

Chatham County
EMERGENCY
OPERATIONS Plan
INCIDENT ANNEX F

BIOLOGICAL

APRIL 2006

**Chatham Emergency Management
Agency**

Biological Incident Annex

Primary Agency: Department of Health and Human Services

Support Agencies:

Department of Agriculture
Department of Commerce
Department of Defense
Department of Energy
Department of Homeland Security
Department of the Interior
Department of Justice
Department of Labor
Department of State
Department of Transportation
Department of Veterans Affairs
Environmental Protection Agency
General Services Administration
US Agency for International Development
US Postal Service
American Red Cross

I. Introduction

A. Purpose: The purpose of the Biological Incident Annex is to outline the actions, roles, and responsibilities associated with response to a disease outbreak of known or unknown origin. Actions described in this annex take place with or without a Presidential Stafford Act declaration or a public health emergency declaration by the Secretary of Health and Human Services (HHS). This annex applies only to potential or actual Incidents of Critical Significance. This annex outlines biological incident response actions including threat assessment notification procedures, laboratory testing, joint investigative/response procedures, and activities related to recovery.

B. Scope: The broad objectives of the response to a biological terrorism event, pandemic influenza, emerging infectious disease, or novel pathogen outbreak are to:

- Detect the event through disease surveillance and environmental monitoring;
- Identify and protect the population(s) at risk;
- Determine the source of the outbreak;

- Quickly frame the public health and law enforcement implications;
- Control and contain any possible epidemic (including providing guidance to local public health authorities);
- Augment and surge public health and medical services;
- Track and defeat any potential resurgence or additional outbreaks; and
- Assess the extent of residual biological contamination and decontaminate as necessary.

The unique attributes of this response require separate planning considerations that are tailored to specific health concerns and effects of the disease (e.g., terrorism versus natural outbreaks; communicable versus noncommunicable, etc.).

Specific operational guidelines, developed by respective organizations to address the unique aspects of a particular disease or planning consideration, will supplement this annex and are intended as guidance to assist public health and medical planners.

Special Considerations

Detection of a bioterrorism act against the civilian population may occur in several different ways and involve several different modalities:

- An attack may be surreptitious, in which case the first evidence of dissemination of an agent may be the presentation of disease in humans or animals. This could manifest either in clinical case reports to domestic or international public health authorities or in unusual patterns of symptoms or encounters within domestic or international health surveillance systems.
- A terrorist-induced infectious disease outbreak initially may be indistinguishable from a naturally occurring outbreak; moreover, depending upon the particular agent and associated symptoms, several days could pass before public health and medical authorities even suspect that terrorism may be the cause. In such a case, criminal intent may not be apparent until some time after illnesses are recognized.
- Environmental surveillance systems, such as the BioWatch system, may detect the presence of a biological agent in the environment and trigger directed environmental sampling and intensified clinical surveillance to rule out or confirm an incident. If a case is confirmed, then these systems may allow for mobilization of a public health, medical, and law enforcement response in advance of the appearance of the first clinical cases or quick response after the first clinical cases are identified.

- The US Postal Service may detect certain biological agents within the US postal system. Detection of a biological agent in the mail stream triggers specific response protocols outlined in agency-specific standard operating procedures.

Policies

- This annex supports policies and procedures outlined in the ESF #8 – Public Health and Medical Services Annex, the ESF #10 – Oil and Hazardous Materials Response Annex, and the Terrorism Incident Law Enforcement and Investigation Annex.
- CCHD serves as the County’s primary agency for the public health and medical preparation and planning for and response to a biological terrorism attack or naturally occurring outbreak that results from either a known or novel pathogen, including an emerging infectious disease.
- Local governments are primarily responsible for detecting and responding to disease outbreaks and implementing measures to minimize the health, social, and economic consequences of such an outbreak.
- If any local agency becomes aware of an overt threat involving biological agents or indications that instances of disease may not be the result of natural causes, They must immediately notify the CCDH and CEMA. These agencies will notify the local office of the FBI which will advise the Federal Bureau of Investigation (FBI)’s Weapons of Mass Destruction Operations Unit (WMDOU). The FBI, in turn, immediately notifies the Department of Justice, the Department of Homeland Security (DHS) Homeland Security Operations Center (HSOC) and the National Counterterrorism Center (NCTC). The Laboratory Response Network (LRN) is used to test samples for the presence of biological threat agents. Decisions on where to perform additional tests on samples are made by the FBI, in coordination with HHS. (See the Terrorism Incident Law Enforcement and Investigation Annex for additional information on the FBI’s roles and responsibilities.)
- Once notified of a credible threat or natural disease outbreak, CCHD convenes a meeting of ESF #8 partners to assess the situation and determine appropriate public health and medical actions. CEMA coordinates overall nonmedical support and response actions across all local departments and agencies. CCHD coordinates overall public health and medical emergency response efforts across departments and agencies.
- Consistent with ESF #8, CCHD closely coordinates the medical response with the medical response system. The FBI coordinates the investigation of criminal activities if such activities are suspected.

- CCHD provides guidance to local authorities and collaborates closely with the FBI in the proper handling of any materials that may have evidentiary implications (e.g., LRN samples, etc.) associated with disease outbreaks suspected of being terrorist or criminal in nature.
- Other departments and agencies may be called upon to support CCHD during the various stages of a disease outbreak response in the preparation, planning, and/or response processes.
- If there is potential for environmental contamination, CCHD collaborates with the Environmental Protection Agency (EPA) in developing sampling strategies and sharing results.
- Given the dynamic nature of a disease outbreak, CCHD, in collaboration with other departments and agencies, determines the thresholds for a comprehensive public health and medical response. These thresholds are based on specific event information rather than predetermined risk levels.
- Any public announcement, statement, or press release related to a threat or actual bioterrorism event must be coordinated with the CEMA Public Affairs Office.

Planning Assumptions

- In a large disease outbreak, Government officials require a highly coordinated response to public health and medical emergencies.
- Disease transmission can occur via an environmental contact such as atmospheric dispersion, person-to-person contact, animal-to-person contact, insect vector-to-person contact, or by way of contaminated food or water.
- A biological incident may be distributed across multiple jurisdictions simultaneously, requiring a nontraditional incident management approach. This approach could require the simultaneous management of multiple “incident sites” from national and regional headquarters locations in coordination with multiple State and local jurisdictions.
- A response to noncontagious public health emergencies may require different planning assumptions or factors.
- The introduction of biological agents, both natural and deliberate, are often first detected through clinical or hospital presentation. However, there are other methods of detection, including environmental surveillance technologies such as BioWatch and syndromic surveillance.

- No single entity possesses the authority, expertise, and resources to act unilaterally on the many complex issues that may arise in response to a disease outbreak and loss of containment affecting a multijurisdictional area. The national response requires close coordination between numerous agencies at all levels of government and with the private sector.
- The Government supports affected health jurisdictions as requested or required. The response by CCHD and other Government agencies is flexible and adapts as necessary as the outbreak evolves.
- The LRN provides for rapid public health assessment of the potential for human illness associated with exposure and the scope of this kind of risk. The LRN also addresses the need for law enforcement notification necessary to initiate threat assessment for criminal intent, and chain of custody procedures. Early CCHD, FBI, and CEMA coordination enhances the likelihood of successful preventative and investigative activities necessary to neutralize threats and attribute the source of the outbreak.
- Response to disease outbreaks suspected of being deliberate in origin requires consideration of special law enforcement and homeland security requirements.
- Test results from non-LRN facilities are considered a “first pass” or “screening” test.
- Any agency or organization that identifies an unusual or suspicious test result should contact the FBI to ensure coordination of appropriate testing at an CCHD approved laboratory.
- Department of Defense laboratories have been identified that meet the standards and requirements for LRN membership.
- All threat and public health assessments are provided to the EOC.

Concept of Operations

Biological Agent Response

The key elements of an effective biological response include (in nonsequential order):

- Rapid detection of the outbreak;
- Swift agent identification and confirmation;
- Identification of the population at risk;

- Determination of how the agent is transmitted, including an assessment of the efficiency of transmission;
- Determination of susceptibility of the pathogen to treatment;
- Definition of the public health, medical, and mental health implications;
- Control and containment of the epidemic;
- Decontamination of individuals, if necessary;
- Identification of the law enforcement implications/assessment of the threat;
- Augmentation and surging of local health and medical resources;
- Protection of the population through appropriate public health and medical actions;
- Dissemination of information to enlist public support;
- Assessment of environmental contamination and cleanup/decontamination of bioagents that persist in the environment; and
- Tracking and preventing secondary or additional disease outbreak.

Primary CCHD functions include supporting public health and medical capacities according to the policies and procedures detailed in the EOP Base Plan and the ESF #8 Annex.

Suspicious Substances

Since there is no definitive/reliable field test for biological agents, all potential bioterrorism samples are transported to an LRN laboratory, where expert analysis is conducted using established HHS/Centers for Disease Control and Prevention (CDC) protocols/reagents. A major component of this process is to establish and maintain the law enforcement chain of custody and arrange for transport.

The following actions occur if a positive result is obtained by an LRN on an environmental sample submitted by the FBI or other designated law enforcement personnel:

- The LRN immediately notifies the local FBI of the positive test result;
- The FBI Field Office makes local notifications and contacts the FBI Headquarters WMDOU;

- FBI Headquarters convenes an initial conference call with the local FBI and HHS to review the results, assess the preliminary information and test results, and arrange for additional testing;
- FBI Headquarters immediately notifies DHS of the situation;
- Original samples may be sent to HHS/CDC for confirmation of LRN analyses;
- CCHD provides guidance on protective measures such as prophylactic treatment and continued facility operation; and
- CCHD and support agencies support the determination of the contaminated area, decisions on whether to shelter in place or evacuate, and decontamination of people, facilities, and outdoor areas.

Outbreak Detection

Determination of a Disease Outbreak

The initial indication of a major disease outbreak, intentional or naturally occurring, may be the recognition by public health and medical authorities that a significantly increased number of people are becoming ill and presenting to local healthcare providers. Therefore, the most critical decisionmaking support requires surveillance information, identification of the causative biological agent, a determination of whether the observations are related to a naturally occurring outbreak, and the identification of the population(s) at risk.

Laboratory Confirmation

During the evaluation of a suspected disease outbreak, laboratory samples are distributed to appropriate laboratories. During a suspected terrorist incident, sample information is provided to the FBI for investigative use and to public health and emergency response authorities for epidemiological use and agent characterization to facilitate and ensure timely public health and medical interventions. If the incident begins as an epidemic of unknown origin detected through local health surveillance systems or networks, laboratory analysis is initiated through the routine public health laboratory network.

Identification (Analysis and Confirmation)

The samples collected and the analyses conducted must be sufficient to characterize the cause of the outbreak. LRN laboratories fulfill the Federal responsibility for rapid analysis of biological agents. In a suspected terrorism incident, sample collection activities and testing are coordinated with FBI and LRN member(s).

Notification

Any disease outbreak suspected or identified by an agency within HHS or through another public health partner is brought to the immediate attention of the HHS Assistant Secretary for Public Health Emergency Preparedness as detailed in the ESF #8 Annex, in addition to the notification requirements contained in the NRP Base Plan. Following these initial notifications, the procedures detailed in the ESF #8 Annex are followed. Instances of disease that raise the “index of suspicion” of terrorist or criminal involvement, as determined by HHS, are reported to FBI Headquarters. In these instances, FBI Headquarters, in conjunction with HHS, examines available law enforcement and intelligence information, as well as the technical characteristics and epidemiology of the disease, to determine if there is a possibility of criminal intent. If the FBI, in conjunction with HHS, determines that the information represents a potential credible terrorist threat, the FBI communicates the situation immediately to the HSOC, which notifies the White House, as appropriate. If warranted, the FBI, HHS, and State and local health officials conduct a joint law enforcement and epidemiological investigation to determine the cause of the disease outbreak, the extent of the threat to public health and public safety, and the individual(s) responsible.

Activation

Once notified of a threat or disease outbreak that requires or potentially requires significant public health and/or medical assistance, CCHD convenes a meeting of the ESF #8 organizations to assess the situation and determine the appropriate public health and medical actions. CEMA coordinates all nonmedical support, discussions, and response actions.

The immediate task following any notification is to identify the population affected and at risk and the geographic scope of the incident. The initial public health and medical response includes some or all of the following actions:

- Targeted epidemiological investigation (e.g., contact tracing);
- Intensified surveillance within healthcare settings for patients with certain clinical signs and symptoms;
- Intensified collection and review of potentially related information (e.g., contacts with nurse call lines, laboratory test orders, school absences, and over-the-counter pharmacy sales); and
- Organization of public health and medical response assets (in conjunction with State and local officials) to include personnel, medical supplies, and materiel (e.g., the Strategic National Stockpile (SNS)).

Actions

Controlling the Epidemic

The following steps are required to contain and control an epidemic affecting large populations:

- CCHD assists local public health and medical authorities with epidemic surveillance and coordination.
- CCHD assesses the need for increased surveillance in localities not initially involved in the outbreak and notifies the appropriate public health officials with surveillance recommendations should increased surveillance in these localities be needed.
- CEMA coordinates with CCHD and State and local officials on the messages released to the public to ensure that communications are consistent and accurate. Messages should address anxieties, alleviate any unwarranted concerns or distress, and enlist cooperation with necessary control measures. Public health and medical messages to the public should be communicated by a recognized health authority (e.g., the Surgeon General). (See the Public Affairs Support Annex.)
- The public health system, starting at the local level, is required to initiate appropriate protective and responsive measures for the affected population, including first responders and other workers engaged in incident-related activities. These measures include mass vaccination or prophylaxis for populations at risk and populations not already exposed, but who are at risk of exposure from secondary transmission or the environment. An overarching goal is to develop, as early as possible in the management of a biological incident, a dynamic, prioritized list of treatment recommendations based on epidemiologic risk assessment and the biology of the disease/ microorganism in question, linked to the deployment of the SNS and communicated to the general public.
- CCHD evaluates the incident with its partner organizations and makes recommendations to the appropriate public health and medical authorities regarding the need for quarantine, shelter-in-place, or isolation to prevent the spread of disease. CCHD coordinates closely with CEMA regarding recommendations for medical needs that are met by NDMS and the US Public Health Service Commissioned Corps.
- The Governor of an affected State implements isolation and/or social-distancing requirements using State/local legal authorities. In order to prevent the interstate spread of disease, HHS may take appropriate Federal actions using the authorities granted by USC. title 42, 42 CFR parts 70 and 71, and 21 CFR 1240. State, and local assistance with the implementation and enforcement of isolation and/or quarantine actions is utilized if Federal authorities are invoked.

- Where the source of the epidemic has been identified as originating outside the United States, whether the result of terrorism or a natural outbreak, HHS works in a coordinated effort with DHS/Border and Transportation Security/Customs and Border Protection (DHS/BTS/CBP) to identify and isolate persons, cargo, mail, or conveyances entering the United States that may be contaminated. HHS provides information and training, as appropriate, to DHS/BTS/CBP personnel on identifying the biological hazard and employing “first responder” isolation protocols.
- The scope of the outbreak may require mass isolation or quarantine of affected or potentially affected persons. Depending on the type of event, food, animals, and other agricultural products may need to be quarantined to prevent further spread of disease. In this instance HHS and, as appropriate, the Department of Agriculture work with local health and legal authorities to recommend the most feasible, effective, and legally enforceable methods of isolation and quarantine.

Decontamination

For certain types of biological incidents (e.g., anthrax), it may be necessary to assess the extent of contamination and decontaminate victims, responders, animals, equipment, buildings, critical infrastructure (e.g., subways, water utilities), and large outdoor areas. Such decontamination and related activities take place consistent with the roles and responsibilities, resources and capabilities, and procedures contained in the ESF #8 and ESF #10 Annexes, the Terrorism Incident Law Enforcement and Investigation Annex, and the Catastrophic Incident Annex. (Note: Currently no decontamination chemicals are registered (under the Federal Insecticide, Fungicide, and Rodenticide Act) for use on biological agents, and responders must request an emergency exemption from the EPA before chemicals can be used for biological decontamination.)

Special Issues

International Notification

A biological incident may involve internationally prescribed reportable diseases. In addition to case reporting, epidemics of disease with global public health significance must also be reported to international public health authorities. Once a positive determination is made of an epidemic involving a contagious biological agent, HHS notifies DOS and DHS. HHS, in coordination with DOS, notifies the WHO and other international health agencies as appropriate.

Allocation and Rationing

If critical resources for protecting human life are insufficient to meet all domestic needs, the Secretary of HHS makes recommendations to the Secretary of Homeland Security regarding the allocation of scarce Federal public health and medical resources.

Responsibilities

The procedures in this annex are built on the core coordinating structures of the EOP. The specific responsibilities of each department and agency are described in the respective ESFs and Incident Annexes.