the process of acquiring a 100-bed mobile hospital that could be set up anywhere in the state, but it would not be able to handle a situation involving hundreds or thousands of people. In such a case, other options for the state might include reopening a mothballed state building, transferring residents out of a currently operating institution, or temporarily taking over a private facility.

Only 39 percent of the respondents to the program review survey of local health departments rated DPH effective to very effective in planning for isolation and confinement of people, 51 percent said the department was somewhat effective to not effective, and 11 percent did not know. With respect to whether local health departments have a plan to quarantine and/or isolate people from the general population in a public health emergency, only 3 percent said their department was well prepared, 59 percent were somewhat prepared, and 38 percent were not prepared.

Recommendation: **The Department of Public Health, in conjunction with the Department of Public Safety and the new Department of Emergency Management and Homeland Security, should establish protocols regarding the circumstances under which the movements of people within Connecticut will be restricted during a public health emergency. In addition, the departments should identify the mechanisms that will be used to enforce compliance with those protocols. If statutory changes are needed, DPH should submit language to the legislature regarding the changes.**

Laboratory Capacity

The state's laboratory system and capabilities have improved, especially in the ability to handle and analyze biological agents. Chemical and radiological capabilities are still under development. The state's lab facilities and information technology system have far outlived their useful lives.

The goal of the state lab is to be able to handle and identify a comprehensive range of materials, including biological, chemical, and radiological agents. The federal government has established a nationwide network of local, state, and federal testing laboratories, called the Laboratory Response Network, which provides the infrastructure and capacity to respond to various biological and chemical threats and other public health emergencies.

Laboratories are designated as either a sentinel laboratory or a reference laboratory based on their ability to handle various dangerous substances. Sentinel laboratories are the basic diagnostic facilities, such as hospital clinical laboratories, that initially identify likely bioterrorism agents and submit specimens to reference laboratories for confirmatory testing. Reference laboratories, of which the DPH lab is one, are more advanced public health laboratories that can provide confirmatory testing for certain substances. The proximity that laboratories in the national network have to one another ideally allows for the transfer of samples to another lab if the state cannot perform required tests or becomes overwhelmed in an emergency situation. Characteristics of lab capacity in Connecticut include the following:

• The state health department's laboratory safety level, like the majority of state labs in the U.S., is designated as Biosafety Level 3, the second highest designation available. This means the facility meets strict safety and security guidelines and can analyze high priority biological agents identified by the federal government. The state lab has the ability to test for four of the six biological agents, and it is awaiting approval from CDC to be allowed to test for an additional biological agent.[27]

• The hospital labs and four local public health labs in the state operate as sentinel labs in the state system. DPH has provided

guidance to these labs and developed a protocol manual that describes how to refer suspicious samples for further testing.

• DPH is in the process of developing its chemical lab capacity. Currently, the state lab is classified as a Level 1 chemical lab, which entails the ability to properly collect and ship clinical specimens, as well as ensure specimens are handled properly if being used to support a criminal investigation. DPH is working toward being designated a Level 2 lab, the second highest designation, which would indicate the lab has the necessary equipment and trained personnel to detect a limited number of toxic chemical agents in human fluid samples.[28] The state currently transfers its chemical samples to a lab in New York for confirmation.

• The state laboratory's radiological capability is limited. The federal government has not provided funding to build radiological lab capacity through its cooperative agreements. Ideally, the role of the state lab in a radiological or nuclear event would be to identify the environmental impact and detect the perimeter of the occurrence. The state laboratory's radiological capability is oriented toward supporting two existing responsibilities: testing drinking water supplies and providing certain testing capabilities for a low-level Millstone nuclear event. Consequently, DPH equipment is calibrated to detect very low levels of radiation, unlike a terrorist scenario in which the radiological fallout would be very high and overwhelm the state's equipment. However, it is important to note Connecticut is one of the few states in the nation developing a biodosimetry lab, which is used to detect the amount of radiation people have been exposed to and assist in determining what therapy would be most effective in treatment.

• DPH is developing a written operational laboratory response plan that is expected to be completed by August 2005.

• Fifty-nine percent of respondents to the survey of local health directors rated DPH effective to very effective in providing timely feedback on the results of lab analyses of suspicious samples. Only 18 percent of respondents said the department was somewhat effective to not effective, while 24 percent did not know.

• It is well recognized that the state laboratory facility is outdated and in need of replacement. Initial bond authorizations have been made to develop a new facility, and site identification is underway.

• Information technology used by the lab is obsolete. The information system for the lab is over 25 years old, not able to provide any customized reports, not backed-up, and technical support is difficult to find. DPH has purchased new hardware and is in the process of purchasing software for a new system.

Education and Training

Education and training opportunities for public health preparedness have been expanded and enhanced, though some improved management practices should be implemented.

The goal of DPH's training and education program, based on federal requirements, is to ensure that appropriate training in public health preparedness is provided to the state and local public health workforce and health care professionals. Over the last three years, in support of that goal, DPH has engaged in a number of activities. For example, DPH has:

• conducted training needs assessments of local health departments, acute care hospitals, EMS providers, home health care agencies, and community health centers;

• developed education and training plans for medical professionals in facilities, clinics, and community-based organizations, including hospitals and community health centers (called Target Group 1) and state and local public health professionals (called Target Group 2);

• implemented a web-based learning management system (i.e., TRAIN) for the Target Group 2 in January 2004 that allows users to search for on-site and distance learning courses, register on-line, and create a record of courses taken and lets the state track users and identify training needs;

• encouraged and supported the development of terrorism preparedness and emergency response curricula aimed at medical and public health programs, including the UConn Schools of Medicine and Dental Medicine, as well as nursing schools; and

• provided 92 training events in the first year (April 1, 2002 - August 30, 2003) to 2,211 public health practitioners (Target Group 2) and basic awareness level training to over 25,000 health care personnel (Target Group 1).

In addition, the Southern Tier Center of Excellence recently implemented a learning management system for that region.

The program review committee makes the following observations with regard to the training and education activities conducted or overseen by DPH:

• The local health director survey indicated 69 percent of respondents either strongly or somewhat agreed that emergency preparedness training for local health departments provided through the state's program met the needs of the department's staff. The same survey found that 84 percent of the respondents rated the Connecticut Association of Directors of Health, a DPH contractor whose activities include training, effective to very effective in providing appropriate emergency preparedness training and education programs. Finally, 10 of the 42 survey respondents who answered an open-ended question on how any additional money for public health preparedness efforts should be spent indicated training and/or education as a top priority.

• The hospital survey indicated 58 percent of respondents either strongly or somewhat disagreed that training for hospital staff through the state's public health preparedness program met the needs of hospital staff. However, 67 percent rated the Centers of Excellence, DPH contractors whose duties include training, as effective in providing appropriate training. Nine of 23 respondents

who provided an answer to an open-ended question about how any additional money should be spent indicated training and/or education should be a top priority.

• There are three parallel systems that track and manage training for public health preparedness. The state is using and continues to develop a management system for course registration and participant tracking for the public health workforce (i.e., TRAIN), while each COE is using a separate system to track health care workers. There are several problems with the training management.

- The TRAIN system does not currently track course evaluations or learner test scores for non-online courses, though that information is being collected separately in most cases.

- The COE systems involve a separate automated management system for the Southern Tier and a paper-based system for the Northern Tier. The systems cannot readily identify the number of individual health care workers trained.

- Participants in TRAIN and the Southern Tier system can register on-line and maintain an electronic record of courses attended, while those using the Northern Tier system cannot.

- The TRAIN system and the COE systems are not compatible though consideration is being given to linking the data.

Recommendation: **The Department of Public Health should work to make all state-sponsored public health preparedness training and education opportunities accessible through a single management system that allows users to register on-line and tracks courses, users, test scores, and other information that would assist in identifying training gaps and managing the training program. DPH should evaluate overall satisfaction of potential and actual participants with the training programs offered, not just individual courses.**

Communications

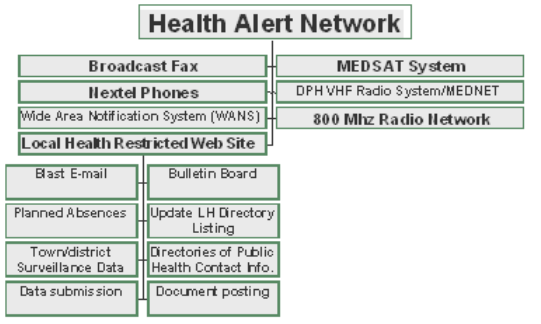
Extensive improvements have been made to public health emergency communications systems at the state and local level in Connecticut. However, additional enhancements are needed to achieve wider and more complete participation in the systems.

In partnership with local health departments and other public and private entities, DPH has worked to build up the emergency preparedness communications system in Connecticut. The primary goal of this effort is ensuring that individuals and institutions who would be involved in the response to a public health emergency can be notified within a reasonable amount of time from the onset of the event. The system also provides ongoing contact as needed during an emergency and incorporates redundant mechanisms to remain operational if there is a power or equipment failure. On a routine basis, the system offers participants access to a wide range of information about public health issues. Key developments in the communications area include the following.

• In 1999, the state received a federal grant to develop the capability to participate in the Health Alert Network, a nationwide information and communications system. The initial goal was to establish a link between DPH and local health departments. From the early days of the effort when it took five and a half hours to send a "rapid" fax to local health departments, now DPH can reach all local health directors within three minutes.

• Subsequently, the system was expanded to include acute care hospitals, other state agencies (e.g., the Departments of Environmental Protection and Public Safety), local officials, and some private groups (e.g., the Red Cross). Today, the network is available 24/7, and it encompasses the array of services and communication equipment shown in Figure VII-2. Efforts are underway to expand the information available electronically on a secure basis.

FIG. VII-2. Components of Connecticut Health Alert Network



Source: Department of Public Health

• Based on information about the status of different components of the public health communications system contained in formal assessments (e.g., infrastructure in 2003 and local communications in 2004) and the results of periodic, routine tests and planned drills conducted by DPH and its partners, several areas needing attention have been identified.

- Commonly used terms may mean different things to different partners. The September 2004 assessment of local

communications noted there was a lower affirmative response rate to a question about the availability of a HAN system than to questions about the type of system, indicating "a potential need for establishing a clearly outlined definition of a local HAN and its components."[29]

- Contact and response problems continue. Multiple DPH after-action reports prepared from early and mid-2004 indicated operational problems with the WAN and Nextel systems, and a July after-action report recommended testing the latter daily.

- System participants whose jobs do not routinely involve the use of specific communications equipment including radios need additional training on how to operate those pieces of equipment as well as transmission protocols. A May 2004 after-action report prepared by DPH indicated some of the personnel at hospital-based sites who participated in a regional drill were not familiar with response etiquette.

- Interoperability continues to be a problem for some emergency responders whose equipment does not allow them to communicate with other partners. This concern was also raised this fall by workgroups set up to advise the Department of Emergency Management and Homeland Security Coordinating Council. A task force composed of public safety officials has been meeting to address many of the technical communications issues affecting first responders.

- The existence of local communications systems to distribute information among emergency preparedness partners serving the same towns and regions is limited. The September 2004 assessment of local communications found only 23 percent of local health departments have a local HAN system, and a number of steps will be needed to improve that situation. One key step is identifying the groups to include in the system.[30]

• Regarding the availability of redundant communication systems to transmit notifications about public health emergencies, respondents to the program review surveys of local health departments and hospitals were generally positive. In terms of transmissions between themselves and their public health emergency partners, hospital coordinators rated their institutions better prepared than local health departments rated themselves. Almost two-thirds of hospital respondents indicated their facilities were well prepared in this area, while 38 percent were somewhat prepared. On the other hand, only 27 percent of the local health department respondents said they were well prepared, while 55 percent were somewhat prepared, and 19 percent were not prepared. Nearly three-quarters of both sets of respondents rated DPH effective to very effective in providing redundant systems for communication with the state.

Recommendation: **The Department of Public Health should develop a more frequent schedule for routinely testing the WANS, Nextel, and radio components of the statewide Health Alert Network. Based on the results of those tests, DPH should modify elements of the current system as needed to correct any weaknesses identified.**

The Department of Public Health has not been timely in its implementation of a comprehensive risk communication program for public health emergencies, including outreach efforts aimed at the general public.

In the context of public health preparedness, the word "communication" also refers to the dissemination of information about health and risk issues, including the provision of general, preventive, and diagnostic facts. Ideally, the state would ensure basic materials are prepared in advance of an emergency, copies are made available to emergency response partners in paper or electronic form, and methods have been identified to reach the general public and special populations during a public health threat or emergency. All of these activities should be based on a risk communications plan that is developed following an assessment.

A critical benchmark in the CDC Year Three grant, to be completed by June 2004, was preparation of an *interim* risk communications and information dissemination plan. Under the current year's grant, a *final* plan is due by August 2005. The required plan is to include a process for developing an effective risk communication capacity that enables state and local public health organizations to disseminate timely information during a public health emergency. Elements of that effort include key individuals trained in communication skills, identification of spokespersons, printed materials, timely reporting of critical information, and effective interaction with the media. Key developments in Connecticut are set out below:

• DPH began working on an interim risk communications and health information dissemination plan in 2002, based on a national model. Concerns were raised that the plan did not adequately reflect the capacities and services of local health departments/districts in Connecticut. A decision was made to develop a plan based on a risk communications needs assessment.

• In 2003, DPH hired an outside consultant to provide risk communications training as well as a risk communications assessment and plan.

• A completed risk communications assessment was submitted to DPH in April 2004. The document, prepared by an outside consultant, was based in large part on the capacity assessments for public health and health care partners previously submitted to DPH and an internal questionnaire completed by the department.

• DPH completed a draft Crisis and Emergency Risk Communication Plan in August 2004. The document notes the intent of the plan is to address the roles, responsibilities, and resources needed to provide information during a public health emergency, not to be a step-by-step guide. A revised draft plan has been distributed for comment to the Focus Area F (Risk Communication and Health Information Dissemination) Subcommittee of the Public Health Preparedness Advisory Committee as well as other departmental partners.

• While the state has made strides toward improving formal communication mechanisms with its health-related partners, it is also

important the people who live and work in Connecticut are kept informed about public health emergency issues. Depending on their reactions during an incident, the scale of the required response can be impacted positively or negatively. DPH has been working with members of the Focus Area F subcommittee and other partners to decide how much information should be given to the general public about preparing for a public health emergency, but no decision has been reached. Because of the broad focus of the draft risk communication plan, it does not contain a detailed strategy -- that is, a description of the nature and timing of specific activities and the desired results of those efforts -- for communication with residents of Connecticut prior to the occurrence of a public health emergency. One proposal under discussion by the subcommittee is a nationally recognized, three-part approach that provides the general public with information identifying risks that can affect people, tells them what the state is doing about those risks, and finally tells them what they personally should do.

• This past summer, DPH created public service spots about general preparedness that were played on radio stations in the state. The department anticipates using these spots again, possibly in the spring of 2005. In coordination with the Focus Area F subcommittee, DPH is also working on development of a public education campaign for the current grant year. However, the scale of that effort will be limited, given its budget of less than $100,000.

• Regarding the provision of incident/disease specific risk communication materials for distribution to the general public, just over half of the two groups surveyed by program review gave DPH positive ratings. Fifty-three percent of the local health department respondents said DPH was effective to very effective, 44 percent said the department was somewhat effective to not effective, and 4 percent didn't know. Respondents to the survey of hospitals had similar views -- 54 percent thought DPH was effective to very effective, one-third said somewhat effective to not effective, and 13 percent didn't know.

• In terms of local health departments having ready access to incident/disease specific risk communications materials for distribution to the public in the event of a public health emergency, 19 percent of the survey respondents said their departments are well prepared, 66 percent are somewhat prepared, and 15 percent are not prepared.

Recommendation: **The Department of Public Health should accelerate efforts to select and implement a strategy for informing the general public about what to do in the event of a public health emergency, prior to such an event occurring. In addition, the department should complete any unfinished incident/disease specific information sheets for public health emergencies likely to occur in Connecticut.**

Contract Process

Payments to contractors under the CDC and HRSA grants have been delayed considerably, slowing implementation of preparedness activities for hospitals and local health departments.

Connecticut has received approximately $20 million in federal funding each of the past two years. More than half of this money was disbursed to local and regional partners. Indeed, DPH relies on contracts with a number of private and governmental entities such as local health departments and acute care hospitals to complete many of the activities required by the two federal public health preparedness grants. These tasks include assessing capacity, developing plans, and training workers. In some cases, funds are coordinated through organizations like the Connecticut Association of Directors of Health and the two hospital-based Centers of Excellence. In other instances, payments go directly to the individual entities.

Unfortunately, contract payments to many of those entities were months behind schedule. This delayed the hiring of staff on the local and regional level and slowed the performance of contract deliverables such as plans and assessments. In written testimony submitted to the program review committee for its September 22, 2004, public hearing, one town described its experience with an award of $85,065. The town noted that it:

• received the contract for review and signature on December 1, 2003 (for the contract year that began on August 31, 2003), and was to receive the first payment upon execution of the contract;

• received the executed contract [from DPH] on March 18, 2004, but did not receive the first check (for half the award) until April 15, 2004;

• still had not received payment two (for one-quarter of the award), which was due January 30, 2004, nor payment three (also for one-quarter) due May 30, 2004, although all deliverables had been completed; and

• was notified by DPH on September 21, 2004, that the contract was extended until November 1, 2004.[31]

Three-quarters of the respondents to the hospital survey agreed somewhat (29 percent) or strongly (46 percent) that delays in disbursements from the grants impeded emergency preparedness planning for their facility. Eighty-two percent of the local health directors responding to the committee's survey agreed somewhat (27 percent) or strongly (55 percent) that the delays had a similar effect.

It appears disbursement of CDC and HRSA funds to contractors was hampered by actions inside and outside the Department of Public Health. As the level of funding and the scope of required activities grew, DPH lost staff to layoffs and an early retirement initiative. The state was also introducing a new accounting system, CORE-CT, when DPH needed to enter a large volume of contracts in a short period of time. Communication delays between DPH program and fiscal staff regarding successful performance of contract deliverables also slowed down the processing of payments.

Another complication affecting some of last year's contracts occurred in January 2004 when the attorney general instituted new oversight procedures for state contracts. Parties receiving contracts for more than $100,000 had to sign affidavits indicating they had not given gifts to relevant state workers during the preceding 10 years. If employees of the contractor had given a gift, information had to be provided about the date of the gift and its value. This issue is less of a problem for the current grant because contractors are more familiar with its provisions, and the applicable contract value has been increased to $500,000.

Another cause of delays was at the local level. It can take local health departments as long as six weeks to obtain approval from their governing municipalities to sign the contract with the state. Only after DPH receives the signed document from the contractor is it submitted for required state approvals.

Contractor frustration with the various delays was compounded by perceptions of DPH's performance related to resolving contract issues. Sixty percent of respondents to the local health department survey said DPH was somewhat effective to not effective in providing technical assistance to facilitate the administration of contracts.

For the current federal funding period, DPH fiscal staff indicated they were trying to provide contracting entities with advance information about the amount of their awards and send out required paperwork earlier than in previous years. It appears, however, that contract documents for municipal signature only went out in late November.

Future Availability of Federal Funding

Federal funding for public health preparedness has declined and will probably continue to diminish in the future. The Department of Public Health does not have a formal mechanism in place to guide the reallocation of resources if federal funding is reduced.

The program review committee makes the following observations regarding federal funding for public health emergency preparedness:

- The CDC public health preparedness and HRSA hospital preparedness grants are the largest federal grants DPH receives for emergency preparedness and represent about 83 percent ($19 million) of total federal funding awarded the agency for preparedness in 2004.

- In 2005, the CDC grant award declined to about $10.8 million from $13.2 million in 2004, while the HRSA grant award remained level for 2005 at $6.2 million.

- The overall amount available under the CDC grant program has declined nationwide from $870 million in FY 04 to $844 million in FY 05. HRSA funding has remained the same in the last two grant years at about $498 million.

- As discussed throughout this report, federal funding has supported critical laboratory improvements, planning efforts, communication upgrades, the purchase of pharmaceuticals and equipment, and training. In addition, the CDC and HRSA grants support 60 state-level positions, 57 of which are permanent and three are durational. The grants also support funding for a full-time position in each of the 50 full-time local health departments/districts.

- The CDC preparedness grant was awarded for a five-year project period that will end August 2005. CDC has indicated future grants will transition from focusing on critical capacities to evidence-based performance goals and measures. It is unclear how this will affect funding levels.

- The HRSA grant has been awarded for a four-year project period that will end in September 2007.

While these recent investments in public health preparedness by the federal government have begun to address the long neglected local public health and health care infrastructure, continued funding is by no means secure. Even related preparedness efforts funded through three formula-based Homeland Security grants are anticipated to decline between 20 and 57 percent next year. While some of the focus of preparedness efforts may move to a maintenance role, the need for a robust public health preparedness program will not diminish.

Guidance and funding from the federal government have been concentrated on building capacity in targeted focus areas. As the public health emergency preparedness program matures, the next step is to test those capabilities and actually determine how well the various systems work together. While some additional capacity building is still needed, establishing minimum targets for acceptable performance of the system and evaluating that performance should now be of paramount concern. Performance measures and benchmarks would also assist in identifying and prioritizing spending needs.

Recommendation: **The Department of Public Health should develop a strategy to manage a potential reduction in federal funding that anticipates a decrease in overall expenditures and the need for additional state spending. As part of the strategy, the department should identify preparedness gaps and overlaps, define relevant performance measures for the public health emergency preparedness system, and develop spending priorities that target specific resources based on those measures.**

While results of assessments of system performance will help guide future spending priorities, some examples of spending reallocations that the department, along with the Office of Policy and Management, may want to consider include:

- a reduction in or realignment of planning personnel currently supported by federal funding (for example, as the focus of preparedness efforts moves to a regional approach, the need for planners working on local plans should diminish);

- a consolidation of the functions performed by the two Centers of Excellence into one entity; and

- the consolidation of various regional emergency management related planning functions already funded by the state, such as those for the EMS regions, emergency management regions, and DPH regions.

Appendices

Appendix A. CDC Cooperative Agreement Critical Capacities and Benchmarks (August 31, 2004)		
Focus Area	**Critical/Enhanced Capacity**	**Critical Benchmarks**
Focus Area A: Preparedness Planning and Readiness Assessment	*CRITICAL CAPACITY #1:* To establish a process for strategic leadership, direction, coordination, and assessment of activities to ensure state and local readiness, interagency collaboration, and preparedness for bioterrorism, other outbreaks of infectious disease, and other public health threats and emergencies.	CRITICAL BENCHMARK #1: Develop and maintain a financial accounting system capable of tracking expenditures by focus area, critical capacity, and funds provided to local health agencies.
	CRITICAL CAPACITY #2: To conduct integrated assessments of public health system capacities related to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies to aid and improve planning, coordination, and implementation.	
	CRITICAL CAPACITY #3: To respond to emergencies caused by bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies through the development, exercise, and evaluation of a comprehensive public health emergency preparedness and response plan.	CRITICAL BENCHMARK #2: Develop or enhance scalable *plans* that support local, statewide, and regional response to incidents of bioterrorism, catastrophic infectious disease, such as pandemic influenza, other infectious disease outbreaks, and other public health threats and emergencies. Plans must include detailed preparations to rapidly administer vaccines and other pharmaceuticals, and to perform healthcare facility based triage and provide short-term acute psychosocial interventions as well as longer-term services to large populations. This should include the development of emergency mutual aid agreements and/or compacts, and inclusion of hospitals.
		CRITICAL BENCHMARK #3: Maintain a system for 24/7 notification or activation of the public health emergency response system.
		CRITICAL BENCHMARK #4: Exercise all plans on an annual basis to demonstrate proficiency in responding to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies.
		CRITICAL BENCHMARK #5: (HRSA/CDC Cross-Cutting Activity) Review the National Incident Management System (NIMS), and complete an assessment of conforming changes needed, if any, for your state health department and partner agencies to be in compliance in FY2005.
	CRITICAL CAPACITY #4: To effectively manage the Strategic National Stockpile (SNS), should it be deployed—translating SNS plans into firm preparations, periodic testing of SNS preparedness, and periodic training for entities and individuals that are part of SNS preparedness.	CRITICAL BENCHMARK #6: Develop or maintain, as appropriate, an SNS preparedness program within the recipient organization's overall terrorism preparedness component, including full-time personnel, that is dedicated to effective management and use of the SNS statewide. This SNS preparedness program should give priority to providing appropriate funding, human and other resources, and technical support to local and regional governments expected to respond should the SNS deploy there.
	ENHANCED CAPACITY #1: To ensure public health emergency preparedness and response through the development of necessary public health infrastructure.	
	ENHANCED CAPACITY #2: To recruit, retain, and fully develop public health leaders and managers with current knowledge and expertise in advanced management and leadership principles who will play critical roles in responding to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies.	
	ENHANCED CAPACITY #3: To ensure that public health systems have optimal capacities to respond to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies.	
Focus Area B: Surveillance and Epidemiology Capacity	CRITICAL CAPACITY #5: To rapidly detect a terrorist event through a highly functioning, mandatory reportable disease surveillance system, as evidenced by ongoing timely and complete reporting by providers and laboratories in a jurisdiction, especially of illnesses and conditions possibly resulting from bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies.	CRITICAL BENCHMARK #7: Complete development and maintain a system to receive and evaluate urgent disease reports and to communicate with and respond to the clinical or laboratory reporter regarding the report from all parts of your state and local public health jurisdictions on a 24-hour-per-day, 7-day-per-week basis.
	CRITICAL CAPACITY #6: To rapidly and effectively investigate and respond to a potential terrorist event as evidenced by a comprehensive and exercised epidemiologic response plan that addresses surge capacity, delivery of mass prophylaxis and immunizations, and pre-event development of specific epidemiologic investigation and response needs.	CRITICAL BENCHMARK #8: With local public health agencies, identify and maintain a current list of physicians and other providers with experience and/or skills in the diagnosis and treatment of infectious, chemical, or radiological diseases or conditions (including psychological and behavioral) possibly resulting from a terrorism-associated event (for example, those who have seen and treated smallpox) who may serve as consultants during a public health emergency.
		CRITICAL BENCHMARK #9: Establish a secure, Web-based reporting and notification system that provides for rapid and accurate receipt of reports of disease outbreaks and other acute health events that might suggest bioterrorism. Include provision for multiple channels for routine communications (e.g., Web, e-mail) and alert capacity for emergency notification (e.g., phone, pager) of key staff.
	CRITICAL CAPACITY #7: To rapidly and effectively investigate and respond to a potential terrorist event, as evidenced by ongoing effective state and local response to naturally occurring individual cases of urgent public health importance, outbreaks of disease, and emergency public health interventions such as emergency chemoprophylaxis or immunization activities.	CRITICAL BENCHMARK #10: At least annually, assess through exercises or after-action reports to actual events, the 24/7 capacity for response to reports of urgent cases, outbreaks, or other public health emergencies, including any events that suggest intentional release of a biologic, chemical, or radiological agent.
		CRITICAL BENCHMARK #11: At least annually, assess adequacy of state and local public health response to catastrophic infectious disease such as pandemic influenza, other outbreaks of disease and other public health emergencies.
	ENHANCED CAPACITY #4: To rapidly detect and characterize additional information about bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies through other core, cross-cutting health department surveillance systems such as vital record death reporting; medical examiner reports; emergency department, provider, or hospital discharge reporting; or ongoing population-based surveys.	
	ENHANCED CAPACITY #5: To rapidly detect and characterize additional information about bioterrorism, other	

	infectious disease outbreaks, or other public health threats or emergencies by accessing potentially relevant pre-existing data sets outside the health department, or through the development of new active or sentinel surveillance activities.	
	ENHANCED CAPACITY #6: For effective response through the creation or strengthening of pre-event, ongoing working links between health department staff and key individuals and organizations engaged in healthcare, public health, and law enforcement.	
Focus Area C: Laboratory Capacity—Biologic Agents	CRITICAL CAPACITY #8: To develop and implement a jurisdiction-wide program to provide rapid and effective laboratory services in support of the response to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies.	CRITICAL BENCHMARK #12: (HRSA/CDC Cross-cutting Activity) Based on a jurisdiction-wide inventory of all analytical laboratories, complete and implement an integrated response plan that directs how public health, hospital-based, food testing, veterinary, and environmental testing laboratories will respond to a bioterrorism incident, including: (a) roles and responsibilities; (b) inter- and intra-jurisdictional surge capacity; (c) how the plan integrates with other department-wide emergency response efforts; (d) protocols for safe transport of specimens by air and ground; and (e) how lab results will be reported and shared with local public health and law enforcement agencies, ideally through electronic means.
	CRITICAL CAPACITY #9: As a member of the Laboratory Response Network (LRN), to ensure adequate and secure laboratory facilities, reagents, and equipment to rapidly detect and correctly identify biological agents likely to be used in a bioterrorist incident.	CRITICAL BENCHMARK #13: Ensure capacity exists for LRN validated testing for all Category A agents and other Level B/C protocols as they are approved.
		CRITICAL BENCHMARK #14: Conduct at least one simulation exercise per year, involving at least one threat agent in Category A, that specifically tests laboratory readiness and capability to perform from specimen threat assessment, intake prioritization, testing, confirmation, and results reporting using the LRN website.
Focus Area D: Laboratory Capacity – Chemical Agents	CRITICAL CAPACITY #10 (Level-One Laboratories): To develop and implement a jurisdiction-wide program that provides rapid and effective laboratory response for chemical terrorism by establishing competency in collection and transport of clinical specimens to laboratories capable of measuring chemical threat agents.	CRITICAL BENCHMARK #15 – APPLICABLE TO LEVEL-ONE LABORATORIES: Hire and train a chemical terrorism laboratory coordinator (chemist or medical technologist) and assistant coordinator to advise the laboratory director, the State Terrorism Coordinator and other public health and environmental health officials about chemical terrorism incidents and preparedness. These individuals are responsible for ensuring the proper collection, labeling, and shipment of blood, urine, and other clinical specimens required in response to known or suspected chemical terrorism incidents and for ensuring associated data and communication requirements are met.
	ENHANCED CAPACITY #7 (Level-Two laboratories): In addition to establishing Level- One capacity, Level-Two Laboratories are to establish adequate and secure laboratory facilities, reagents, and equipment (e.g., ICP-MS, GC-MSD) to rapidly detect and measure in clinical specimens Level-Two chemical agents (such as cyanide-based compounds, heavy metals, and lewisites). Currently, CDC methods for Level-Two chemical agents use analytical techniques of inductively coupled plasma mass spectrometry and gas chromatography mass spectrometry. The list of Level-Two chemical agents may expand as better methods are developed. Tandem mass spectrometry methods are not required for Level-Two chemical agents.	CRITICAL BENCHMARK #16 – APPLICABLE TO LEVEL-TWO LABORATORIES ONLY: Participate in at least one exercise per year that specifically tests chemical terrorism laboratory readiness and capability to detect and identify at least one chemical-threat agent.
	ENHANCED CAPACITY #8 (Level-Three laboratories): In addition to maintaining Level- One and Level-Two capacity, Level-Three laboratories are to establish adequate and secure laboratory facilities, reagents, and equipment (e.g., tandem mass spectrometer) to rapidly detect and measure in clinical specimens Level-Three chemical agents (such as nerve agents, mustards, mycotoxins, and selected toxic industrial chemicals). Level-Three laboratories will also provide surge capacity to CDC and serve as referral laboratories for Level-One and Level-Two laboratories. The five laboratories currently funded under Focus Area D (California, Michigan, New Mexico, New York and Virginia) are considered Level-Three laboratories.	CRITICAL BENCHMARK #17 – APPLICABLE TO LEVEL-THREE LABORATORIES ONLY: Participate in at least one exercise per year that specifically tests chemical terrorism laboratory readiness and capability to detect and identify at least two chemical-threat agents.
Focus Area E: Health Alert Network/ Communication and Information Technology	CRITICAL CAPACITY #11: To ensure effective communications connectivity among public health departments, healthcare organizations, law enforcement organizations, public officials, and others (e.g. hospitals, physicians, pharmacies, fire departments, 911 Centers)	CRITICAL BENCHMARK #18: Implement a plan for connectivity of key stakeholders involved in a public health detection and response including a 24/7 flow of critical health information,
		CRITICAL BENCHMARK #19: Ensure, by testing and documentation, at least 90 percent of the key stakeholders involved in a public health response can receive and send critical health information including alerts and critical event data.
	CRITICAL CAPACITY #12: To ensure a method of emergency communication for participants in public health emergency response that is fully redundant with standard telecommunications (telephone, e-mail, Internet, etc.).	CRITICAL BENCHMARK #20: Routinely assess the timeliness and completeness of the redundant method of alerting, as it exists to reach participants in public health response.
	CRITICAL CAPACITY #13: To ensure the ongoing protection of critical data and information systems and capabilities for continuity of operations in accordance with IT function #8	
	CRITICAL CAPACITY #14: To ensure secure electronic exchange of clinical, laboratory, environmental, and other public health information in standard formats between the computer systems of public health partners.	CRITICAL BENCHMARK #21: Ensure that the technical infrastructure exists to exchange a variety of data types, including possible cases, possible contacts, specimen information, environmental sample information, lab results, facilities, and possible threat information.
		CRITICAL BENCHMARK #22: Adopt and implement LOINC as the standard for electronic exchange of clinical laboratory results and associated clinical observations between and among public health department laboratories, hospital-based laboratories, and other entities, including collaborating academic health centers, that have a major role in responding to bioterrorism and other public health emergencies. b. In connection with CDC-provided technical assistance, identify areas where refinement or extension of LOINC would enhance public health emergency

		preparedness.
	ENHANCED CAPACITY #9: To provide or participate in an emergency response management system to aid the deployment and support of response teams, the management of response resources, and the facilitation of inter-organizational communication and coordination.	
	ENHANCED CAPACITY #10: To ensure full information technology support and services.	
Focus Area F: Risk Communication and Health Information Dissemination	CRITICAL CAPACITY #15: To provide needed health/risk information to the public and key partners during a terrorism event by establishing critical baseline information about the current communication needs and barriers within individual communities, and identifying effective channels of communication for reaching the general public and special populations during public health threats and emergencies.	CRITICAL BENCHMARK #23: Complete a plan for crisis and emergency risk communication (CERC) and information dissemination to educate the media, public, partners and stakeholders regarding risks associated with the real or apparent threat and an effective public response.
		CRITICAL BENCHMARK #24: Conduct trainings, drills, and exercises involving communication systems to ensure channels of communication to inform the public, partners, and stakeholders about recommendations during public health emergencies work in a timely and effective manner.
	ENHANCED CAPACITY #11: To identify, develop and improve crisis and emergency-risk communication planning with respect to the needs of special populations, cultural and psychological aspects of crisis communication, and communication barriers to effective public health response during public health emergencies including terrorism, infectious disease outbreak and other public health emergencies.	
Focus Area G: Education and Training	CRITICAL CAPACITY #16: To ensure the delivery of appropriate education and training to key public health professionals, infectious disease specialists, emergency department personnel, and other healthcare providers (including mental health care) in preparedness for and response to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies, either directly or through the use (where possible) of existing curricula and other sources, including Centers for Public Health Preparedness, other schools of public health, schools of medicine, academic health centers, CDC training networks, and other providers.	CRITICAL BENCHMARK #25: Implement a training plan, which ensures priority preparedness training is provided across all Focus Areas to the state and local public health workforce, healthcare professionals, and laboratorians.
	ENHANCED CAPACITY #12: To provide directly or through other organizations the ongoing systematic evaluation of the effectiveness of training, and the incorporation of lessons learned from performance during bioterrorism drills, simulations, other exercises, events, and evaluations of those exercises.	

Source: *Continuation Guidance for Cooperative Agreement on Public Health Preparedness and Response for Bioterrorism- Budget Year Five Program Announcement*, Centers for Disease Control and Prevention, June 14, 2004

Appendix B. HRSA Cooperative Agreement Priority Areas and Benchmarks

Priority Number	Priority Area	Critical Benchmarks
1	ADMINISTRATION	*Critical Benchmark #1: Financial Accountability* - Develop and maintain a financial accounting system capable of tracking expenditures by critical benchmark and by funds allocated to hospitals and other health care entities.
2	REGIONAL SURGE CAPACITY	*Critical Benchmark #2-1: Surge Capacity: Beds* - Establish a system that allows the triage, treatment and initial stabilization of 500 adult and pediatric patients per 1,000,000 awardee jurisdiction (1:2000), above the current daily staffed bed capacity, with acute illnesses or trauma requiring hospitalization from a chemical, biological, radiological, nuclear or explosive (CBRN&E) incident
		Critical Benchmark #2-2: Surge Capacity: Isolation Capacity - Ensure that all participating hospitals have the capacity to maintain, in negative pressure isolation, at least one suspected case of a highly infectious disease (e.g., small pox, pneumonic plague, SARS, Influenza and hemorrhagic fevers) or for any febrile patient with a suspect rash or other symptoms of concern who might possibly be developing a potentially highly communicable disease. In addition, the awardee must identify at least one regional healthcare facility in each awardee hospital preparedness region as defined by the awardee's FY 2003 work plan that is able to support the initial evaluation and treatment of at least 10 adult and pediatric patients at a time in negative pressure isolation
		Critical Benchmark #2-3: Surge Capacity: Health Care Personnel - Establish a response system that allows the immediate deployment of additional health care personnel in support of surge bed capacity noted in Critical Benchmark # 2-1. The number of health care personnel must be linked to already established patient care ratios noted by the awardee's Patient Care Practice Acts based on 24 hours operations.
		Critical Benchmark #2-4: Surge Capacity: Advance Registration System -

		Develop a system that allows for the advance registration and credentialing of clinicians needed to augment a hospital or other medical facility to meet patient/victim care increased surge capacity needs.
		Critical Benchmark #2-5: Surge Capacity: Pharmaceutical Caches - Establish regional plans that insure a sufficient supply of pharmaceuticals to provide prophylaxis for 3 days to hospital personnel (medical and ancillary staff), emergency first responders and their families as well as for the general community -- in the wake of a terrorist-induced outbreak of anthrax or other disease for which such countermeasures are appropriate.
		Critical Benchmark #2-6: Surge Capacity: Personal Protective Equipment - Each awardee must ensure adequate personal protective equipment (PPE) per awardee defined region, to protect current and additional health care personnel, during a chemical, biological, radiological or nuclear incident
		Critical Benchmark #2-7: Surge Capacity: Decontamination - Ensure that adequate portable or fixed decontamination systems exist for managing adult & pediatric patients as well as health care personnel, who have been exposed during a chemical, biological, radiological, nuclear or explosive incident in accordance with the numbers associated with CBM # 2-1 & # 2-3. All decontamination assets must be based on how many patients/providers can be decontaminated on an hourly basis. The awardee should plan to be able to decontaminate all patients and providers within 3 hours from the onset of the event.
		Critical Benchmark #2-8: Surge Capacity: Behavioral (Psychosocial) Health - Enhance the networking capacity and training of health care professionals to be able to recognize, treat and coordinate care related to the behavioral health consequences of bioterrorism or other public health emergencies.
		Critical Benchmark #2-9: Surge Capacity: Trauma and Burn Care - Enhance statewide trauma and burn care capacity to be able to respond to a mass casualty incident due to terrorism. This plan should ensure the capability of providing trauma care to at least 50 severely injured adult and pediatric patients per million of population.
		Critical Benchmark #2-10: Surge Capacity: Communications and Information Technology - Establish a secure and redundant communications system that ensures connectivity during a terrorist incident or other public health emergency between health care facilities and state and local health departments, emergency medical services, emergency management agencies, public safety agencies, neighboring jurisdictions and federal public health officials.
3	EMERGENCY MEDICAL SERVICES	*Critical Benchmark #3: Emergency Medical Services* - Enhance the statewide mutual aid plan for upgrading and deploying EMS units in jurisdictions/regions they do not normally cover, in response to a mass casualty incident due to terrorism. This plan must ensure the capability of providing EMS triage and transportation for at least 500 adult and pediatric patients per million population.
4	LINKAGES TO PUBLIC HEALTH DEPARTMENTS	*Critical Benchmark #4-1: Hospital Laboratories* - Implement a hospital laboratory program that is coordinated with currently funded CDC laboratory capacity efforts, and which provides rapid and effective hospital laboratory services in response to terrorism and other public health emergencies.
		Critical Benchmark #4-2: Surveillance - Enhance the capability of rural and urban hospitals, clinics, emergency medical services systems and poison control centers to report syndromic and diagnostic data that is suggestive of terrorism to their associated local and state health departments on a 24-hour-a-day, 7-day-a-week basis.
5	EDUCATION AND PREPAREDNESS TRAINING	*Critical Benchmark #5: Education and Preparedness Training* - Awardees will utilize competency based education and training programs for adult and pediatric pre-hospital, hospital, and outpatient health care personnel responding to a terrorist incident.
6	TERRORISM PREPAREDNESS EXERCISES	*Critical Benchmark #6: Terrorism Preparedness Exercises* - As part of the state or jurisdiction's bioterrorism hospital preparedness

		plan, exercises/drills will be conducted during FY 2004. These exercises/drills should encompass at least one biological agent; the inclusion of scenarios involving radiological and chemical agents as well as explosives may also be included as part of the exercises/drills.

Source: *National Bioterrorism Hospital Preparedness Program, FY 2004 Continuation Guidance*, Health Resources and Services Administration, May 2004.

Appendix C. Preparedness Advisory Committee Members	
AARP Connecticut	CT Fire Chiefs Association
American Academy of Pediatrics CT Chapter	CT General Assembly - 18 members
American Red Cross	CT Hospital Association
American Society for Therapeutic Radiology and Oncology	CT Infectious Disease Society
Association of CT Ambulance Providers	CT Military Department
Association of Health Plans	CT Nurses Association
Board of Trustees for Connecticut State Universities	CT Office of Emergency Management
Capitol Region Metropolitan Medical Response System (MMRS)	CT Partnership for Workforce Development
CT Association for Home Care, Inc.	CT Poison Control Center
CT Association for the Education of Young Children	CT Primary Care Association
CT Association of Directors of Health	CT Public Health Association
CT Association of Health Care Facilities	CT State Medical Society
CT Association of Not-for-profit Providers for the Aging	Disaster Medical Assistance Team (DMAT)
CT Association of Public Health Nurses	Emergency Department Directors Group
CT Association of School Based Health Centers	Governor's Office
CT Career Fire Chiefs Association	Hartford Health Department
CT Chiefs of Police Association	Hartford Hospital
CT Commission on Fire Prevention and Control	Infoline
CT Conference of Municipalities	International Association of Hispanic Firefighters
CT Council of Small Towns	Mashantucket Pequot Tribe
CT Department of Children and Families	Mohegan Tribal Health
CT Department of Environmental Protection	Office of Policy & Management
CT Department of Mental Health and Addiction Services	Office of the Chief Medical Examiner
CT Department of Public Health	Pro Health Physicians, Inc.
CT Department of Public Safety	Qualidigm
CT Department of Transportation	State Office of Rural Health
CT Department of Veterans' Affairs	U.S. Postal Service
CT Emergency Nurses Association	U.S. Department of Homeland Security, Office of Emergency Response
CT EMS Advisory Board	University of Connecticut Health Center
CT EMS Medical Advisory Committee	Veterans Administration CT Health Care System
CT Environmental Health Association	Yale New Haven Health Systems

APPENDIX D. Selected State Emergency Plans With Public Health Components		
Name of Plan	**Purpose of Plan**	**Public Health Component**
Emergency Management Plan (EMP) (April 1986; revised March 1991) ---------- Natural Disasters Response Plan (March 1991)	Facilitate a coordinated and effective response by all levels of government to the full range of natural and man-made hazards that might affect the residents of Connecticut; EMP consists of: • *basic plan* -- "generic starting point" for supplemental state/local plans • *hazard specific plans* • *functional support plans* • *agency annexes* -- internal agency operating procedures	Goal is to maximize preservation of life and property in times of disaster or emergency and correct or alleviate as expeditiously as possible serious disaster or emergency related conditions that present a threat to the health or welfare of Connecticut residents
Emergency Alert System Operational Plan (January 2001)	Define procedures for broadcast/cable services and designated government officials of Conn. to disseminate emergency information/instructions in	None, but if event prompting warning occurs, a need for public health services or medical care may result

	threatened or actual emergencies	
Y2K Emergency Response Plan (September 1999; revised 12/15/99)	Facilitate response actions by the state to possible disruptions caused by the change of the millennium (Y2K) and ensure state agency responses are coordinated with the response actions of local, federal, and private agencies	DPH responsibilities include monitoring efficacy of health care facilities, assisting governor's office with info on public health matters, and providing info re: medical facilities/capabilities/resources
Health Care State Support Plan 2001 Draft (March 2001; revised 04/06/01)	Facilitate state emergency support for nursing homes and group homes so facilities can continue to provide clients with quality care during a strike by unionized workers	Goal is to provide clients with quality care and provide health care employees and replacement workers with safe access/egress from workplace
Catastrophic Disaster Plan Draft (December 2003)	Establish state policies for response to catastrophic disaster, which requires emergency operations be sustained at higher level and implementation of Federal Response Plan; outline interaction of state/local agencies with federal agencies assigned to assist	DPH responsibilities include developing requests for federal medical assistance, providing info about in-state medical facilities/ capabilities/resources, performing field assessments to identify public health and medical issues
Natural Disaster Plan Draft (December 2003)	Establish mission assignments of state agencies in responding to natural disasters of a severity and magnitude typical for Connecticut; describe interaction of state, local, and private agencies with the federal government	If mass casualties, DPH monitor and assist EMS Control Officer; more serious public health problems likely to be lack of refrigeration, sanitation, and potable water, disruption of pharmaceutical operations, and vector proliferation
Consequence Management Guide For Deliberately Caused Incidents Involving Chemical Agents Draft (November 2003)	Provide response agencies with concept of operations for response to chemical weapons of mass destruction (WMD) incident Outline responsibilities/interactions of the federal/state/local/private agencies that will respond	DPH responsibilities include assisting local officials develop appropriate public health response strategies, acting as state counter-part for federal health and medical assistance, tracking casualty/fatality info, providing toxicological and health risk assessment regarding the release, and analyzing samples at State Health Department Lab
Smallpox Preparedness and Response Plan (December 1, 2002)	Enable state and local health departments to respond quickly and effectively to one or more confirmed cases of smallpox (covers single-case, multiple-case, and vaccine-resistant smallpox scenarios -- may also serve as guideline for other scenarios)	DPH lead in development of smallpox control efforts, including planning, resource identification, training, surveillance monitoring, and communication; local health departments and acute hospitals participate in planning/surveillance monitoring activities and would be involved in isolation/quarantine activities; LHDs run mass vaccination clinics and hospitals run employee vaccination clinics
Pandemic Influenza Preparedness Plan Draft (February 2004)	Provide framework for various government agencies and private organizations to work together to mitigate the consequences of pandemic influenza on the people of Connecticut	DPH responsible for overall direction and control of health care personnel and resources related to pandemic influenza control at state level; if needed, local health departments would implement mass vaccination clinics (based on smallpox preparedness plan)
Plan for the Distribution of the Strategic National Stockpile (SNS) Draft	Describe how Connecticut will prepare for, obtain, and redistribute pharmaceutical and medical material from SNS to designated facilities	DPH operates Connecticut SNS Program
Connecticut Helps Oversight Council (CHOC) Operations Manual	Coordinate appropriate health and human services to disaster victims and their families, primarily long-term recovery services days or weeks after a	DPH as state leader in public health policy/advocacy is center of a comprehensive network of public health services and partner to local

(May 5, 2004) Based on FEMA *Guide For All Hazard Emergency Operations Planning*	disaster -- maximize the state's response to a disaster and meet the needs of those directly affected by disasters through a personal approach and individualized case management	health departments for which it provides advocacy, training and certification, technical assistance, consultation, and specialty services not available at local level
Sources of Data: the individual plans listed in column one		

APPENDIX E - LOCAL HEALTH DEPARTMENT DIRECTORS SURVEY

1 The local public health department/district that you work for is a:

	Response Total
Full-Time Municipal Department	22
Part-Time Municipal Department	25
Full-Time District	17
Response Total	64

2 What is the combined population of the town(s) your health department/district serves?

	Response Total
Less than 10000	10
10000 to 25999	8
26000 to 59999	20
60000 or More	15
Response Total	53

3 Please indicate the extent to which you agree or disagree with each of the following statements.

	Strongly Agree	%	Somewhat Agree	%	Somewhat Disagree	%	Strongly Disagree	%	Don't Know	%	Response Total
a The perspectives of local health departments/districts are sufficiently represented in the state's planning process for the federal bioterrorism/public health preparedness grants.	6	11%	29	52%	8	14%	9	16%	4	7%	56
b Delays in grant disbursements from the Department of Public Health (DPH) have impeded public health emergency preparedness planning for my department/district.	30	55%	15	27%	4	7%	3	5%	3	5%	55
c Preparing for bioterrorism and other public health emergencies has diminished the ability of my health department/district to carry out its routine public health responsibilities.	26	46%	16	29%	9	16%	5	9%	0	0%	56
d The use of different regional planning configurations by different state emergency preparedness programs hinders the process for developing regional public health emergency response plans.	32	57%	18	32%	4	7%	1	2%	1	2%	56
e The perspective of the health department/ district I work for is sufficiently represented in the LOCAL emergency planning process in each of the towns served by my department/district.	21	38%	23	41%	8	14%	4	7%	0	0%	56
f Overall the emergency preparedness training for local health department/district workers provided through the state's public health preparedness program meets the needs of my staff.	10	18%	28	51%	10	18%	6	11%	1	2%	55
g The public health emergency preparedness needs of towns served by part-time health departments are adequately addressed in the current planning process.	4	7%	7	13%	13	23%	22	39%	10	18%	56

4 Compared to August 2001 would you say preparedness for a public health emergency in Connecticut has gotten better gotten worse or is about the same?

Response Total

Better	49	89%
Worse	0	0%
About the Same	6	11%
Response Total	55	

5 Please indicate the level of preparedness of your local health department/district with respect to each of the items listed below.

		Well Prepared	%	Somewhat Prepared	%	Not Prepared	%	Response Total
a	An up-to-date local public health emergency response plan that clearly identifies the roles and responsibilities of your staff.	14	22%	41	65%	8	13%	63
b	Development of and participation in periodic drills or exercises that adequately test the local public health emergency response plan.	9	14%	33	52%	22	34%	64
c	A plan to quarantine and/or isolate persons from the general population in the event of a public health emergency.	2	3%	37	59%	24	38%	63
d	Formal agreements with neighboring jurisdictions and local public health partners to provide assistance during a public health emergency.	16	25%	25	39%	23	36%	64
e	Adequate number of personnel trained to perform public health functions in the event of a public health emergency lasting several days.	3	5%	30	47%	31	48%	64
f	Redundant communication systems to transmit notifications about public health emergencies between your health department/district and other local public health emergency partners.	17	27%	35	55%	12	19%	64
g	Sufficient volunteers including medical personnel and support staff to provide services for a mass vaccination/prophylaxis clinic.	4	6%	28	44%	32	50%	64
h	Ability to operate within an incident command structure during a public health emergency.	22	34%	28	44%	14	22%	64
I	Ready access to incident/disease specific risk communication materials for distribution to the general public in the event of a public health emergency.	14	22%	37	58%	13	20%	64

6 On a scale of 1 to 4 please rate the effectiveness of the Connecticut Department of Public Health in performing each of the tasks listed below where 1 = Very Effective and 4 = Not Effective.

		Very Effective 1	%	2	%	3	%	Not Effective 4	%	Don't Know	%	Response Total
a	Providing overall direction and leadership regarding public health preparedness for emergencies.	3	5%	24	44%	18	33%	9	16%	1	2%	55
b	Providing redundant communication systems that allow for the coordination and transfer of information between the state and local health departments during a public health emergency.	13	24%	26	47%	12	22%	4	7%	0	0%	55
c	Providing timely feedback to local health departments/districts on the results of laboratory analyses of suspicious samples.	8	15%	24	44%	7	13%	3	5%	13	24%	55
d	Establishing a health surveillance and monitoring system.	8	15%	25	45%	12	22%	8	15%	2	4%	55
e	Providing useful feedback on local public health emergency response plans.	4	8%	16	30%	22	42%	9	17%	2	4%	53
f	Providing incident/disease specific risk communication materials for distribution to the general public.	6	11%	23	42%	12	22%	12	22%	2	4%	55
g	Planning for the isolation and confinement of persons in the event of a public health emergency.	2	4%	19	35%	19	35%	9	16%	6	11%	55
h	Providing technical assistance to facilitate the administration of DPH contracts with local health departments/districts.	6	11%	12	22%	14	25%	19	35%	4	7%	55

7 On a scale of 1 to 4 please rate the effectiveness of the Connecticut Association of Directors of Health in performing each of the tasks listed below where 1 = Very Effective and 4 = Not Effective.

		Very Effective 1	%	2	%	3	%	Not Effective 4	%	Don't Know	%	Response Total
a	Providing technical assistance to local health departments/districts regarding public health emergency preparedness planning.	22	41%	20	37%	7	13%	3	6%	2	4%	54
b	Providing appropriate emergency preparedness training	22	41%	23	43%	4	7%	4	7%	1	2%	54

and educational programs for local health department/district staff.

8 If additional funding became available for public health preparedness efforts what would be your top priority for how the money should be spent?

Total Respondents 44

Response Areas	Coordination with public health depts. or first responders or local government	Additional equipment (e.g., decontamination, protective, and quarantine suites)	Training and education (e.g., specific preparedness training, public education, reimbursement for training, EMS training)	Additional Staff	Improvements to local public health infrastructure	Additional funding to maintain improvements or funding to DPH	More Drills	Establish regional response teams or provide additional regional resources	All Hazards Planning	Coordinated volunteer recruitment
Total Comments	3	5	11	14	1	4	3	7	1	1
Program review staff analyzed and grouped respondent comments into the above general response area categories. Some respondents provided more than one comment.										

9 If there are any other comments or suggestions you would like to make about public health preparedness for emergencies in Connecticut please add them below.

Total Respondents 34

Response Areas	Better coordination with state or federal agencies	Criticism of DPH leadership/ direction	Criticism of DPH contracting or payments	Regional planning issues (e.g., catchment areas, regional response teams, coordination)	Need for training or better training	Need for surge capacity/ mutual aid agreements	More funding for public health and local public health infrastructure	Lack of part-time health department participation or funding	More participation in surveillance system	Isolation/ quarantine issues (i.e., location identification, or roles and responsibilities, or smallpox planning)	More drills needed	Universal descrip-tion of public health roles and respon-sibilities
Total Comments	3	7	5	6	2	2	4	4	1	3	2	2
Program review staff analyzed and grouped respondent comments into the above general response area categories. Some respondents provided more than one comment.												

Survey Methodology:

Program review committee staff sent surveys to all 88 local health directors in Connecticut who represent 98 health departments/districts. The survey was electronically sent out on October 14, 2004, to local health directors based on email addresses obtained from the state Department of Public Health's web site. Two electronic follow-up notices were sent on October 26, 2004, and November 7, 2004. Telephone contact was also made on November 12, 2004.

Four part-time directors, who oversee more than one part-time department, received a slightly different survey than everyone else. This survey allowed these directors to provide a response for each individual part-time department they oversee.

Fifty-seven health directors replied, for a response rate of 65 percent. The 57 health directors represent 65 different departments/districts or 66 percent of all departments/districts.

A total of 17 part-time directors responded representing 25 departments. Seventeen full-time municipal directors and 22 full-time district directors responded, representing 39 departments/districts. One respondent did not identify what type of department/district he/she represented.

APPENDIX F - HOSPITAL EMERGENCY PLAN COORDINATORS SURVEY

1 Please indicate staffed bed capacity for your hospital.

	Response Total
0-99 staffed beds	7
100-199 staffed beds	7

200-399 staffed beds	8
400+ staffed beds	4
Response Total	26

2 Which hospital tier are you located in?

	Response Total
Northern Tier	11
Southern Tier	15
Response Total	26

Note: Two respondents did not indicate the size or geographic location of the facility they work for.

3 Please indicate the extent to which you agree or disagree with each of the following statements.

	Strongly Agree	%	Somewhat Agree	%	Somewhat Disagree	%	Strongly Disagree	%	Don't Know	%	Total
a The perspectives of acute care hospitals are sufficiently represented in the state's planning process for the federal bioterrorism/public health preparedness grants.	3	13%	13	54%	5	21%	3	13%	0	0%	24
b Delays in disbursements from the federal bioterrorism/public health preparedness grants have impeded emergency preparedness planning for my hospital.	11	46%	7	29%	4	17%	2	8%	0	0%	24
c The emergency management plan for the hospital you work for is integrated with the local emergency response plans for the municipalities in your public health preparedness region.	13	54%	6	25%	4	17%	1	4%	0	0%	24
d Emergency management planning efforts between the hospital you work for and emergency medical service providers in your public health preparedness region are well coordinated.	12	50%	8	33%	4	17%	0	0%	0	0%	24
e Emergency management planning efforts between the hospital you work for and local public health departments in your public health preparedness region are well coordinated.	10	42%	9	38%	4	17%	0	0%	1	4%	24
f The use of different regional planning configurations by different state emergency preparedness programs hinders the process for developing a regional emergency response plan.	11	46%	8	33%	4	17%	0	0%	1	4%	24
g Overall the emergency preparedness training for hospital staff provided through the state's public health preparedness program meets the needs of my hospital's staff.	2	8%	6	25%	7	29%	7	29%	2	8%	24

4 Compared to August 2001 would you say preparedness for a public health emergency in Connecticut has gotten better gotten worse or is about the same?

	Response Total	%
Better	23	92%
Worse	0	0%
About the Same	2	8%
Total Respondents	25	

5 Please indicate the level of preparedness of your hospital with respect to each of the items listed below.

	Well Prepared	%	Somewhat Prepared	%	Not Prepared	%	Total
a An up-to-date and comprehensive hospital emergency response plan.	18	75%	6	25%	0	0%	24
b Participation in periodic drills or exercises with emergency responders in your region that adequately test the hospital's emergency response plan.	13	54%	11	46%	0	0%	24
c Inpatient and clinical staff trained to recognize symptoms and diseases associated with biological agents.	6	25%	16	67%	2	8%	24

d Procedures for the discharge or movement of patients from the hospital to other locations in order to increase the number of staffed beds available for victims of a public health emergency.	8	33%	10	42%	6	25%	24
e Adequate amount of personal protective equipment for biological agents to meet the needs of hospital staff.	10	42%	11	46%	3	13%	24
f Adequate resources for chemical and biological decontamination of staff and patients in the event of a public health emergency.	8	33%	13	54%	3	13%	24
g Adequate stockpile of antibiotics to use for prophylaxis treatment of hospital staff in the event of a bioterrorism incident.	7	29%	13	54%	4	17%	24
h Adequate capacity to address a mass casualty incident due to a public health emergency.	5	21%	12	50%	7	29%	24
l Redundant communication systems to transmit notifications about public health emergencies between your hospital and other public health emergency partners.	15	63%	9	38%	0	0%	24

6 On a scale of 1 to 4 please rate the effectiveness of the Connecticut Department of Public Health in performing each of the tasks listed below where 1 = Very Effective and 4 = Not Effective.

	Very Effective 1	%	2	%	3	%	Not Effective 4	%	Don't Know	%	Total
a Providing overall direction and leadership regarding public health preparedness for emergencies.	1	4%	8	33%	11	46%	3	13%	1	4%	24
b Planning for sufficient statewide surge capacity for hospitals in the event of a public health emergency.	1	4%	9	38%	8	33%	4	17%	2	8%	24
c Providing redundant communication systems that allow for the coordination and transfer of information between the state and hospitals during a public health emergency.	6	25%	11	46%	5	21%	2	8%	0	0%	24
d Providing timely feedback on the results of laboratory analyses of suspicious samples.	2	8%	5	21%	6	25%	0	0%	11	46%	24
e Establishing a hospital syndromic surveillance program.	3	13%	7	29%	6	25%	5	21%	3	13%	24
f Providing incident/disease specific risk communication materials for distribution to the general public.	5	21%	8	33%	6	25%	2	8%	3	13%	24

7 On a scale of 1 to 4 please rate the effectiveness of the Center of Excellence for your region in performing each of the tasks listed below where 1 = Very Effective and 4 = Not Effective.

	Very Effective 1	%	2	%	3	%	Not Effective 4	%	Don't Know	%	Total
a Providing technical assistance to my hospital regarding emergency preparedness planning.	7	29%	10	42%	3	13%	4	17%	0	0%	24
b Providing appropriate emergency preparedness training and educational programs for hospital staff.	7	29%	9	38%	4	17%	4	17%	0	0%	24
c Providing timely communications regarding emerging bioterrorism and infectious disease issues.	10	42%	12	50%	2	8%	0	0%	0	0%	24

8 If additional funding became available for public health preparedness efforts what would be your top priority for how the money should be spent?

Total Respondents 23

Response Areas	Coordination with public health depts. or first responders or local government	Additional equipment (e.g., decontamination, protective, and quarantine suites)	Training and education (e.g., specific preparedness training, public education, reimbursement for training, EMS training)	Additional Staff	Continued funding to maintain preparedness initiatives	Assessment of preparedness efforts by team outside of hospital personnel
Total Comments	4	9	14	3	1	1
Program review staff analyzed and grouped respondent comments into the above general response area categories. Some respondents provided more than one comment.						

9 If there are any other comments or suggestions you would like to make about public health preparedness for emergencies in Connecticut please add them below.

Total Respondents 10

Response Areas	Better coordinated planning with local responders or state agencies or between administrative and operational agencies	Improvements to planning process (i.e., More all-hazards planning, better surge planning)	Too many Centers of Excellence	Need for training for first responders	Too many mandates	DPH helpful in Communications area
Total Comments	5	2	2	2	1	1
Program review staff analyzed and grouped respondent comments into the above general response area categories. Some respondents provided more than one comment.						

Survey Methodology:

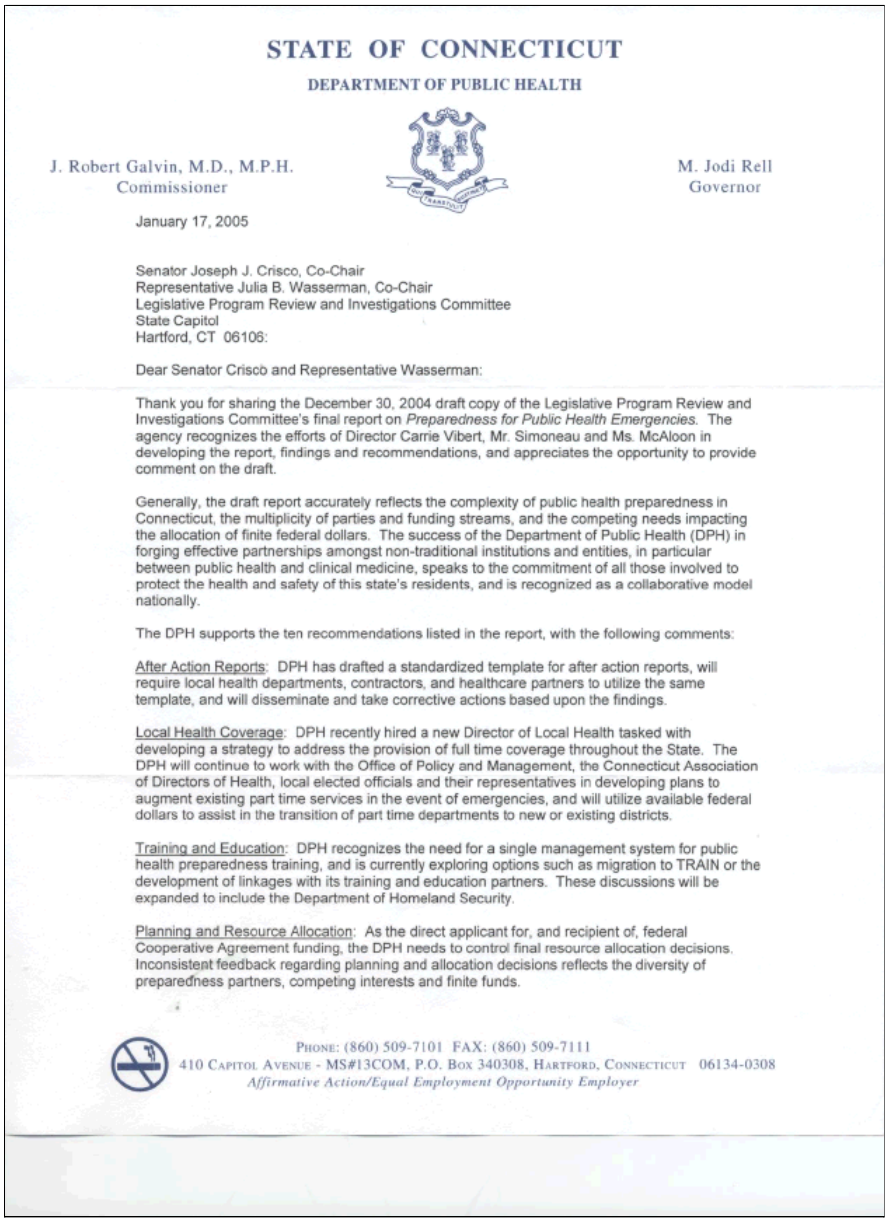
Program review committee staff sent surveys to the emergency response plan coordinators for the 32 acute care hospitals in Connecticut. The survey was electronically sent out on November 1, 2004, to the hospital coordinators based on email addresses obtained from the state Department of Public Health. Two electronic follow-up notices were sent on November 8, 2004, and November 15, 2004. Telephone contact was also made on November 19, 2004.

One coordinator, who oversees more than one hospital emergency response plan, received a slightly different survey than everyone else. This survey allowed the coordinator to provide a response for each individual hospital plan.

Twenty-eight emergency response plan coordinators replied, for a response rate of 88 percent.

APPENDIX G

Agency Response



STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

J. Robert Galvin, M.D., M.P.H.
Commissioner

M. Jodi Rell
Governor

January 17, 2005

Senator Joseph J. Crisco, Co-Chair
Representative Julia B. Wasserman, Co-Chair
Legislative Program Review and Investigations Committee
State Capitol
Hartford, CT 06106:

Dear Senator Crisco and Representative Wasserman:

Thank you for sharing the December 30, 2004 draft copy of the Legislative Program Review and Investigations Committee's final report on *Preparedness for Public Health Emergencies*. The agency recognizes the efforts of Director Carrie Vibert, Mr. Simoneau and Ms. McAloon in developing the report, findings and recommendations, and appreciates the opportunity to provide comment on the draft.

Generally, the draft report accurately reflects the complexity of public health preparedness in Connecticut, the multiplicity of parties and funding streams, and the competing needs impacting the allocation of finite federal dollars. The success of the Department of Public Health (DPH) in forging effective partnerships amongst non-traditional institutions and entities, in particular between public health and clinical medicine, speaks to the commitment of all those involved to protect the health and safety of this state's residents, and is recognized as a collaborative model nationally.

The DPH supports the ten recommendations listed in the report, with the following comments:

After Action Reports: DPH has drafted a standardized template for after action reports, will require local health departments, contractors, and healthcare partners to utilize the same template, and will disseminate and take corrective actions based upon the findings.

Local Health Coverage: DPH recently hired a new Director of Local Health tasked with developing a strategy to address the provision of full time coverage throughout the State. The DPH will continue to work with the Office of Policy and Management, the Connecticut Association of Directors of Health, local elected officials and their representatives in developing plans to augment existing part time services in the event of emergencies, and will utilize available federal dollars to assist in the transition of part time departments to new or existing districts.

Training and Education: DPH recognizes the need for a single management system for public health preparedness training, and is currently exploring options such as migration to TRAIN or the development of linkages with its training and education partners. These discussions will be expanded to include the Department of Homeland Security.

Planning and Resource Allocation: As the direct applicant for, and recipient of, federal Cooperative Agreement funding, the DPH needs to control final resource allocation decisions. Inconsistent feedback regarding planning and allocation decisions reflects the diversity of preparedness partners, competing interests and finite funds.

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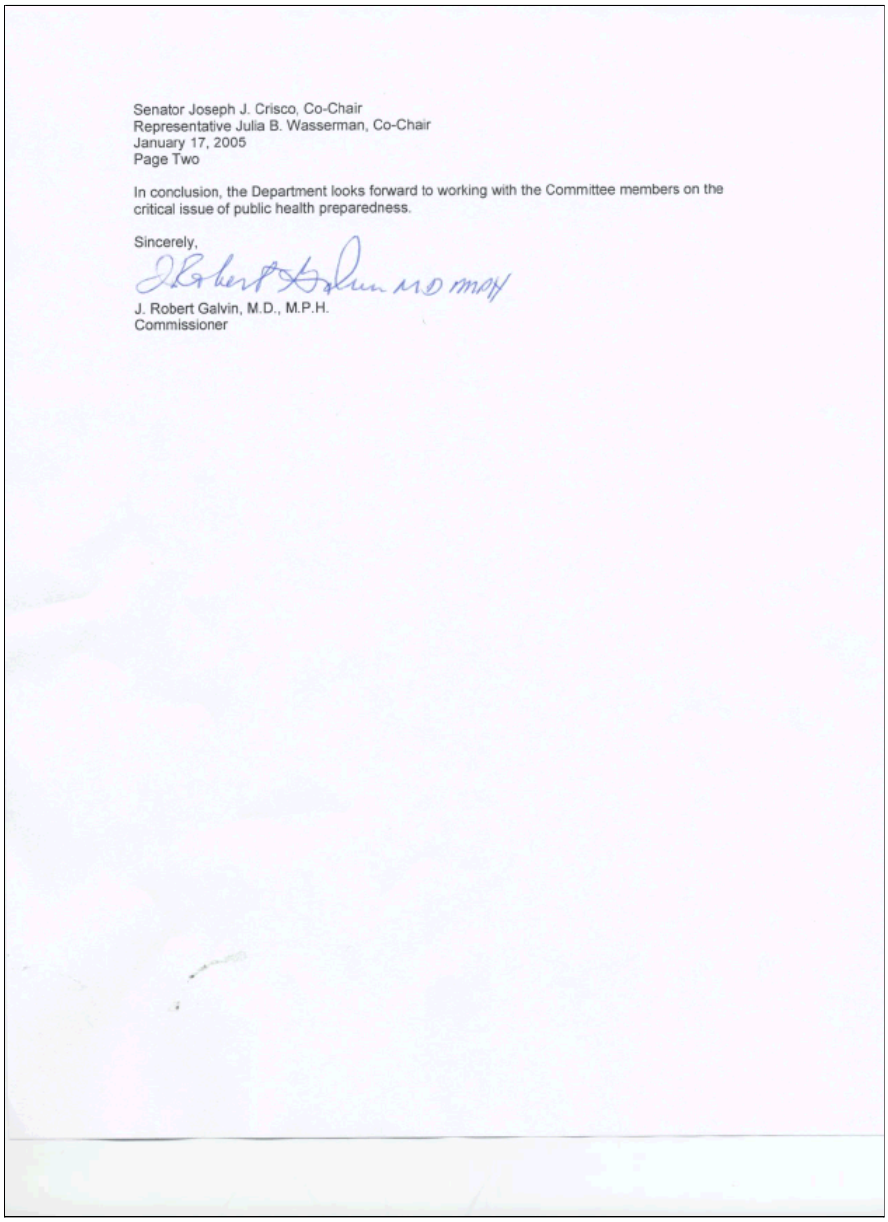

Senator Joseph J. Crisco, Co-Chair
Representative Julia B. Wasserman, Co-Chair
January 17, 2005
Page Two

In conclusion, the Department looks forward to working with the Committee members on the critical issue of public health preparedness.

Sincerely,

J. Robert Galvin, M.D., M.P.H.
Commissioner

[1] The American Medical Association defines *bioterrorism* as the deliberate or threatened use of bacteria, viruses, and toxins to cause disease, death, or fear. Bioterrorism could also be directed against livestock, food crops, and environmental resources such as reservoirs. (See *Bioterrorism: Frequently Asked Questions* at www.ama-assn.org)

[2] U.S. Department of Health and Human Services (HHS), HHS Fact Sheet: Biodefense Preparedness: Record of Accomplishment, April 28, 2004

[3] *Continuation Guidance for Cooperative Agreement on Public Health Preparedness and Response for Bioterrorism - Budget Year Five Program Announcement*, Centers For Disease Control and Prevention, June 14, 2004, p.2.

[4] *Ready or Not? Protecting the Public's Health in the Age of Bioterrorism*, Trust for America's Health, Washington D.C., December 2003. Subsequent to the program review committee's vote on the recommendations listed in Chapter Seven, the Trust for America's Health released an update of its earlier study. It found Connecticut had achieved six of the 10 indicators, the same level as 19 other states. Fourteen states were below that level, while 16 states had achieved a higher level. (See *Ready or Not? Protecting the Public's Health in the Age of Bioterrorism 2004*, Trust for America's Health, Washington D.C., December 2004.)

[5] *Public Health's Infrastructure – A Status Report*, Atlanta Georgia: Centers for Disease Control and Prevention. 2001, and *The Future of the Public's Health in the 21st Century,* Washington D.C., Institute of Medicine 2002.

[6] *Lessons from the Anthrax Attacks, Implications for U.S. Bioterrorism Preparedness*, Washington D.C: Center for Strategic and International Studies 2002.

[7] Connecticut Department of Public Safety, Division of Homeland Security website www.ct.gov/hls/site/default.asp accessed August 08, 2004.

[8] Health districts are created when two or more towns form one health department. Over time, the number of full-time districts is increasing and the number of part-time departments is decreasing as the latter join an existing district or several get together to form a new district. As of December 2004, there were 31 full-time departments, 19 full-

time districtstwo and 18 towns), and 46 part-time departments. Both of the tribal nations located within the state also have full-time health departments. In this report, references to local health departments include local health districts, even if not specified.

[9] Hartford Hospital serves 15 hospitals in the northern half of the state (i.e., the Northern Tier), and Yale New Haven Health System serves 17 hospitals in the southern half of the state (i.e., the Southern Tier).

[10] A third program administered by HHS, the Metropolitan Medical Response System, is intended to enhance the local response to a public health crisis. The money for this program bypasses the state as HHS contracts directly with a select number of cities. Hartford is the only city in Connecticut to receive money under this program.

[11] *Continuation Guidance,* CDC, June 14, 2004, p.1.

[12] Ibid., pg. 2.

[13] DPH has indicated a reassessment of capacity will be undertaken in 2005-06. Capacity improvements made since the 2003 assessments will be noted at that time.

[14] FEMA, State and Local Guide (SLG)101: *Guide for All-Hazard Emergency Operations Planning* (9/96).

[15] The two tribal nations located within eastern Connecticut are actively involved in public health preparedness planning efforts. Each has developed an Emergency Management Plan, and they coordinate their activities with local health departments in their vicinity as well as state emergency planning agencies.

[16] The state Catastrophic Disaster Plan establishes policies for response to a catastrophic disaster requiring emergency operations to be sustained at a higher level and results in implementation of the Federal Response Plan (FRP). The FRP coordinates the delivery of federal assistance and resources when state and local efforts are overwhelmed. It can be implemented in anticipation of significant events likely to result in the need for federal assistance or in response to actual events resulting in a presidential declaration of a disaster.

[17] National Emergency Management Association (NEMA), Incident Command System for Executives, Student Manual (IEM/TRN04-004).

[18] *State Preparedness Funds Status as of August 31, 2004*, Association of State and Territorial Health Officials, updated November 19, 2004.

[19] One benchmark is not applicable to Connecticut because the state does not have a Level 3 chemical lab.

[20] In October 2004, program review committee staff sent an electronic survey to the 88 local health directors (some are whom are part-time) who represent the 98 health departments/districts in the state. Fifty-seven health directors replied, for a response rate of 65 percent. Those 57 directors represent 65 different departments/districts or 66 percent of all departments/districts. In November 2004, committee staff sent an electronic survey to the emergency response plan coordinators for the 32 acute care hospitals in Connecticut. Twenty-eight replied, for a response rate of 88 percent.

[21] The program review surveys asked respondents to rate the effectiveness of certain entities in performing specific tasks, based on a scale of 1 to 4, with 1 = Very Effective and 4 = Not Effective. For purposes of reporting those results, respondents who selected 1 or 2 have been grouped into the heading "effective to very effective." Those who selected 3 or 4 have been grouped under the heading "somewhat effective to not effective." These labels are used throughout this report to describe the answers to any survey question that used this rating scale.

[22] trategic National Stockpile program site review and a tabletop exercise, an Operation Yankee Exercise, a Capitol Region Emergency Planning Committee exercise and a drill, a Millstone exercise and a drill, Patriot '04, a suspicious powder incident, and the two national party conventions in neighboring states.

[23] Emergency Management and Homeland Security Coordinating Council, *Report to M. Jodi Rell and the Connecticut General Assembly*, approved December 16, 2004.

[24] *Public Health Preparedness & Response Capacity Assessment for Local Public Health Departments: Final Report*,, August 18, 2003, p.2.

[25] Ibid., pp. 62-63.

[26] fall 2004 situation involving limited supplies of flu vaccine is not technically a public health emergency. However, many of the issues and activities being generated by this situation provide a prescient example of what the state will have to deal with in the event of an actual public health emergency involving a contagious disease.

[27] Currently, the CDC maintains the only civilian Biosafety Level 4 lab, the highest designation available.

[28] Only five state-based labs in the nation are designated as Level 3.

[29] *Local Communications Systems Assessment for Local Public Health Departments: Final Report*, September 13, 2004, p.11.

[30] Ibid., p. 24.

[31] , to the Legislative Program Review and Investigations Committee. (According to DPH, the second and third payments owed the town were sent out on September 22, 2004.)