National Aviation Resource Manual for Quarantinable Diseases

DEPARTMENT OF TRANSPORTATION
UNITED STATES OF AMERICA

"By preparing now, we can give our citizens some peace of mind knowing that our nation is ready to act at the first sign of danger…"

- President George W. Bush, November 2005

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National Aviation Resource Manual For Quarantinable Diseases

Office of the Secretary

United States Department of Transportation

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In coordination with the

Centers for Disease Control and Prevention

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THE SECRETARY OF TRANSPORTATION
WASHINGTON, D.C. 20590

A Message From The Secretary of Transportation

One hundred and three years ago, the Wright brothers unlocked more than the secret of flight. They unlocked the door of opportunity and growth. Since then, civil aviation has become a $900 billion industry, employing more than 11 million people. It shrinks the world's vast distances and carries economic vitality and hope.

Unfortunately, the more than nine million flights a year that traverse our skies carry the risk of less welcome cargo: infectious diseases with the potential to disrupt our way of life and cause disastrous suffering and loss. Such quarantinable diseases include smallpox, cholera, viral hemorrhagic fevers, severe acute respiratory syndrome, and—of particular concern today—those strains of the influenza virus that may cause a pandemic.

In order to prevent the spread of such diseases through the airline system, we have prepared this manual. Our objective is to bolster the capabilities of airport operators, air carriers, first responders, and State and local governments. To prevent widespread transmission of quarantinable diseases, the manual provides a comprehensive guide for the organizations involved in planning for and responding to a quarantinable disease incident. We hope it will be an invaluable resource for these organizations as they develop more specific and detailed response plans to deal with emergencies.

My thanks go to Secretary of Health and Human Services Mike Leavitt and his team for working so closely with the U.S. Department of Transportation on this manual.

Mary E. Peters

Mary E. Peters

THE SECRETARY OF HEALTH AND HUMAN SERVICES
WASHINGTON, D.C. 20201

Our nation's ports of entry are teeming with activity. Each day, more than 5 million travelers arrive to or pass through the United States by air, sea or land. These 317 ports represent the intersection of the transportation industry, public health, and homeland security. This document is a product of collaboration among those sectors. Where our public's health is most vulnerable, such collaboration is essential.

The Department of Health and Human Services (HHS), through its Centers for Disease Control and Prevention's (CDC) Division of Global Migration and Quarantine, currently operates quarantine stations at 18 major ports of entry. Each of these 18 stations has responsibility for all other ports of entry within its assigned region of the United States. Our ports are thriving centers of commerce and trade, yet they are vulnerable to the entry of infectious disease—whether accidental or deliberate. The emergence of SARS illustrated the potential for a new disease to suddenly appear and spread, leading to widespread health, economic, and social consequences. The SARS epidemic, the outbreak of monkeypox, and the ongoing reports of avian influenza demonstrate that emerging infectious diseases are a threat to the United States.

HHS is committed to preventing the importation and spread of infectious disease in the United States. We applaud the Department of Transportation for developing this Resource Manual, which provides information of critical importance to the airport operators and local health authorities who would be called upon to respond to a traveler with a suspected infectious disease. Continued collaboration between the relevant sectors will be essential to a consistent and integrated response at our ports of entry.

Michael O. Leavitt

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MANUAL OVERVIEW AND SCOPE

Introduction

The United States government has become increasingly concerned about global travel as a means for the spread of new or reemerging communicable diseases. Of particular interest is the international airline industry, which sees thousands of travelers coming into the U.S. daily through more than 130 international airports. Because of the sheer volume of travelers flowing through these airports, the potential exists for the rapid and widespread dissemination of a communicable disease within the U.S.

There are nine quarantinable diseases specified by Executive Order pursuant to the authority contained in Section 361 (b) of the Public Health Service Act. Some of these quarantinable diseases may require an immediate and large-scale response and containment strategy. For the purposes of this Manual we are focusing on the recognition and control of quarantinable diseases that require a more intensive response due to their potential for widespread impact on public health, and we have defined this recognition and control as a *quarantinable disease incident*. Most recently, concerns have been raised in this way about pandemics associated with severe acute respiratory syndrome (SARS)*****, smallpox, and avian flu, but it is reasonable to assume that responses to other quarantinable diseases would follow a similar pattern if they were deemed to present a significant public health threat.

The immediate and accurate recognition of a quarantinable disease of major public health significance is of utmost importance to the effective containment of the disease. For the most part, the recognition of the disease would be *triggered* by a combination of circumstances that would suggest that a potentially dangerous situation exists and, therefore, pertinent authorities, such as the U.S. Centers for Disease Control and Prevention (CDC), should be contacted immediately. Usually, this combination of circumstances would involve a disease alert and a travel notice along with a symptomatic traveler returning from an area for which the alert or notice had been posted. This Manual focuses on such triggered responses.

Any response and containment effort to a quarantinable disease incident will require well coordinated actions among airlines, airports, CDC, federal agencies, state and local public health departments, and first responders, all of whose efforts are essential to an efficient and effective response and containment strategy. Airlines already have their protocols and guidelines in place, as do some of the airports within the country. However, most airports do not have a manual that reviews the total effort necessary for preventing widespread transmission of quarantinable diseases throughout the U.S. This Manual provides that information. It also provides a “big picture” for those involved in both planning for and responding to a quarantinable disease incident. It does not prescribe what airport planners and responders *should do* or *have to do* at their airport. Those details are left to the individual airport planners and responders to put together based on their own logistical and jurisdictional issues.

While this Manual provides a general guide for airport quarantinable disease planning, it is important to recognize that differences in the epidemiology of quarantinable diseases require a disease-specific response. Therefore, the actions and planning recommendations outlined in this Manual may need to be updated and tailored based on novel disease characteristics or additional federal guidance as it becomes available.

*****Note: A list of the abbreviations used within this Manual is provided in Appendix I.

Purpose

The purpose of this Manual is to be a national aviation resource outlining the response to and recovery from a quarantinable disease incident of major public health significance at a U.S. international airport. The target audience for the Manual is airlines, airports, federal response agencies and other first responders, local and state health departments, and other local and state government stakeholders that would be involved in the response to or recovery from the incident.

Scope and Assumptions

The scope and assumptions for the Manual are listed below.

1. This document is intended to provide guidance. It does not create or confer rights for or on any person, and does not operate to bind the Department of Transportation or the public. Through implementation of the National Implementation Plan for Pandemic Influenza, the U.S. Government will continue to develop guidance that might assist the aviation industry in preparedness to address communicable diseases.
2. The response activities described in this Manual would occur at international airports only when a significant public health threat exists to warrant airline and airport authorities; federal, state, and local public health agencies; and first responders to be on heightened alert and awareness for the introduction of a quarantinable disease into the U.S. on an international flight. As a result, the combination of heightened alert and awareness coupled with a potentially ill person on an international flight would trigger the high-alert response activities described in this Manual.
3. A quarantinable disease incident at a U.S. international airport had not occurred as of the writing of this Manual. Generally, CDC and other public health responders deal mostly with communicable diseases such as chickenpox, seasonal influenza, measles, and gastrointestinal illnesses. However, this does not diminish the need to plan and prepare for a quarantinable disease incident at a U.S. international airport.
4. The Pandemic and All-Hazards Preparedness Act (S. 3678, December 2006) amended the Public Health Service Act to establish the Department of Health and Human Services (HHS) as the primary federal agency for coordinating the response to public health and medical emergencies. Therefore, under this act, the federal response to a quarantinable disease incident will likely be coordinated by the Secretary of HHS, and will be subject to the National Response Plan (NRP). Airport response plans will need to take into account the NRP structure when developing or updating their own airport response plans. The NRP structure is described in this Manual. However, it is beyond the scope of the Manual to detail exactly how individual airport response plans should incorporate the NRP structure into their own response plans. This level of detail is left to individual airport planners and responders to compile based on their own logistical and jurisdictional issues..
5. While there are nine quarantinable diseases specified by Executive Order pursuant to the authority contained in Section 361(b) of the Public Health Service Act (see Section 1 and Appendices E and F in this Manual), this Manual focuses on the recognition and control of quarantinable diseases that require a more intensive response due to their potential for widespread impact on public health (e.g., smallpox, SARS, and avian/pandemic flu). However, it is reasonable to assume that responses to other quarantinable diseases would follow a similar pattern if they were deemed to present a significant public health threat.
6. The response activities described in this Manual are for a non-bioterrorism event.

7. This Manual describes response activities at U.S. international airports.
8. The response activities described in this Manual are those that would occur at the scheduled arrival airport for an incoming international flight. In other words, the Manual does not address response activities for an airport to which the flight has been diverted. However, it should be noted that most of the response activities described in this Manual would apply at the airport to which a flight might be diverted.
9. The use of the term “airport response plan” or “airport communicable disease response plan” in this Manual refers to an airport response plan that deals with the response to a quarantinable disease at a U.S. international airport.
10. The response activities covered in this Manual apply to general aviation flights, but general aviation is not discussed in this Manual because the response that might be associated with such flights would appear to be much smaller.
11. It is beyond the scope of this Manual to:
    a. Describe those response activities that would occur in a quarantinable disease incident in which an illness is not discovered until after the ill person has exited the airplane and been processed through the international airport.
    b. Provide specific information on local or state public health or law enforcement statutes or regulations relating to the response to or recovery from a quarantinable disease incident at a U.S. international airport. Each airport may have to address its own jurisdictional or legal issues relating to public health and law enforcement.
    c. Provide detailed information about the various types of personal protective equipment (PPE) as well as detailed instructions on its proper use. Those providing and donning surgical masks or respiratory protection should be trained in the proper types and appropriate uses of this PPE. Therefore, a certified professional should be consulted when selecting PPE and training responders on its proper use.
12. This Manual does not address:
    a. Due process procedures for isolated or quarantined individuals.
    b. Pre-clearance procedures in foreign countries. It addresses the response to and recovery from a quarantinable disease incident at a domestic international airport and the measures taken to prevent further dissemination of the disease. It does not address preventive measures taken at the originating foreign country or airport.
    c. The importation, processing, or quarantining of animals.
13. The information contained in this Manual was current at the time of its writing.

Clarifications

For the purposes of this Manual, the terms listed below need to be clarified and understood.

Infectious and Communicable Disease

The terms *infectious disease* and *communicable disease* often are incorrectly used interchangeably. An *infectious* disease is any illness that is caused by a microorganism (e.g., virus or bacteria). A *communicable disease* is an infectious disease that is transmitted from one person to another by direct contact with an infectious individual or their discharges or by indirect means (as by a vector).

Isolation and Quarantine
Quarantine is an often misused and misunderstood term and is frequently confused with the term *isolation. Isolation* refers to the separation and restriction of movement of ill and potentially infectious persons from those who are healthy to stop the spread of disease. It is intended to stop subsequent infections by reducing exposure of well persons to a transmissible, infectious agent. *Quarantine* refers to the separation and restriction of movement of persons who, while not yet ill, have been exposed to a communicable disease and, therefore, may become infectious and transmit the disease to others.

Triggered Response and Non-Triggered Response
A *trigger* is a combination of circumstances that would suggest that a potentially dangerous situation exists and, therefore, pertinent authorities should be contacted immediately. Usually, this would involve heightened alert and awareness for a particular quarantinable disease along with a symptomatic traveler returning from an area for which a health alert had been posted. The trigger would lead to a heightened response to a potential quarantinable disease incident. This heightened response is referred to as a *triggered response*.

A *non-triggered response* could be a response to a common illness, such as gastrointestinal disorders or air sickness, and is outside the scope of this Manual. It also could be a response to a quarantinable disease incident that is not discovered until post-arrival and passenger processing. This Manual does not describe the response activities to non-triggered quarantinable disease incidents.

CDC Quarantine Stations and CDC Headquarters
CDC Quarantine Stations are within CDC's Division of Global Migration and Quarantine (DGMQ). Although they are primarily located at large international airports, they are the lead federal, public health responders or federal response coordinators at *all* seaports, airports, or land border crossings receiving international arrivals. At large domestic international airports, CDC Quarantine Station staff are the ones to whom notifications go, and they will be the ones responding to and assessing a quarantinable disease. They, in turn, may contact CDC Headquarters for notification purposes or guidance on passenger treatment, or potentially, to issue a quarantine order. Every U.S. airport falls under the jurisdiction of a CDC Quarantine Station. These are listed in Appendix A.

Manual Production
This Manual was produced with input from representatives of major airlines; international airports; airline and airport associations; federal, state, and local response agencies; state and local health departments; and other federal, state, and local public health and emergency response stakeholders. Much of the information provided in this Manual was compiled from the abovementioned entities during the commission of pandemic influenza tabletop exercises conducted for CDC at major international airports around the country. (See Appendix J for a listing of organizations that provided input and comments on this Manual.)

Contents
This Manual is divided into nine sections and has ten appendices. The first eight sections provide general concepts while the ninth section provides detailed guidance. Covered within this Manual are the following:

- The **Lead Authority**—CDC DGMQ—for the response to quarantinable disease incidents at U.S. airports.

- The role responders play in **Communicable Disease Awareness at Airports**, from disease surveillance to disease alerts.
- **Pre-Incident Preparation** to ensure an effective and efficient response to a quarantinable disease incident at an international airport.
- The **Roles and Responsibilities** of conveyance operators, airport operators, state and local governments, local healthcare facilities and support organizations, and agencies of the federal government.
- The **In-Flight Response** to a quarantinable disease incident at an international airport, including notifications, aircraft gating considerations, and responder preparations.
- The **On-Arrival Response** to a quarantinable disease incident at an international airport, including the gate response and treatment of passengers and flight crew.
- The **Post-Arrival Response** to a quarantinable disease incident at an international airport, including ill person hospitalization and isolation as well as quarantine of other passengers and flight crew.
- The **Recovery Phase** of a quarantinable disease incident at an international airport, which entails taking actions to help individuals and the community to return to normal as soon as can reasonably be done.
- **Airport Communicable Disease Response Planning** guidance for airports to use for developing their own response plans.
- **Appendices** of relevant information on:
  - CDC DGMQ Quarantine Stations,
  - CDC travel notices,
  - Personal protective equipment,
  - Legal authorities for isolation and quarantine,
  - Executive Orders on quarantinable diseases,
  - Quarantinable diseases,
  - An example of an international airport quarantine plan,
  - Incident command/unified command,
  - Abbreviations, and
  - Acknowledgments.

SECTION 1: LEAD AUTHORITY

Introduction

Title 42 United States Code Section 264 (Section 361 of the Public Health Service Act) gives the Secretary of HHS responsibility for preventing the introduction, transmission, and spread of communicable diseases from foreign countries into the United States and from one state or U.S. possession into another. This statute is implemented through regulations found at 42 CFR Parts 70 and 71. Under its delegated authority, CDC, through DGMQ, is empowered to detain, medically examine, or conditionally release persons suspected of carrying a quarantinable disease. DGMQ makes the determination as to whether an airport communicable disease incident involves a potentially quarantinable disease of public health significance.

Note: The Pandemic and All-Hazards Preparedness Act (S. 3678, December 2006) amended the Public Health Service Act to establish HHS as the primary federal agency for coordinating the response to public health and medical emergencies.

CDC Division of Global Migration and Quarantine

Under its delegated authority, DGMQ is responsible for implementing regulations necessary to prevent the introduction, transmission, or spread of communicable diseases from foreign countries into the United States. Some of the tasks undertaken to meet legal and regulatory responsibilities as they relate to the intended audiences for this Manual are to:

- Oversee the screening of arriving international travelers for symptoms of illness that could be of public health significance.
- Respond to reports of illness on board arriving aircraft.
- Provide travelers with essential health information through publications, automated fax, and the Internet.
- Collect and disseminate worldwide health data.
- Perform inspections of maritime vessels and cargos for communicable disease threats.

CDC Quarantine Stations

CDC Quarantine Stations are located at 18 ports of entry across the United States: Anchorage, Atlanta, Boston, Chicago, Detroit, El Paso (land border), Honolulu, Houston, Los Angeles, Miami, Minneapolis, New York, Newark, San Diego, San Francisco, San Juan, Seattle, and Washington. (Two new Quarantine Stations will be added in 2006 in Dallas and Philadelphia.) Each Quarantine Station has responsibility for enforcing federal quarantine regulations at *all* ports of entry within its assigned area of jurisdiction. At ports of entry where no CDC Quarantine Station is present, the Officer in Charge and the Quarantine Medical Officer at the CDC Quarantine Station that has jurisdiction over the area will assist the state and local public health authorities and provide technical guidance and communication. (See Appendix A for a detailed listing of Quarantine Stations and their corresponding jurisdictions.)

Each Quarantine Station is staffed with an Officer in Charge, a Quarantine Medical Officer, and Quarantine Public Health Officers. The roles and responsibilities of each are as follows:

- Officer in Charge: The Officer in Charge serves as the team leader of DGMQ staff at the assigned Quarantine Station and as the recognized authority for DGMQ programs and activities at the ports of entry under his or her jurisdiction. The Officer in Charge provides guidance and direction to port partners in quarantine principles, bioterrorism preparedness, and other public health activities related to the control and prevention of communicable diseases.

- Quarantine Medical Officer: The Quarantine Medical Officer serves as a medical consultant to DGMQ staff, state and local health departments, travel industry staff, and other federal agencies directly encountering ill persons. The Quarantine Medical Officer also provides clinical, epidemiologic, and technical consultation and guidance in response to reports of illness, including threats of bioterrorism, and collaborates with local partners to apply the appropriate public health treatment.

- Quarantine Public Health Officers: Quarantine Public Health Officers conduct active and passive surveillance of travelers, flight crew, and cargo on international and domestic conveyances for indications of communicable diseases. They also direct and perform activities related to the collection, distribution, and management of medical information of immigrants, refugees, and other migrants.

Quarantinable Diseases

Under Section 361(b) of the Public Health Service Act, DGMQ has the authority to isolate and quarantine individuals or groups ill with or exposed to the following diseases (see Appendix F for more information on each disease):

1. Cholera and suspected cholera
2. Diphtheria
3. Infectious tuberculosis (TB)
4. Plague
5. Smallpox
6. Yellow fever
7. Viral hemorrhagic fevers (Lassa, Marburg, Ebola, Crimean-Congo, South American, and others not yet isolated or named).
8. Severe acute respiratory syndrome (SARS)
9. Influenza caused by novel or re-emergent influenza viruses that are causing, or have the potential to cause, a pandemic.

As noted in the Introduction, several of the diseases listed above (e.g., smallpox, SARS, and influenza with the potential to cause a pandemic) might likely result in a quarantinable disease incident. Others, such as infectious TB, would be highly unlikely to result in one.

Additionally, it is important to note that quarantine authority also resides with state and local public health officials and that some state and/or local laws may require isolation and/or quarantine for other communicable diseases (e.g., measles).

DGMQ Partnerships

DGMQ would work in collaboration with a number of federal, state, and local partners when dealing with communicable disease containment issues at an international airport.

- Federal partners include U.S. Fish and Wildlife Service (FWS), the U.S. Department of Agriculture's (USDA's) Animal and Plant Health Inspection Service (APHIS), and the following Department of Homeland Security (DHS) components: U.S. Customs and Border Protection (CBP), Immigration and Customs Enforcement (ICE), and the Transportation Security Administration (TSA) These agencies would notify DGMQ when a situation of public health interest arises. Subsequently, DGMQ staff then would assess the situation, take appropriate action, and involve CDC specialists when necessary.
- State and local partners include state and local health departments, which would be quickly notified of a quarantinable disease incident and would be asked to provide valuable and essential assistance in the incident response.
- Airline and airport partners include international airline organizations and airport planners and responders.

HHS Partnerships

DHS is working closely with HHS. In October 2005, the two agencies signed a Memorandum of Understanding (MOU) to enhance the nation's preparedness against the introduction, transmission, and spread of quarantinable and serious communicable diseases. Specifically, this MOU addresses how travel information will be shared as well as how partners will assist with screening and handling of persons who are suspected to be ill.

SECTION 2: COMMUNICABLE DISEASE AWARENESS AT AIRPORTS

Introduction

As stated in Manual Overview and Scope, the response activities described in this Manual are those that would occur at domestic international airports only when a significant public health threat exists to warrant airline and airport authorities; federal, state, and local public health agencies; and first responders to be on heightened alert and awareness for the introduction of a quarantinable disease into the U.S. on an international air flight. This section addresses activities that would be conducted by those authorities and agencies while under that heightened alert and awareness condition.

Legal Requirement for Notification of Ill Passenger(s)

42 CFR, Section 71.21 requires that the pilot-in-command of a conveyance *immediately* report passenger illness to DGMQ. (Note: CDC's proposed rule change, "Control of Communicable Disease Proposed 42 CFR Parts 70 and 71," may alter this notification requirement.) For this purpose, an ill passenger is defined by 42 CFR, Section 71.21 as one with either of the two conditions outlined below.

1. A temperature of 38°C (100°F) or greater, accompanied by one or more of the following: rash, jaundice, glandular swelling, or temperature persisting for two or more days.
2. Diarrhea severe enough to interfere with normal activity or work (three or more loose stools within 24 hours or a greater than normal number of loose stools).

Disease Surveillance

Surveillance means "the act of observing." It is the mechanism public health agencies use to monitor the health of their communities. In the case of disease surveillance at airports, surveillance means observing travelers for signs and symptoms of communicable diseases. There are two types of disease surveillance: passive and active.

1. Passive Surveillance: At international airports, this type of surveillance refers to information provided to CDC DGMQ without their soliciting it. An example of passive surveillance would be an airline or airport employee pointing out an ill passenger to CDC DGMQ who would then pull the passenger aside to gather more information about the passenger's physical condition and travel history. This type of surveillance would have been unsolicited by CDC DGMQ.

   It should be noted here that CBP is often the agency identifying and detaining travelers due to their passive surveillance. As outlined above, they then notify CDC DGMQ or designated local public health personnel for further medical assessment.

2. Active Surveillance: In the event of an ongoing communicable disease outbreak in a specific country or region, active surveillance measures may be implemented. The objective of this surveillance is to assess the risk that individuals arriving from affected countries or regions are carrying a potentially quarantinable illness or an illness of public health threat or significance. Examples of active surveillance would be CDC DGMQ personnel meeting arriving aircraft to visually inspect deplaning passengers for outward signs of disease or interviewing them as they deplane to ascertain their health status and obtain their travel history.

Disease Alerts

Should one of the quarantinable diseases—or a new, unknown disease—emerge, the public health system is notified via a disease or health alert network. Throughout the world, there are several interacting disease/health alert networks. These are presented below to make airport personnel, DGMQ partners, and first responders aware of them.

- CDC's Traveler's Health: CDC's Traveler's Health program provides information on global disease outbreaks to the general public in the form of travel notices and through other information provided on their Web site. (URL: http://www.cdc.gov/travel)
- Global Outbreak and Response Network (GOARN): Administered by the World Health Organization (WHO), GOARN "is a technical collaboration of existing institutions and networks that pool human and technical resources for the rapid identification, confirmation, and response to outbreaks of international importance. The Network provides an operational framework to link this expertise and skill to keep the international community constantly alert to the threat of outbreaks and ready to respond." (URL: http://www.who.int/csr/outbreaknetwork/en/)

  GOARN is part of WHO's Communicable Disease Surveillance and Response network, which electronically updates member countries about rumored or confirmed disease outbreaks. (URL: http://www.who.int/csr/don/en)
- Global Public Health Intelligence Network (GPHIN): GPHIN is a "secure, Internet-based 'early warning' system that gathers preliminary reports of public health significance in seven languages on a real-time, 24-hour basis. This unique, multilingual system gathers and disseminates relevant information on disease outbreaks and other public health events by monitoring global media sources such as news wires and web sites. The information is filtered for relevancy by an automated process, and then is analyzed by Public Health Agency of Canada GPHIN officials. The output is categorized and made accessible to users. Notifications about public health events that may have serious public health consequences are immediately forwarded to users." (URL: http://www.phac-aspc.gc.ca/media/nr-rp/2004/2004_gphin-rmispbk_e.html)
- CDC Health Alert Notice (HAN): CDC's HAN is dedicated to strengthening the core public health infrastructure for information access, communications, and distance learning at the state and community levels. Its purpose is to "ensure that each community has rapid and timely access to emergent health information through the provision of alert notices regarding specific infectious disease threats. (URL: http://www2a.cdc.gov/han/Index.asp)

  If a HAN has been issued regarding a disease in a particular country, Quarantine Station personnel may distribute copies of the notice to each arriving traveler (or to an adult member of a family of travelers) arriving from that country. In the event of multiple flights, DGMQ may rely on its airport partners to assist in the distribution of these notices.

  (Note: HANs distributed by DGMQ to airplane passengers or flight crews differ from HANs distributed to public health professionals by CDC. The former are written in simple, easy-to-understand language and are designed for the "average" person's level of comprehension. These notices are provided in several foreign languages and contain specific information about the disease, along with a 24-hour phone number that passengers can call to receive further information.)

Travel Notices

These reports issued by CDC's Travelers' Health are based on the level of risk posed by a disease outbreak. (See Appendix B.) The four levels of travel notices are:

1. In the News: Reports sporadic cases of diseases of public health significance.
2. Outbreak Notice: Reports disease outbreaks in a limited geographic area or setting.
3. Travel Health Precaution: Reports outbreaks of greater scope that affect a larger geographic area and outline specific measures for travelers to take before, during, and after travel.
4. Travel Health Warning: Reports widespread outbreaks that have moved outside the initially affected population and may involve multiple regions or very large areas. The warning would include the precautions described above and a recommendation to reduce nonessential travel to the affected area.

Airport personnel should familiarize themselves with these travel notices to become aware of diseases in foreign countries that potentially could be brought back into the U.S.

Triggers

In terms of disease awareness at airports, a trigger is a combination of conditions that would suggest that a potentially dangerous situation exists and, therefore, pertinent authorities, such as CDC, should be contacted immediately. Usually, this combination of conditions would involve a disease alert and a travel notice along with a symptomatic traveler returning from an area for which the alert or notice had been posted. It is for this reason that airport authorities and personnel need to keep up to date on the global status of disease outbreaks.

SECTION 3: PRE-INCIDENT PREPARATION

Introduction

There is no substitute for planning and preparation when it comes to responding to a quarantinable disease incident at an international airport. Having plans and procedures in place prior to the event will ensure an effective and efficient response to the incident, thus delaying or potentially averting the nationwide spread of a serious disease. While planning and preparing are an ongoing process, there are several tasks outlined in this section for airport quarantinable disease response planners to consider.

Authorities

It is incumbent upon all airport response personnel to know that CDC DGMQ is the lead authority (see Section 1) for the medical response to a quarantinable disease incident at an international airport, and to know how they and their organization interact with DGMQ authority. Airport response personnel should consider acquainting themselves with the Quarantine Station staff, including their roles and responsibilities, their physical location within the airport complex, and how to contact them on an “around-the-clock” basis.

Roles and Responsibilities

In addition to learning the roles and responsibilities of Quarantine Station staff, airport response personnel should know the roles and responsibilities of all entities that would respond to a quarantinable disease incident (see Section 4). Of particular note are the following pre-incident roles and responsibilities:

- Airport Operations Center, in concert with the Federal Aviation Administration (FAA), should consider having in place:
  - An airport emergency response plan that specifically addresses the response to a quarantinable disease incident.
- CDC would be expected to have in place:
  - A procedure for heightened disease monitoring at U.S. ports of entry (airports, seaports, and land border posts), working with airline and airport partners, state and local health departments, and DHS.
  - A familiarity with state and local public health authorities and emergency management agencies.
  - An active contact list with state and local public health authorities and emergency management agencies who can respond to any of the ports of entry and who can act as their designee to make medical assessments.

Worker Protection

Those involved in the response to and containment of a quarantinable disease incident potentially could be exposed to the disease in question. Therefore, these personnel need to be provided PPE appropriate for the response. PPE can include protection for eyes, face, head, and extremities. Gowns, face shields, gloves, and respirators are examples of commonly used PPE within healthcare facilities. Employees should receive training to ensure that they understand the hazards present, the necessity of the PPE, and its limitations. In addition, they should learn how to properly put on, take off, adjust, and wear PPE. Finally, employees must understand the proper care, maintenance, and disposal of PPE.

The decision about what type of PPE* to use depends on the degree of communicability of the suspected illness and its route of spread. However, it is important to take appropriate precautions and don only PPE that is required for the situation. If the staff who initially board a plane for a medical assessment are "over-dressed" (e.g., wearing a biohazard suit when only a surgical mask is necessary), they could possibly frighten the passengers and flight crew and may make the initial assessment more difficult to conduct. In some situations, full PPE may be appropriate, but, in any case, it is important to explain why that level of precaution is being taken.

*Note: It is beyond the scope of this Manual to provide detailed information about the various types of PPE as well as detailed instructions on their proper use. Responding agencies already have their own PPE protocols and practices in place, and responders should adhere to what their agency prescribes. Most importantly, those providing and donning surgical masks or respiratory protection should be trained in the proper types and appropriate uses of this PPE. Therefore, a certified professional should be consulted when selecting PPE and training responders on its proper use. (For more information about PPE, please see Appendix C.)

Pre-Incident Preparation: In-Flight Response

There are a number of tasks to consider that pertain to the in-flight response to a quarantinable disease incident (see Section 5).

- Notification Trees – Once initial notification has been made of an arriving airplane with a suspected quarantinable disease onboard, a series of other notifications begins. To ensure that proper notifications are made, airport response personnel should consider developing "notification trees" that show which organization(s) to contact and the methods to use (e.g., phone, radio, e-mail, etc.).
- Airplane Parking Location – After notifications have been made, it will be necessary to determine where to park the airplane. The Airport Operations Center (in coordination with FAA and CDC) should consider identifying ahead of time a location and procedure for parking an airplane during the response to a quarantinable disease incident. When considering an airplane parking location, decision makers should consider a location in which support services (e.g., fresh air, air conditioning, and electrical power) can be supplied to the airplane.
- Initial Response Team – Airport response personnel should be aware of who comprises the initial response team prior to the incident and their roles and responsibilities. They also should take into consideration "after hours" response issues, such as around-the-clock notifications and delays in assembling the initial response team.
- Incident Command System – The response to a quarantinable disease incident will require the initial response team to activate and deploy its Incident Command System (ICS) (see Section 5 and Appendix H). A well planned ICS is of utmost importance to an appropriate response to a quarantinable disease incident. Therefore, responders should consider understanding the nature of ICS and Unified Command (UC) prior to an incident, and how their organization interacts within the ICS/UC structure. Additionally, they should understand the roles and responsibilities outlined in the NRP and the National Incident Management System (NIMS) (see Appendix H).

- Personal Protective Equipment – Once airport responders have been notified of the pending arrival of an airline with a suspected quarantinable disease onboard, those that will be interacting with the ill passengers will need to assemble the appropriate PPE for responding to the suspect disease. PPE should be appropriate to the situation, as determined by the responding agency's protocols. Therefore, those responders should consider having appropriate PPE accessible and have knowledge about which PPE to use for each particular disease and how to use it.

Pre-Incident Preparation: On-Arrival Response

As mentioned above, responders should know prior to the incident who the initial response team is and what PPE to use. PPE should be appropriate to the situation, as determined by the responding agency's protocols. Another task to be accomplished ahead of time is:

- Passenger Information Scripts – Passengers will look to any source for information about the unfolding events on the airplane. "Information scripts" prepared by CDC and airlines prior to an incident will help responders and the flight crew keep people accurately informed of the unfolding events on the plane.

Pre-Incident Preparation: Post-Arrival Response

Two pre-incident planning tasks that pertain to the post-arrival response to a quarantinable disease incident are:

- Identified Quarantine Facility – The airport should consider designating a "holding area" on the airport property where exposed persons can be held separately for a few hours while CDC and other public health officials evaluate a potentially quarantinable disease situation. The airport in cooperation with CDC and state and local health authorities should have identified in the airport communicable disease response plan sites for a temporary quarantine or an extended quarantine. These might be on the airport or off-airport at a site identified as part of a comprehensive community solution for dealing with possible quarantinable diseases. The Quarantine Station and the health department, with cooperation from federal and state support organizations, would be responsible for identifying the supplies and personnel needed to maintain the quarantine sites (see Section 7).

  Because state or local health authorities may issue a separate, concurrent quarantine order, these health authorities should consider having in place an identified quarantine facility and the supplies and personnel needed to manage this quarantine site.

- Pre-Designated Hospital Facilities – At some international airport cities, CDC has signed agreements with certain local hospitals–known as Memorandum of Agreement (MOA) hospitals–to manage ill persons. An MOA hospital is a hospital that has met certain criteria and has signed a confidential agreement with CDC to manage ill travelers who are suspected of having a quarantinable disease. If there are no MOA hospitals near the airport or the pre-designated MOA hospital(s) cannot take in the ill traveler(s), responders will transfer them to another hospital designated by CDC Quarantine Station personnel or their authorized representatives in coordination with state or local emergency medical services (EMS) and public health agencies. Therefore, airport responders need to be aware that these MOA hospitals exist and that CDC will provide their names at the time of an incident. Naturally, the severity of the illness, bed availability, and security precautions for non-compliant patients need to be taken into consideration when deciding on ill traveler hospitalization.

Pre-Incident Preparation: Recovery

With regard to recovery, a pre-incident planning task is:

- Objectives of Recovery – The objectives of recovery are to assist the public, restore the environment, and restore the infrastructure. Airport responders need to have considered ahead of time the tasks required by all agencies involved in the recovery effort to accomplish these objectives.

SECTION 4: INCIDENT RESPONSE: ROLES AND RESPONSIBILITIES

Introduction

A successful response to a quarantinable disease event at an international airport will require a well-coordinated effort by conveyance operators, airport operators, state and local governments, local healthcare facilities and support organizations, and agencies of the federal government. The first step to developing and implementing an airport communicable disease response plan is to understand the roles and responsibilities of each of these authorities. These roles and responsibilities are for ill traveler incidents during which there is suspicion that the illness may be one of the quarantinable diseases specified by Executive Order 13295 (amended) pursuant to Section 361(b) of the Public Health Service Act.

Note: The roles and responsibilities listed may not reflect those roles and responsibilities that may result from an escalating public health incident.

Conveyance Operators

Pilot-in-Command of Airplane

The roles and responsibilities of the pilot-in-command and flight crew of the airplane are to:

- Immediately report ill passenger(s) or crew members suspected of having a communicable disease to DGMQ through established protocols.*****
- Make an initial assessment. Seek assistance from medical professionals on board the aircraft and on the ground (either airline medical staff or contract medical consultants) to make an initial assessment of the situation and communicate pertinent information to CDC personnel.
- Determine, in consultation with medical professionals, CDC, and other governmental entities, whether to proceed to the scheduled destination or divert to another airport. (Depending on the medical situation and current national security concerns, CDC, FAA, CBP, and TSA may directly influence the decision to divert.)
- Recommend what services should be staged at the airport upon arrival.
- Maintain contact with the FAA and the Airline Operations Center, which will establish and maintain contact with the CDC Quarantine Station of jurisdiction.

*****Note: The notification procedure may be somewhat different in communicating with foreign airlines as opposed to U.S. airlines. The principal difference is that foreign airlines do not have an Airline Operations Center at a U.S. airport and, therefore, must have an airline representative meet their planes upon arrival at the domestic airport.

Airline Operations Center/Airline Representative

The roles and responsibilities of the Airline Operations Center/Airline Representative are to:

- Coordinate operations and maintain communication between the pilot-in-command of the airplane and CDC to monitor the status of an ill person.
- Provide instructions to the airplane crew, in consultation with FAA, CBP, airport operators, CDC Quarantine Station, and, if appropriate, the Federal Bureau of

Investigation (FBI). (Note: Alerting the FBI is appropriate because responders cannot presume to know the nature and cause of the illness in question.)

- Coordinate with CBP and other federal partners.
- Provide assistance for an on-site crisis management team when requested to assist public health authorities. The team may include experts in communications, medical and mental health services, occupational health, environmental health, and engineer or manufacturer representatives and passenger service staff.
- Coordinate with CDC and state and local health departments on media relations.
- Help make travel arrangements and transport travelers to their final destinations when public health considerations allow.

Airport Operators

Airport Operations Center

The roles and responsibilities of the Airport Operations Center are to:

- Assist in deciding when and where the airplane should land.
- Assist with logistics.
- Provide credentials and security escorts to public health personnel and emergency responders who require access to restricted areas of the airport.
- Make appropriate notifications about the incident.
- Work with CDC and other agencies to assist in the care of passengers and flight crew if they are housed at a temporary care facility or quarantine facility at the airport.
- Coordinate with CBP and other federal partners.
- Provide transportation for passengers and flight crew to the temporary care or quarantine facility. (Proper infection control measures should be taken. See Appendix C.)
- Participate in determining a location where Incident Command (IC) or UC would operate.
- Assist with providing information to family and friends of passengers and flight crew.
- Coordinate with the FAA to provide a parking area for the aircraft.

Emergency Medical Services

The roles and responsibilities of EMS, which may require supplemental assistance from local jurisdictions, are to:

- When requested, assist public health personnel in the assessment of the ill person.
- Implement the use of infection control measures to limit transmission of communicable disease on the airplane, after landing, and during transit.
- Remove the ill person from the airplane and transport by ambulance to the designated medical facility after CBP clearance or medical parole.

- Provide first aid and other emergency medical services to ill or injured passengers or flight crew members.
- Assist the public health responders and other on-site healthcare providers, and coordinate with CDC personnel.

State and Local Governments

State and Local Health Departments

The roles and responsibilities of the state and local health departments are to:

- Perform the preliminary assessment of ill person(s) after the plane lands *if* CDC Quarantine Station staff is *not* available. (The specifics as to notification, response, assessment, and ill person disposition should be worked out between individual local and/or state health departments and the jurisdictional CDC Quarantine Station.)
- Assist in preliminary assessment of ill person(s) when CDC Quarantine Station staff is available.
- Notify state and local medical examiner or coroner if indicated.
- Coordinate, as necessary, with CDC in the issuance of quarantine and isolation orders and the management of quarantine and isolation.
- Provide staff to assist in managing a surge of ill people from the quarantine site arriving at a hospital (or hospitals).
- Assist, as needed, federal public health agencies with setting up a medical clinic at the quarantine site.
- Provide guidance to designated hospitals and/or the quarantine site medical clinic on the clinical and diagnostic management of ill people, including assisting with arrangements for laboratory testing at local or state public health laboratories or at CDC.
- Prepare strategies for mental health interventions for ill persons and persons who have been exposed and are under quarantine, their families, and service providers.
- Assist emergency management agencies, if needed, in planning for and activating a temporary care facility and quarantine facility.
- Provide clinical and public health information to local healthcare providers and the public.
- Provide information and recommendations to local and state authorities.
- Coordinate with the IC/UC on media relations.
- Coordinate with CDC Quarantine Station on recommendations and guidance as needed.

State and Local Emergency Management Authorities
The roles and responsibilities of the state and local emergency management authorities are to:

- Assist and support state and local public health authorities with financial and other measures if temporary care and quarantine facilities are activated.
- Work with state and local health departments to support the planning and preparation activities to operate temporary care and quarantine facilities at each international and domestic airport, seaport, and land border crossing.
- Seek assistance from the Federal Emergency Management Agency (FEMA) when appropriate.

Law Enforcement Agencies
The roles and responsibilities of law enforcement agencies are to:

- Provide security for the response staging area and control access to and from the airplane and the airport.
- Escort agency representatives into and out of IC and the airport as needed.
- Provide representatives to IC.
- Maintain order.
- Assist in and expedite the transfer of ill persons and clinical materials for evaluation and treatment.
- Enforce required actions (e.g., transportation) for ill persons or persons who have been exposed to an illness if any such persons are uncooperative. (Proper infection control measures should be taken. See Appendix C.)

Local Healthcare Facilities and Support Organizations

Healthcare Facilities
The roles and responsibilities of healthcare facilities are to:

- Isolate ill persons when medically indicated.
- Institute infection control measures to limit the spread of quarantinable diseases. This may include isolation of ill persons and use of PPE by staff and visitors when medically indicated.
- Evaluate and treat referred ill persons. This includes obtaining specified diagnostic specimens and assuring the specimens are promptly and safely transported to designated laboratories. It also includes assessing the need for and providing prescription medications for the ill persons.
- Evaluate exposed people if they develop illness signs or symptoms while in quarantine.
- Provide clinical and laboratory information to federal, state, and local public health authorities.
- Work with public health authorities on media relations.

Support Organizations
A number of different support organizations, including non-government organizations, would be brought in to provide support services to people exposed to the illness (quarantined individuals), as well as to service providers. Such support services may be modified depending on the nature of the quarantine to protect volunteers. Support services include, but are not limited to:

- Meals (including special meals for those under dietary restrictions)
- Beverages (including sterile water and formula for infants)
- Eating utensils, plates and napkins
- Tables and chairs
- Cots and bedding
- Space heaters and fans
- Portable toilet facilities and toiletries
- Hand-washing facilities
- Portable showering facilities
- Parent-child needs (e.g., diapers)
- Telephones
- Means of communicating with family
- Television, movies, and radio
- Internet access and email
- Reading materials and games
- Public address system
- Interpreter services
- Spiritual support
- Mental health support

Federal Government

Centers for Disease Control and Prevention (CDC)
The roles and responsibilities of CDC are to:

- Authorize the temporary detention, through federal order as necessary, of passengers and flight crew for appropriate evaluation and response to reports of illness.
- Issue federal quarantine orders if warranted.
- Notify and collaborate with other federal, state, and local agencies when ill travelers have been detained or paroled into the United States for evaluation or treatment for communicable diseases.
- Arrange or assist in the medical evaluations of ill travelers and determine the need for public health interventions.

- Provide advice and guidance to the public health responders, including state and local public health authorities, in implementing quarantine measures and caring for ill persons and persons who have been exposed to the illness.
- Obtain information on ill and exposed travelers (e.g., demographics, contact information, travel itinerary, illness history, and medical status) and the conveyance (number of passengers, manifest availability).
- Communicate with other federal, state, and local response and public health partners regarding the ill person's medical treatment.
- Participate in the management of media relations, in collaboration with state and local health departments and information officers from other response partners.
- Work with the Department of State and WHO to provide information about ill international travelers to ministries of health at their place of origin and at intermediate destinations.
- Work with the Department of State, as necessary, to notify applicable foreign consulates or embassies that their foreign nationals have been detained for evaluation or treatment of a quarantinable disease.
- Assist in the development of occupational health and infection control guidelines for the Federal Inspection Site (FIS) at ports of entry.
- Rescind federal quarantine orders when the public health situation allows.

Department of Homeland Security
DHS leverages resources within federal, state, and local governments, coordinating the transition of multiple agencies and programs into a single, integrated agency focused on protecting the American people and their homeland. At international airports, the following DHS components play a role in the response to a quarantinable disease incident.

Customs and Border Protection
The roles and responsibilities of CBP are to:

- Support initial entry screening of international travelers (using up-to-date information provided by CDC) for the purposes of identifying potentially infected travelers.
- Provide enforcement resources during a medical response until the appropriate enforcement agency arrives at the plane.
- For international flights, meet the conveyance and prevent disembarkation until CDC or their designated alternate arrives. (TSA has concurrent authority.)
- Escort medical personnel and other emergency responders on to the aircraft.
- Notify the appropriate CDC Quarantine Station to initiate their medical assessment before releasing detained passengers.
- Assist CDC in identifying travelers at risk and those suspected of having been in contact with an ill person by providing passenger customs declarations, Advance Passenger Information System (APIS) data, and other sources of traveler information in response to a specific request by CDC.

- Assist CDC by providing information for use in locating people suspected of having contact with an ill person.
- Parole, if necessary, ill non-U.S. citizens and non-permanent residents (e.g. nonimmigrant students, workers, etc.) into the United States if public health interventions are indicated.
- Assist CDC, as necessary and as resources permit, in distributing health information at ports of entry.
- Assist in the development of occupational health and infection control guidelines for the federal inspection site at ports of entry.

Immigration and Customs Enforcement
ICE is an investigative agency of DHS. Specific ICE officers are authorized under the Public Health Service Act to:

- Assist CDC in the enforcement of quarantine and isolation.

Transportation Security Administration
If the Secretary of DHS determines that a situation involving a communicable disease presents a security threat, TSA may, under various authorities within the Aviation Transportation Security Act and the Homeland Security Act, request that FAA either:

- Direct a flight destined for the U.S. from landing in the U.S. or direct the flight to land at a specified airport in the U.S. that is equipped to examine and handle a suspected infectious person on the aircraft until CDC or their designated alternate arrives.

Federal Aviation Administration (FAA)
The roles and responsibilities of FAA are to:

- Provide air traffic control services and handling priority as required to permit safe and expeditious arrival and landing at the destination airport.
- Provide taxi instructions to a parking location designated by competent authority to effectively implement public health intervention in response to illnesses on board.
- Establish and assist with enforcement of temporary flight restrictions where requested by competent authority in the interest of public health and safety.
- At the request of TSA, direct a flight destined for the U.S. from landing in the U.S. or direct the flight to land at a specified airport in the U.S. that is equipped to examine and handle a suspected infectious person on the aircraft.

SECTION 5: INCIDENT RESPONSE: IN-FLIGHT

Introduction

Federal law requires the pilot-in-command to *immediately* contact the appropriate CDC Quarantine Station about an illness or death on an aircraft (see Section 2). The pilot can do this through either the FAA or the airline's dispatch center, which would then notify the jurisdictional CDC Quarantine Station. This notification would then trigger other notifications and preparations prior to the arrival of the aircraft. Notifications among responding agencies to a quarantinable disease incident on an international aircraft should be timely and redundant. This section describes the notifications, preparations, and responsibilities of all involved entities.

Notifications: Airports with an On-Site CDC Quarantine Station

The notification process for international airports with an on-site CDC Quarantine Station differs slightly from those airports that do not have a Quarantine Station. The difference is mainly in the delegation of authority to other on-site responders at non-CDC Quarantine Station airports. Listed below are the notifications for the in-flight response to a quarantinable disease incident on an international flight at airports with an on-site CDC Quarantine Station. Please note that, in this list, there are built in redundancies to ensure proper notification of all responding entities. Airport communicable disease response planners may wish to reduce or eliminate these redundancies as they see fit for their particular airport operation.

- Pilot-In-Command notifies:
  - Airline dispatch center
  - FAA
  - CDC Quarantine Station

- CDC Quarantine Station notifies:
  - CBP
  - Airport police/Fire Department/EMS Dispatch Center
  - State and local public health departments
  - Healthcare facility (depending on the nature of the event)
  - CDC headquarters (depending on the nature of the event)
  - FBI

- FAA notifies:
  - CDC Quarantine Station
  - Airport Operations
  - CBP
  - TSA

- Airport Police/Fire Department/EMS Dispatch Center notifies:
  - Airport operations center
  - CDC Quarantine Station
  - CBP
  - TSA

- Airport Police/Fire Department/EMS notifies:
  - CDC Quarantine Station
  - Airport operations center

- Airline Operations Center/Airline Representative notifies:
  - CDC Quarantine Station
  - Airport police/fire department/EMS
  - CBP
  - TSA

- CBP notifies:
  - CDC Quarantine Station

- TSA notifies:
  - CBP

Notifications: Airports Without an On-Site CDC Quarantine Station

At international airports without an on-site CDC Quarantine Station, the response to a quarantinable disease incident on an international flight relies on on-site responders who have been delegated authority by the jurisdictional Quarantine Station to act on its behalf. Airports without a Quarantine Station should notify the jurisdictional Quarantine Station and the local health department for both domestic and international flights. Listed below are the notifications for the in-flight response at airports without an on-site CDC Quarantine Station. Please note that, in this list, there are built in redundancies to ensure proper notification of all responding entities. Airport communicable disease response planners may wish to reduce or eliminate these redundancies as they see fit for their particular airport operation.

- Pilot-In-Command notifies:
  - Airline dispatch center
  - FAA
  - Jurisdictional CDC Quarantine Station

- Jurisdictional CDC Quarantine Station notifies:
  - CBP
  - Airport police/Fire department/EMS Dispatch Center
  - State/local health department
  - Healthcare facility
  - CDC Headquarters
  - FBI

- FAA notifies:
  - Jurisdictional CDC Quarantine Station
  - CBP
  - Airport police/fire department/EMS dispatch center
  - TSA

- Airport Police/Fire Department/EMS Dispatch Center notifies:
  - Airport police/fire department/EMS
  - Airport operations center
  - Jurisdictional CDC Quarantine Station
  - CBP
  - TSA

- Airport Operations Center/Airline Representative notifies:
  - Jurisdictional CDC Quarantine Station
  - Airport police/fire department/EMS
  - CBP
  - TSA

- CBP notifies:
  - Jurisdictional CDC Quarantine Station

- TSA notifies:
  - CBP

Other Notification Considerations

In addition to the responders listed in the notifications above, the entities listed below may be considered in notification lists for airport response planning:

- City/County Responders
  - Emergency Management Agency
  - EMS
  - Law enforcement
  - Communicable disease specialist/controller
  - Medical laboratory
  - Public information officers
  - Non-governmental agencies

- State Responders
  - Emergency Management Agency
  - Health department
  - Law enforcement
  - Communicable disease specialist/controller
  - Medical laboratory
  - Public information officers

Preparation for the Arrival of the Aircraft

Preparing for the arrival on an international flight with a quarantinable disease incident on board involves three activities: deciding where to park the aircraft, assembling the initial response team, and preparing for the arrival of the ill person(s).

Parking the Aircraft

The nature of the event and the scope of the anticipated response will dictate where to park the aircraft. Three options for parking the aircraft are:

- Park the aircraft at its assigned gate. Airport operator in coordination with the FAA, CBP and CDC will decide where the aircraft will be parked. The advantages of parking the aircraft at its assigned gate are that responders will have easy access to the ill person(s) and that, should the incident be a minor one, travelers will be able to disembark quickly. The disadvantage is that the infected person(s) may have the potential to contaminate the passenger boarding bridge and gate area. Additionally, if the incident turns out to be a major event, it will tie up the gate for hours, and may be more difficult to manage.

- Park the aircraft at a secure, remote gate. The advantage of parking the aircraft at a secure, remote gate is that responders will have unconstrained access to the ill person(s). The disadvantages are that the remoteness of the gate could prevent the responders from getting to it and exiting it quickly and that, should the incident be a minor one, the plane may have to be moved to its original gate or an alternate gate at the airport.

- Isolate the aircraft on the airport ramp. One advantage of isolating the aircraft on the airport ramp is it helps prevent the spread of a possible quarantinable disease. Another advantage is that responders will have access to passengers and flight crew. The disadvantages are that special equipment may be needed for responders to board the plane and that the remoteness of the area could prevent the responders from getting to it and exiting it quickly. Another disadvantage is that, should the incident be a minor one, the plane may have to be moved to its original gate or an alternate gate at the airport.

When considering an airplane parking location, decision makers should consider a location in which support services (e.g., fresh air, air conditioning, and electrical power) can be supplied to the airplane.

Passenger Considerations

Holding people on an airplane or on airport grounds presents some sensitive issues to consider:

- Maintaining the health of the “well” passengers and flight crew – Inadequate ventilation, insufficient bathroom facilities, and the potential for deep vein thrombosis from sitting for long periods of time pose health risks for “well” passengers and flight crew. It is important that the Quarantine Station or public health personnel evaluate the ill person(s) in an expeditious manner and remove them promptly if warranted.

- Keeping the passengers informed – Passengers will look to any source for information about the unfolding events on the airplane. Responding agencies need to assist and encourage the flight crew to keep passengers informed and calm.

- Keeping the situation under control – The public health officer who enters the plane should ask the flight attendants to keep everyone seated until the medical evaluation is made. Should “well” passengers become unruly, the public health officer should request assistance from the jurisdictional law enforcement agency.

- Informing family members and those waiting for the airplane – Airlines need to keep those waiting for the airplane informed about what is occurring on the airplane. Some airports/airlines have waiting areas for the families and friends awaiting passengers and flight crew.

Assembling the Initial Response Team
The initial response team for a quarantinable disease incident at an international airport should be assembled and waiting for the aircraft.* This team should have gathered as much information from the airline ahead of time as possible in order to make an informed judgment as to the type of disease(s) they may encounter and to have the necessary PPE on hand to make an initial screening and diagnosis.

At international airports with an on-site CDC Quarantine Station, the initial response team would comprise:

- CDC Quarantine Station personnel
- CBP
- Airport police/fire department/EMS
- Local public health department

At international airports without an on-site CDC Quarantine Station, the initial response team would comprise:

- CBP (Acting Lead in consultation with CDC Quarantine Station)
- Local public health department
- Airport police/fire department/EMS

As noted in Section 3, Pre-Incident Preparation, all airport response personnel should be aware of the make-up and roles and responsibilities of the initial response team prior to the incident. They also should take into consideration “after hours” response issues, such as around-the-clock notifications, and delays in assembling the initial response team.

*Note: In the “best case” scenario, notifications would be made in a timely manner to all of the appropriate authorities. However, there are instances when notifications are late, thereby delaying the assemblage of the initial response team. Responders need to keep in mind the health and safety of both the ill person(s) and the well passengers and flight crew. The response to the quarantinable disease incident needs to be swift and effective. Ill person disposition should not be delayed while waiting for the entire response team to assemble.

Incident Command System
If a quarantinable disease is suspected, the initial response team would activate and deploy their ICS. The ICS is a standardized on-scene incident management concept designed specifically to allow responders to adopt an integrated organizational structure equal to the complexity and demands of any single incident or multiple incidents without being hindered by jurisdictional boundaries. (See Appendix H for more detailed information on IC or UC.)

Preparing for the Arrival of Ill Passenger(s)
In addition to the initial response team, other entities may need to prepare for the arrival of not only an ill person or persons, but also the treatment of exposed people (i.e., quarantine). Those entities and their corresponding roles and responsibilities are:

- **Local Healthcare Facilities**
  - Prepare for the arrival of ill people who may need medical care under isolation; and
  - Develop strategies with the state and local health departments to deliver care to people under quarantine who need medical services.

- **State and Local Governments**
  - Prepare for on-site or remote consultation to determine medical and public health treatment of the ill person(s) and possible quarantine of people who may have been exposed to the illness;
  - Inform local agency partners and prepare for the enforcement of quarantine in a temporary-care facility for people who were exposed to the ill person; and
  - Develop strategies with the local healthcare facility to deliver care to people under quarantine who need medical services.

- **Federal Government**
  - Develop strategies to isolate the ill person(s) and to quarantine people exposed to the ill person;
  - Prepare for the enforcement of isolation and quarantine measures for the arriving travelers and conveyance at the port of entry; and
  - Prepare to request and collect passenger locating information.

SECTION 6: INCIDENT RESPONSE: ON ARRIVAL

Introduction

The on-arrival response to a quarantinable disease incident at an international airport poses a "balancing act" for the initial response team and the airline. While responders want to take as much time as necessary to interview the ill travelers on board the aircraft and make an informed diagnosis, they also must take into consideration the hundreds of other passengers and flight crew who may or may not have been exposed to a potentially dangerous disease and who want to disembark as soon as possible to return to their homes or continue their travels, and the airline that needs to put the aircraft back in service.

Planeside Response

Once the plane has been parked, two activities will occur:

1. CDC Quarantine Station personnel or their designated alternate (e.g., local health department) will board the plane and be directed to the ill person(s). Before reaching the ill person(s), they may don PPE appropriate for the anticipated illness. Once they reach the ill persons, they will assess the symptoms, take a travel history, and make an initial determination and treatment. (See "Treatment of Ill People" below.)

2. The remaining people should have been notified prior to the plane being parked that there is an ill person on board requiring medical evaluation before anyone else can be cleared for deplaning. This announcement should be made again as the medical responders are boarding the plane, and it should be made periodically during the assessment. However, note that, the longer the assessment takes, the more anxious the remaining people will become. Therefore, the appropriate law enforcement authority may be asked to board the plane to maintain order. (See "Treatment of Exposed People" below.)

Treatment of Ill People

The response to ill or exposed passengers and flight crew on the aircraft depends on the initial determinations and diagnosis of those assessing the ill person(s). The following "if-then" conditional statements outline how the passengers and flight crew will be managed:

1. If the ill person is assessed and determined to have an illness that is not of public health significance (e.g., diabetes), then:

   - The ill person, upon receiving a planeside medical clearance by CDC or their designated alternate, will be transported to a healthcare facility, if necessary.
   - The other passengers and flight crew will be released to continue regular federal clearing processing.

2. If the ill person is assessed and is suspected of having an illness of public health significance but not one that would pose a threat to other people on the aircraft or in the community (e.g., malaria), then:

   - The ill person, upon receiving a planeside medical clearance by CDC or their designated alternate, will be transported to a healthcare facility for further evaluation or treatment.

- The other passengers and flight crew will be released to continue CBP processing.

3. If the ill person is assessed and is suspected of having a *non-quarantinable illness* (e.g., measles) that could pose a threat to other people on the aircraft or in the community then:

   - The ill person will be isolated and provided a surgical mask, if the person can tolerate wearing one. If they cannot wear a surgical mask they will be instructed to practice respiratory/cough etiquette (see the following CDC web site at: www.cdc.gov/flu/professionals/infectioncontrol/resphygiene.htm) and to use good hand hygiene.
   - Other responders and the designated healthcare facility (local hospital) will be alerted to apply appropriate precautions (e.g., PPE).
   - The ill person may be transported under appropriate isolation measures to a local hospital.
   - Notifications will be made to CDC Headquarters, healthcare facilities, and state and local health departments.
   - Health alert notices about the disease may be distributed to the passengers and flight crew.
   - Locator information may be collected from some or all of the remaining “well” passengers and flight crew before releasing them. CDC will request this passenger information from CBP, if needed.

4. If an ill person is assessed and suspected of having a *quarantinable illness* (e.g., pandemic influenza), then:

   - The ill person will be isolated from others and provided a mask if available, or tissues, if this has not been done already and if the person does not have breathing difficulties.
   - Other responders and designated healthcare facilities will be alerted to apply appropriate precautions, including PPE.
   - The ill person will be transported under appropriate isolation measures to a designated healthcare facility after clearing CBP processing and/or temporary parole.
   - Notifications will be made to CDC Headquarters, healthcare facilities, and state and local health departments.
   - All people who may have been exposed to the ill person will be identified, and contact information for each will be collected.
   - An order for quarantine will be issued by CDC.
   - Quarantine plans for the exposed passengers and flight crew will be implemented (see Section 7).
   - State and local support organizations will be alerted.
   - Appropriate agencies will coordinate IC/UC, ensuring consistency and accuracy.

Treatment of Exposed People

As seen above, when an ill person is assessed and suspected of having an illness that could pose a threat to other people on the airplane or in the community, those remaining will be asked to provide contact information before being released or they will be quarantined. In the case of quarantine, the information will be collected at the quarantine site. Quarantine is covered in Section 7.

Information Given to Exposed People

If the exposed people are going to be allowed to deplane and not be quarantined, they will be provided with health information instructing them about the signs and symptoms of the disease and what to do if they observe any of these signs and symptoms in themselves.

Information Collected from Exposed People

Both the airlines and CDC learned from the SARS experience that tracing exposed passengers and flight crew is a very difficult task. Fortunately, they have worked together to improve the methods for collecting information from exposed passengers and flight crew. Several methods of collecting passenger and flight crew information are described below.

- Passenger Locator Cards: The passenger locator card was developed by CDC with input from the airlines to collect contact information from passengers in a machine-readable format. Using a targeted approach, CDC will identify countries where exposure to quarantinable disease is most likely and then stock the Passenger Locator Cards, as well as Health Alert Notices, on flights arriving from these countries. Using this approach, passenger information can be collected before deplaning.

- Immigration Forms: Non-U.S. citizens and non-permanent residents with certain exceptions (e.g. Canadian citizens) must fill out CBP Form I-94 or I-94W, Arrival/Departure Record. A crewmember must complete CBP Form I-95, Crewman Landing Permit. These forms provide information about the passengers' or crewmembers' nationalities and their travel itineraries within the U.S.

- eAPIS: CBP's Electronic Advance Passenger Information System (eAPIS) online transmission system collects passenger information for arriving and departing flights. For international flights arriving in the U.S., passenger information needs to be submitted in advance of an aircraft's arrival.

Because most international flights carry hundreds of people, CDC may call on the airline or CBP to assist them in obtaining the abovementioned information.

SECTION 7: INCIDENT RESPONSE: POST-ARRIVAL

Introduction

The post-arrival response to a quarantinable disease incident at an international airport is multi-faceted and depends on the nature of the incident and the scope of the response. As seen in the previous section, in an event of low public health significance, the ill person is assessed and, if necessary, hospitalized, and the remaining passengers and flight crew are released. In an event of high public health significance, the ill person is assessed and hospitalized, and the remaining passengers and flight crew either are released after providing contact information or are quarantined. Contact information was discussed in the previous section. This section covers hospitalization of ill persons and quarantine of exposed passengers and flight crew.

Hospitalization of the Ill Persons

Once the initial response team has decided to hospitalize the ill person(s), there are three considerations that need to be addressed:

1. To which hospital do the ill persons go?
2. Under whose charge are they going?
3. What happens if they don't want to go?

Memoranda of Agreement Hospitals

The answer to the first question is that EMS would take ill people to one of CDC's pre-designated MOA hospitals for that particular airport. An MOA hospital is a hospital that has met certain criteria and has signed a confidential agreement with CDC to manage ill travelers who are suspected of having a quarantinable disease. If there are no MOA hospitals near the airport or the pre-designated MOA hospital(s) cannot take in ill travelers, responders will transfer them to another hospital designated by CDC Quarantine Station personnel or their authorized representative(s) in coordination with state or local EMS and public health agencies.

Naturally, the severity of the illness, bed availability, and security precautions for non-compliant patients need to be taken into consideration when deciding on hospitalization of ill persons. In a life-threatening situation, responders will take ill travelers to the closest hospital that can treat them.

CBP

All travelers on international flights must go through the federal clearance process before entering the U.S. Therefore, they are under federal authority and control until they have been released into the country. If necessary, CBP may provide planeside clearances, if admissible, or temporary parole of ill people to allow for disembarkation from the passenger boarding bridge directly to an awaiting ambulance on the tarmac. The advantage of this protocol is that it would lessen the potential of exposure to other people within the federal inspection area and the airport terminal.

Recalcitrant Travelers

Ill travelers may insist that they are not ill enough to require hospitalization. Should this case arise, CDC Quarantine Station personnel or their authorized representative(s) will:

- Consult with state and local health authorities and issue a federal isolation order.
- Call on local, state, or federal law enforcement to enforce the federal order.

Should an ill traveler resist an isolation order or attempt to flee, CDC Quarantine Station personnel may, pursuant to authorities contained in the Public Health Service Act, request that state and local authorities or federal law enforcement detain the individual and provide security during medical evaluation and treatment.

Quarantine

Quarantine and isolation represent two ways of trying to contain a quarantinable disease within a community. Historically, both methods have been used, most recently during the 2003 SARS epidemics in which China, Hong Kong, Singapore, and Canada issued quarantine orders. There has not been any large-scale quarantine incident in the United States in recent history. Regardless of whether quarantine or isolation is used, the governing authority over the quarantine or isolation, whether it be local, state, or federal, has an obligation to provide adequate healthcare, food and water, and a means of communication with family and friends.

The terms *isolation* and *quarantine* often are used interchangeably, but they have very different meanings and serve different purposes. CDC's "Fact Sheet: Isolation and Quarantine" (URL: http://www.cdc.gov/ncidod/dq/sars_facts/isolationquarantine.pdf and Appendix D) explains the two terms in the following way:

- *Isolation* refers to the separation of people who have a specific infectious illness from those who are healthy and to the restriction of their movement to stop the spread of that illness. Isolation allows for the focused delivery of specialized health care to people who are ill, and it protects healthy people from getting sick. People in isolation may be cared for in their homes, hospitals, or designated healthcare facilities. Isolation is a standard procedure used in hospitals today for patients with TB and certain other infectious diseases. In most cases, isolation is voluntary; however, many levels of government (federal, state, and local) have basic authority to compel isolation of sick people to protect the public.

- *Quarantine* refers to the separation and restriction of movement of people who, while not yet ill, have been exposed to an infectious agent and therefore may become infectious. Quarantine of exposed people is a public health strategy, like isolation, that is intended to stop the spread of infectious disease. Quarantine is medically very effective in protecting the public from disease.

Authority to Quarantine

Section 1 explained that CDC DGMQ is the lead authority for the response to a quarantinable disease incident at an international airport. Under this authority, DGMQ is empowered to detain, medically examine, or conditionally release people suspected of carrying a quarantinable disease. Therefore, in an incident where a traveler on an international flight is suspected of being ill with a quarantinable disease and quarantine of the remaining passengers and flight crew is indicated, *CDC will issue the initial order to quarantine the exposed passengers and*

flight crew. However, because state and local health authorities may have concurrent legal power to order quarantine, secondary orders to quarantine may come from these entities. (See "Fact Sheet: Legal Authorities for Isolation and Quarantine" in Appendix D.)

Change in Quarantine Authority
Depending on the scope of the incident and the nature of the disease, quarantine may last from a few days to a few weeks. In short-term quarantines, federal authorities will maintain their authority. However, in long-term quarantine situations, they may transition the authority to state and local governments.

Quarantine Planning

As noted above, CDC will be the lead authority for quarantining exposed passengers and flight crew. However, because the quarantine may take place on airport grounds or within the local community, CDC may consult with airport, state, and local organizations to select and prepare the quarantine site and manage the overall quarantine. Therefore, these organizations need to understand state and local quarantine laws, prescribed responsibilities, and requisite documentation. They also need to be prepared in advance for a quarantine incident within their jurisdictional boundaries. This planning and preparation includes:

1. Identifying a secure location and requisite lodging for quarantine.
2. Identifying the staff needed to sustain, enforce, and provide services to quarantined individuals and from where this staff will come.
3. Identifying the supplies needed to sustain quarantine and from where these supplies will come.
4. Identifying the medical and mental health needs of the quarantined population and how these needs will be met.
5. Identifying the special needs (e.g., children, pregnant women, people with disabilities, and differing cultures and religions.) of the quarantined population and how these needs will be met.
6. Identifying the support organizations available to assist in managing quarantine.
7. Identifying the financial needs for managing quarantine.
8. Addressing the legal needs for managing quarantine (e.g., due process protections for quarantined passengers and flight crew).
9. Addressing media and public information issues [e.g., setting up a Joint Information Center (JIC)].

Quarantine Planning Considerations

The preceding paragraph lists nine steps to planning for quarantine (i.e., developing a quarantine plan). Outlined below are considerations when developing this plan. (See Appendix G for an example of an international airport quarantine plan.)

- Site/Location: There are several considerations for selecting a quarantine site:
  - Security: The site needs to have containment boundaries (e.g., fences or walls) to keep people in and keep people out.

- Size: The site needs to be large enough to accommodate at a minimum the number of passengers, flight crew, and staff that would be on the largest capacity airplane that might visit the airport. When considering how many people would be quarantined, take into account the largest (in terms of passenger and flight crew capacity) international flight arriving at the airport.
- Accessibility: The site needs to be readily accessible to security forces, medical personnel, and suppliers.
- Comfort: Because quarantine may be a long-term situation, the comfort—both physical and mental—of the quarantined passengers and flight crew as well as staff needs to be taken into consideration.

- Staff: Quarantine staff need to perform a variety of medical, mental health, occupational, and spiritual functions. Also, quarantine is an around-the-clock activity, so different shifts of staff need to be taken into consideration.

- Supplies: When considering supply needs, take into account that quarantine may extend over a week, or longer depending on the incubation period. Types of supplies range from medical to food to occupational needs for passengers who want to work during quarantine.

- Medical Needs: Quarantined people may have medical needs unrelated to the disease for which they have been quarantined.

- Special Needs: The quarantine population will be a diverse group of people with varying religious and cultural needs. Things to take into consideration are communication issues, religious issues, and dietary needs. Have foreign-language interpreters on call to deal with non-English speaking passengers.

- Support Organizations: There are non-governmental organizations available to provide services in coordination with the local emergency management agency. These support services may be modified, depending on the nature of the quarantine.

- Financial Needs: One of the big questions about quarantine is who is going to pay for it. While the answer sometimes lies in a “gray zone,” planners can help determine payment obligations by tracking all expenditures and costs before, during and after quarantine.

- Public Information Issues: The media will be ever present to keep a spotlight on quarantine.

Ending Quarantine

Quarantine is *usually* ended when two disease incubation periods have passed with no signs or symptoms of the quarantinable disease in the quarantined community. The incubation period includes the period between a person having acquired the infectious agent, becoming infected, and becoming symptomatic. This process varies for different diseases. The order to end quarantine will come from the respective entity or entities exercising jurisdiction over the quarantine.

Just as there are things to consider when instituting quarantine, there are several considerations to take into account when ending quarantine:

- Rebooking Flights: Some quarantined people had planned further travels before they were quarantined. Their continuing travel needs to be considered.

- Traveler Briefing: The quarantined passengers and flight crew have just gone through a long ordeal. They may be hounded by the media for details or questioned by friends and families about it. CDC, public information officers, and public health officers should brief them ahead of time to help them cope with these inquiries.

Some of the end-of-quarantine activities involve the recovery phase of quarantine. These activities will be discussed in the next section.

SECTION 8: INCIDENT RESPONSE: RECOVERY

Introduction

The information provided in this section is taken from the NRP and the DHS Office of State and Local Government Coordination and Preparedness, Universal Task List (UTL): Version 2.1 (URL: http://www.ojp.usdoj.gov/odp/docs/UTL2_1.pdf).

What is Recovery?

Recovery entails taking actions to help individuals and the community to return to normal as soon as can reasonably be done. The NRP defines recovery as "the development, coordination, and execution of service- and site-restoration plans and the reconstitution of government operations and services through individual, private-sector, nongovernmental, and public assistance programs."

With regard to a quarantinable disease incident at an international airport, recovery may entail only cleaning an aircraft and rebooking travelers. Or, in a major public health incident, it may entail a large-scale effort, such as decontaminating a quarantine site, re-stocking medical and social supplies, providing mental health services, and rebooking passenger flights, among other things.

Objectives of Recovery

As discussed in the UTL, there are three objectives for the recovery mission:

- **Assist the public** – Help individuals directly impacted by an incident to return to pre-incident levels, where feasible. Sub-objectives of this objective are to:
    1. Provide long-term healthcare.
    2. Educate the public.
    3. Provide social services.
- **Restore the environment** – Reestablish or bring back to a state of environmental or ecological health the water, air, and land, and the interrelationship that exists among and between water, air, and land and all living things. Sub-objectives are to:
    1. Conduct site cleanup.
    2. Dispose of materials.
    3. Conduct site remediation.
    4. Restore natural resources.
- **Restore the infrastructure** – Restore the infrastructure in the affected communities in order to return to pre-incident levels, where feasible. Sub-objectives are to:
    1. Reconstitute government services.
    2. Rebuild property.

With regard to applicability to a quarantinable disease incident at an international airport, tasks that might be performed within the scope of each objective are to:

- **Assist the Public**
  - Provide mental health services for quarantine residents and support staff.
  - Address issues related to lost work and personal time.
  - Re-book flights.
- **Restore the Environment**
  - Decontaminate the airplane, the quarantine site(s), and transportation conveyances used to transport ill or exposed people.
  - Dispose of medical waste per established protocols.
- **Restore the Infrastructure**
  - Establish systems for tracking and reporting on resources.
  - Document resources committed to incident response.
  - Maintain records of equipment and materials.
  - Track personnel, equipment, and supplies.
  - Maintain inventories of supplies.
  - Replenish resources (i.e., medical supplies).
  - Maintain accountability of expenditures.
  - Maintain records of expenditures.

SECTION 9: AIRPORT COMMUNICABLE DISEASE RESPONSE PLANNING*

Introduction

The previous eight sections outline the "big picture" of the response to a quarantinable disease incident at an international airport. This section looks at planning for such an incident, more specifically, developing an international airport communicable disease response plan. In keeping with the big picture scope of the Manual, the planning template or guidance provided herein is not all inclusive nor does it go into detail. Mainly, it outlines the topics that might be covered in a communicable disease response plan and leaves it up to a planner to provide the specifics.

*Note: When the word "airport" is used below, it refers to international airports, although this section on response planning could apply to and be used by domestic airports. Also, the use of the term "communicable disease response plan" refers to communicable diseases that are quarantinable, although airports may wish to address other diseases in their response plans.

Contents of an Airport Communicable Disease Response Plan

Because the arrival of a quarantinable disease at an international airport may become an Incident of National Significance, elements and concepts of the NRP may apply to the response to and recovery from the event. Additionally, Homeland Security Presidential Directive 5 (HSPD-5, February 28, 2003), regarding the management of domestic incidents, requires the use of the NIMS for all disaster responses. Therefore, airports should consider adopting the framework and terminology of the NRP and NIMS in their own airport communicable disease response plan. This framework and terminology is provided below. (For more information on the NRP, see http://www.dhs.gov/dhspublic/interapp/editorial/editorial_0566.xml)

Introduction

The *Introduction* to the airport communicable disease response plan sets forth the *Purpose* and the *Scope and Applicability* of the plan. As the name implies, the *Purpose* contains the stated purpose for the plan. The *Scope and Applicability* subsection identifies what the plan covers and to whom it applies (i.e., what agencies and organizations).

Planning Assumptions and Considerations

In this section of the airport communicable disease response plan, the *Planning Assumptions and Considerations* upon which the airport communicable disease response plan is based are outlined. Several examples of planning assumptions and considerations taken from the NRP are as follows:

> *Incidents are typically managed at the lowest possible geographic, organizational, and jurisdictional level.*
>
> *Incident management activities will be initiated and conducted using the principles contained in the NIMS.*
>
> *The combined expertise and capabilities of government at all levels, the private sector and nongovernmental organizations, will be required to prevent, prepare for, respond to, and recover from Incidents of National Significance.*

An example of a planning assumption from an international airport communicable disease response plan is as follows:

> *Only through a concerted and coordinated effort by all responding agencies can the situation be contained, reducing or preventing unnecessary exposure to personnel in the terminal; preventing potentially contaminated/contagious passengers from entering the community at large; allowing public health the opportunity to begin its epidemiological investigation; and allowing state and/or federal law enforcement agencies the opportunity to begin their investigation into a possible terrorist event.*

Roles and Responsibilities
As the name implies, the *Roles and Responsibilities* section of the airport communicable disease response plan outlines the roles and responsibilities of all agencies and organizations involved in the response to and recovery from the incident. Examples of a roles and responsibilities section can be found in Section 4 of this Manual. However, an individual airport communicable disease response plan would want to go into more detail by clearly and definitively identifying organizations and individuals by name and providing contact information.

Concept of Operations
This section outlines the incident management structure and protocols that will be set in place to manage the airport communicable disease incident. As with the *Roles and Responsibilities* section, an individual airport communicable disease response plan would want to clearly and definitively describe its concept of operations. Examples of a concept of operations can be found in Appendix H of this document in the flowchart entitled “Unified Command Flowchart Example.”

Incident Management Actions
This section describes the actual response to an airport communicable disease incident. Within the NRP, incident management actions are divided into five areas: notification and assessment, activation, response, recovery, and mitigation. For the purpose of the airport communicable disease response plan, these five areas pertain to:

1. Notification and Assessment – Pre- and post-confirmation notification requirements for a communicable disease incident at an airport; also, assessment requirements and protocols for assessing the incident. (*Notification and Assessment* requirements are covered in Sections 5 and 6 of this Manual.)
2. Activation – Activation and deployment of the response and support agencies and organizations; activation and deployment of the ICS. (*Activation* is covered in Section 5 of this Manual.)
3. Response – The activities that occur (as a result of notification, assessment, and activation) to address the communicable disease incident at the airport. These activities may include isolation or hospitalization of ill people and quarantine of exposed travelers. As with all sections of the airport communicable disease response plan, the requirements of this subsection will be clearly defined. (*Response* activities are outlined in Sections 5, 6, and 7 of this Manual)
4. Recovery – Actions needed to be taken to help individuals, communities, and agencies return to normal following the incident. (*Recovery* activities are addressed in Section 8 of this Manual.)

5. Mitigation – Activities designed to reduce or eliminate risks to persons or property or to lessen the actual or potential effects or consequences of an incident. (It is beyond the scope of this Manual to address mitigation activities.)

Ongoing Plan Management and Maintenance
This section of the airport communicable disease response plan describes actions that will be taken to update the plan based on new statutory requirements and lessons learned from exercises or actual incidents.

Appendices
The appendices include clarifying information (e.g., glossary of terms), references (e.g., statutes), and other material deemed necessary for and pertinent to supporting the contents of the airport communicable disease response plan.

Important Considerations for an Airport Communicable Disease Response Plan
The above information provides a framework from which airport authorities are able to design their airport communicable disease response plan, but does not explicitly identify the requisite contents of the plan. The provision of this information is left to airport authorities and responders to determine based on the airport location and its organizational and community structure. However, some important considerations for planners when putting together their plan are identified below.

- Clearly identified lines of authority. At international airports, the response to a quarantinable disease incident will be led by several federal agencies. The roles and responsibilities of these agencies as well as their statutory authority to undertake these roles and responsibilities needs to be clearly defined and explained in the airport communicable disease response plan. Additionally, any legal authority conveyed to state or local response agencies by these lead federal agencies needs to be clearly defined.
- Agreed upon incident management structure. In conjunction with clearly identified lines of authority, a clearly defined and agreed upon incident management structure needs to be developed prior to an actual communicable disease incident at an airport. An effective and efficient response requires all parties to be “on the same page” at the same time. Pre-incident planning could lead to this desired response.
- Pre-determined location(s) and assets for quarantine. Each international flight carries hundreds of travelers. Quarantining just one flight will require a large space and numerous assets to support the quarantine. The quarantine may require more than one location: a short-term site while laboratory diagnostic testing is performed to determine what disease is present, and a long-term site once positive confirmation has been determined and quarantine has been ordered. Both sites may be on or off the airport property. For the sake of the safety and the well-being of travelers, the airport itself, and the general public, it is imperative that planners determine ahead of time the location(s) and assets necessary to manage a large-scale, temporary quarantine or an extended quarantine.

- Management of public information. Today's world is one of fast and easily accessible and transmittable information. As soon as travelers on a plane suspect that a serious incident is occurring on their plane, they can be expected to use their cell phones to alert family, friends, and the media. Airport planners need to take a serious look at how they will handle the onslaught of media inquiries and reports from the very outset of the communicable disease incident. Airport public relations staff should consider developing contacts with their CDC counterparts before an incident occurs. Remember the old adage, "You only get one chance to make a good first impression."

APPENDIX A

CDC Quarantine Stations

Introduction

In response to concerns about disease importation and bioterrorism, DGMQ increased the number of stations and enhanced the training and response capability of its staff. Existing CDC Quarantine Stations were improved, and the number of Quarantine Stations increased to 18 in FY 2005, with more to be added in FY 2006. These field stations will provide advanced emergency response capabilities, including isolation and communications facilities. Regional health officers assigned to each station will provide clinical, epidemiologic, and programmatic support, and quarantine public health officers will conduct surveillance and response and communicable disease prevention activities. The transformed CDC Quarantine Stations will bring new expertise to bridge gaps in public health and clinical practice, emergency services, and response management.

Quarantine Station Listing

1. **CDC Anchorage Quarantine Station**
   4600 Postmark Drive, Suite NC 206
   Anchorage, AK 99502
   (907) 271-6301
   (907) 271-6325 (Fax)
   Hours: Monday–Friday, 8:00 a.m.–4:30 p.m.
   Jurisdiction: All ports in Alaska.

2. **CDC Atlanta Quarantine Station**
   Hartsfield International Airport
   P.O. Box 45256
   Atlanta, GA 30320
   (404) 639-1220
   (404) 639-1224 (Fax)
   Hours: Monday–Friday, 8:30 a.m.–6:30 p.m.
   Jurisdiction: All ports in Georgia, Alabama, Arkansas, Louisiana, Mississippi, North Carolina, South Carolina, and Tennessee.

3. **CDC Boston Quarantine Station**
   Terminal E
   Logan International Airport
   East Boston, MA 02128
   (617) 820-6877 (Temporary)
   (617) 561-5701
   (617) 561-5708 (Fax)
   Hours: Monday–Friday, 8:00 a.m.–4:30 p.m.
   Jurisdiction: All ports in Massachusetts, Maine, New Hampshire, and Rhode Island.

4. **CDC Chicago Quarantine Station**
   O'Hare International Airport
   AMF O'Hare, POB 66012
   Chicago, IL 60666-0012
   (773) 894-2960
   (773) 894-2970 (Fax)
   Hours: Monday–Friday, 8:00 a.m.–8:00 p.m
   Saturday, Sunday, and Holidays, 12:00 p.m.–8:00 p.m.
   Jurisdiction: All ports in Illinois, Indiana, Iowa, Kansas, Missouri, and Wisconsin.
   Canadian pre-clearance port: Toronto.

5. **CDC Detroit Quarantine Station**
   2613 World Gateway Place
   McNamara Terminal, Building 830
   Detroit, MI 48242
   (734) 955-6197
   (734) 955-7790 (Fax)
   Hours: Monday–Friday, 8:00 a.m.–4:30 p.m.
   Jurisdiction: All ports in Michigan, Kentucky, and Ohio.

6. **CDC El Paso Quarantine Station**
   Center for Border Health Research
   1100 N. Stanton, Suite 410
   El Paso, TX 79902
   (915) 577-0970 (Extension 12 or 20)
   (915) 543-2829 (24-hour Answering Service)
   (915) 541-1137 (Fax)
   Hours: Monday–Friday, 8:00 a.m.–4:30 p.m.
   Jurisdiction: All ports in West Texas and New Mexico, including the U.S.-Mexico border for those two states.

7. **CDC Honolulu Quarantine Station**
   Honolulu International Airport
   300 Rodgers Blvd., #67
   Honolulu, HI 96819-1897
   (808) 861-8530
   (808) 861-8532 (Fax)
   Hours: Monday–Friday, 6:00 a.m.–4:00 p.m.
   Jurisdiction: All ports in Hawaii, Guam, and Pacific Trust Territories.

8. CDC Houston Quarantine Station
George Bush Intercontinental Airport (IAH)
3870 North Terminal Road
C/O CBP, International Arrivals
U.S. Public Health Service, IA2.0833
Houston, Texas 77032
(281) 230-3784
Hours: Monday–Friday, 8:00 a.m.–5:30 p.m.
Jurisdiction: All ports in East Texas (includes Dallas-Ft. Worth, Austin, and San Antonio), Texas Gulf ports, and Oklahoma.

9. CDC Los Angeles Quarantine Station
Tom Bradley International Airport
380 World Way, Box N19
Los Angeles, CA 90045
(310) 215-2365
(310) 215-2285 (Fax)
Hours: Monday–Friday, 7:00 a.m.–4:30 p.m.
Saturday, Sunday, and Holidays, 8:00 a.m.–4:30 p.m.
Jurisdiction: All ports in Southern California, Nevada, and Arizona (excluding the U.S.-Mexico border). Southern California counties include Los Angeles, Orange, San Bernardino, Riverside, Ventura, Santa Barbara, and San Luis Obispo.

10. CDC Miami Quarantine Station
Miami International Airport
P.O. Box 996488
Miami, FL 33299-6488
(305) 526-2910
(305) 526-2798 (Fax)
Hours: Monday–Friday, 6:00 a.m.–4:00 p.m.
Saturday, Sunday, and Holidays, 8:00 a.m.–4:00 p.m.
Jurisdiction: All ports in Florida; Also, pre-clearance ports in the Bahamas.

11. CDC Minneapolis Quarantine Station
Minneapolis–St. Paul International Airport
Lindberg Terminal, Suite G-2256
4300 Glumack Drive
St. Paul, MN 55111
(612) 725-3005
Hours: Monday–Friday, 8:00 a.m.–4:30 p.m.
Jurisdiction: All ports in Minnesota, Nebraska, North Dakota, and South Dakota.

12. CDC Newark Quarantine Station
Newark Liberty International Airport
Terminal B - Box 52
Newark, NJ 07114
(973) 368-6200 (6201, 6202, and 6203)
(973) 368-6204 (Fax)
Hours: Monday–Friday, 9:00 a.m.–5:30 p.m.
Jurisdiction: All ports in New Jersey and Delaware.

13. CDC New York Quarantine Station
JFK International Airport
Room 219.016 Terminal 4 (E)
Jamaica, NY 11430-1081
(718) 553-1685
(718) 553-1524 (Fax)
Hours: Monday–Friday, 8:00 a.m.– 6:00 p.m.
Saturday, Sunday, and Holidays, 10:00 a.m.–6:00 p.m.
Jurisdiction: All ports in New York, Connecticut, Pennsylvania, and Vermont. Canadian pre-clearance port: Montreal. Also, pre-clearance ports at Bermuda, Shannon, and Dublin.

14. CDC San Diego Quarantine Station
CDC San Diego Quarantine Station
3851 Rosecrans St.
P.O. Box 85524, MS-P511B OBH
San Diego, CA 92138-5524
(619) 692-5659
(619) 692-8821 (Fax)
Hours: Monday–Friday, 8:00 a.m.–4:30 p.m.
Jurisdiction: All ports in San Diego and Imperial Counties of Southern California, and the U.S.-Mexico border crossings in California and Arizona.

15. CDC San Francisco Quarantine Station
San Francisco International Airport
PO Box 280548 SFIA
San Francisco, CA 94128-0548
(650) 876-2872
(650) 876-2796 (Fax)
Hours: Monday–Friday, 8:00 a.m.–4:30 p.m.
Jurisdiction: All ports in Central and Northern California (46 counties).

16. CDC San Juan Quarantine Station
CDC San Juan Quarantine Station
P.O. Box 37197
San Juan, PR 00937-0197
(787) 253-7868
(787) 774-7812 (Alternate phone)
Hours: Monday–Friday, 8:00 a.m.–4:30 p.m.
Jurisdiction: All ports in Puerto Rico and the U.S. Virgin Islands.

17. CDC Seattle Quarantine Station
Seattle-Tacoma International Airport, Room S-2067
Seattle, WA 98158-1250
(206) 553-4519
(206) 553-4455 (Fax)
Hours: Monday–Friday, 8:00 a.m.–4:30 p.m.
Jurisdiction: All ports in Washington, Colorado, Idaho, Montana, Oregon, Utah, and Wyoming. Canadian pre-clearance ports: Edmonton, Calgary, Vancouver, and Victoria.

18. CDC Washington Quarantine Station
Dulles International Airport
P.O. Box 17087
Washington, DC 20041
(703) 661-1320
(703) 661-1318 (Fax)
Hours: Monday–Friday, 8:00 a.m.–4:30 p.m.
Jurisdiction: All ports in Washington, DC, Maryland, Virginia, and West Virginia

New Quarantine Stations to be Added in 2006

19. CDC Dallas Quarantine Station

20. CDC Philadelphia Quarantine Station

APPENDIX B

Travel Notices

Introduction

(From http://www.cdc.gov/travel/outbreaks.htm)

CDC issues different types of notices for international travelers. As of May 20, 2004, these definitions have been refined to make the announcements more easily understood by travelers, healthcare providers, and the general public. The definitions are laid out below. They describe both levels of risk for the traveler and recommended preventive measures to take at each level of risk.

Type of Notice/Level of Concern	Scope*	Risk for Travelers†	Preventive Measures	Example of Notice	Example of Recommended Measures
In the News	Reports of sporadic cases	No increased risk over baseline for travelers observing standard recommendations	Keeping travelers informed and reinforcing standard prevention recommendations	Report of cases of dengue in Mexico, 2001	Reinforced standard recommendations for protection against insect bites
Outbreak Notice	Outbreak in limited geographic area or setting	Increased but definable and limited to specific settings	Reminders about standard and enhanced recommendations for the region	Outbreak of yellow fever in a state in Brazil in 2003	Reinforced enhanced recommendations, such as vaccination
Travel Health Precaution	Outbreak of greater scope affecting a larger geographic area	Increased in some settings, along with risk for spread to other areas	Specific precautions to reduce risk during the stay, and what to do before and after travel‡	Outbreak of avian influenza among poultry and humans in several countries in Southeast Asia in early 2004	Recommended specific precautions including avoiding areas with live poultry, such as live animal markets and poultry farms; ensuring poultry and eggs are thoroughly cooked; monitoring health
Travel Health Warning	Evidence that outbreak is expanding outside the area or populations initially affected	Increased because of evidence of transmission outside defined settings and/or inadequate containment measures	In addition to the specific precautions cited above, **postpone nonessential travel**‡	SARS outbreak in Asia in 2003	Recommended travelers to postpone nonessential travel because of level of risk

* The term "scope" incorporates the size, magnitude, and rapidity of spread of an outbreak.

† Risk for travelers is dependent on patterns of transmission, as well as severity of illness.

‡ Preventive measures other than the standard advice for the region may be recommended depending on the circumstances (e.g., travelers may be requested to monitor their health for a certain period after their return, or arriving passengers may be screened at ports of entry).

Travel Notices: Interim Definitions and Criteria As of May 20, 2004

Rationale

CDC issues different types of notices for international travelers. We are refining these definitions to make the announcements more easily understood by travelers, healthcare providers, and the general public. In addition, defining and describing levels of risk for the traveler will clarify the need for the recommended preventive measures. From the public health perspective, scalable definitions will enhance the usefulness of the travel notices, enabling them to be tailored readily in response to events and circumstances.

1. **In the News:** notification by CDC of an occurrence of a disease of public health significance affecting a traveler or travel destination. The purpose is to provide information to travelers, Americans living abroad, and their healthcare providers about the disease. The risk for disease exposure is not thought to be increased beyond the usual baseline risk for that area, and only standard guidelines are recommended.

2. **Outbreak Notice:** notification by CDC that an outbreak of a disease is occurring in a limited geographic area or setting. The purpose of an outbreak notice is to provide accurate information to travelers and resident expatriates about the status of the outbreak and to remind travelers about the standard or enhanced travel recommendations for the area. Because of the limited nature of the outbreak, the risk for disease exposure is thought to be increased but defined and limited to specific settings.

3. **Travel Health Precaution:** ***CDC does NOT recommend against travel to the area*****.** A travel health precaution is notification by CDC that a disease outbreak of greater scope is occurring in a more widespread geographic area. The purpose of a travel health precaution is to provide accurate information to travelers and Americans living abroad about the status of the outbreak (e.g., magnitude, scope, and rapidity of spread), specific precautions to reduce their risk for infection, and what to do if they become ill while in the area. The risk for the individual traveler is thought to be increased in defined settings or associated with specific risk factors (e.g., transmission in a healthcare or hospital setting where ill patients are being cared for).

4. **Travel Health Warning:** ***CDC recommends against nonessential travel to the area*****.** A travel health warning is a notification by CDC that a widespread, serious outbreak of a disease of public health concern is expanding outside the area or populations that were initially affected. The purpose of a travel health warning is to provide accurate information to travelers and Americans living abroad about the status of the outbreak (e.g., its scope, magnitude, and rapidity of spread), how they can reduce their risk for infection, and what to do if they should become ill while in the area. The warning also serves to reduce the volume of traffic to the affected areas, which in turn can reduce the risk of spreading the disease to previously unaffected sites. **CDC recommends against nonessential travel to the area** because the risk for the traveler is considered to be high (i.e., the risk is increased because of evidence of transmission outside defined settings or inadequate containment). Additional preventive measures may be recommended, depending on the circumstances (e.g., travelers may be requested to monitor their health for a certain period after their return; arriving passengers may be screened at ports of entry).

Criteria for Instituting Travel Notices

- Disease transmission: The modes of transmission and patterns of spread, as well as the magnitude and scope of the outbreak in the area, will affect the decision for the appropriate level of notice. Criteria include the presence or absence of transmission outside defined settings, as well as evidence that cases have spread to other areas.
- Containment measures: The presence or absence of acceptable outbreak control measures in the affected area can influence the decision for what level of notice to issue. Areas where the disease is occurring that are considered to have poor or no containment measures in place have the potential for a higher risk of transmission to exposed persons and spread to other areas.
- Quality of surveillance: Criteria include whether health authorities in the area have the ability to accurately detect and report cases and conduct appropriate contact tracing of exposed persons. Areas where the disease is occurring that are considered to have poor surveillance systems may have the potential for a higher risk of transmission.
- Quality and accessibility of medical care: Areas where the disease is occurring that are considered to have inadequate medical services and infection control procedures in place, as well as remote locations without access to medical evacuation, present a higher level of risk for the traveler or Americans living abroad.

Criteria for Downgrading or Removing Notices
To downgrade a **travel health warning** to a **travel health precaution**, there should be:

- Adequate and regularly updated reports of surveillance data from the area
- No evidence of ongoing transmission outside defined settings for two incubation periods after the date of onset of symptoms for the last case, as reported by public health officials.

To remove a **travel precaution**, there should be:

- Adequate and regularly updated reports of surveillance data from the area
- No evidence of new cases for three incubation periods after the date of onset of symptoms for the last case, as reported by public health authorities.
- Limited or no recent instances of exported cases from the area; this criterion excludes intentional or planned evacuations.

In the News and **Outbreak Notices** will be revisited at regular intervals and will be removed when no longer relevant or when the outbreak has resolved.

APPENDIX C

Personal Protective Equipment (PPE)

Note
It is beyond the scope of this Manual to provide detailed information about the various types of PPE as well as detailed instructions on its proper use. As has been pointed out earlier in the Manual, those providing and donning surgical masks or respiratory protection should be trained in the proper types and appropriate uses of this PPE. Therefore, a certified professional should be consulted when selecting PPE and training responders on its proper use.

As has also been pointed out earlier, fairly simple infection control practices can help to minimize the transmission of respiratory disease. For example, placing a surgical mask on ill person(s), if the person can tolerate wearing one is very important. If they cannot wear a surgical mask they should be instructed to practice respiratory/cough etiquette (see the following CDC web site at: www.cdc.gov/flu/professionals/infectioncontrol/resphygiene.htm). In addition, transmission can be reduced through the use of good hand hygiene.

Resources
In addition to the above mentioned web site, there are several good web sites that provide more information on the proper use of PPE. These are listed below..

1. Centers for Disease Control and Prevention, Smallpox Response Plan and Guidelines Infection Control Measures for Healthcare and Community Settings, Available at http://www.bt.cdc.gov/agent/smallpox/response-plan/files/guide-c-part-1.pdf.

2. Centers for Disease Control and Prevention, Guideline for Isolation Precautions in Hospitals, Available at http://www.cdc.gov/ncidod/dhqp/gl_isolation_ptII.html.

3. Centers for Disease Control and Prevention, Supplement I: Infection Control in Healthcare, Home, and Community Settings, Infection Control for Prehospital Emergency Medical Services, Available at http://www.cdc.gov/ncidod/sars/guidance/I/word/prehospital.doc .

4. Occupational Safety and Health Administration-Safety and Health Topics- Respiratory Protection, Available at http://www.osha.gov/SLTC/respiratoryprotection/index.html

5. Occupational Safety and Health Administration-Respiratory Protection E-tool, Available at http://www.osha.gov/SLTC/etools/respiratory/index.html.

6. NIOSH-Respirator Decision Logic- http://www.trustcrm.com/ectny/respiratory_advisor/oshafiles/appendixe.html.

APPENDIX D

Fact Sheet: Legal Authorities for Isolation and Quarantine

[From: http://www.cdc.gov/ncidod/dq/factsheetlegal.htm (Updated February 24, 2006)]

Introduction

- **Isolation** and **quarantine** are two common public health strategies designed to protect the public by preventing exposure to infected or potentially infected persons.
- In general, **isolation** refers to the separation of persons who have a specific infectious illness from those who are healthy and the restriction of their movement to stop the spread of that illness. Isolation is a standard procedure used in hospitals today for patients with tuberculosis and certain other infectious diseases.
- **Quarantine**, in contrast, generally refers to the separation and restriction of movement of persons who, while not yet ill, have been exposed to an infectious agent and therefore may become infectious. Quarantine of exposed persons is a public health strategy, like isolation, that is intended to stop the spread of infectious disease.
- Both isolation and quarantine may be conducted on a **voluntary basis** or **compelled on a mandatory basis** through legal authority.

State/Local and Tribal Law

- A state's authority to compel isolation and quarantine within its borders is derived from its inherent "police power"—the authority of a state government to enact laws and promote regulations to safeguard the health, safety, and welfare of its citizens. As a result of this authority, the individual states are responsible for intrastate isolation and quarantine practices, and they conduct their activities in accordance with their respective statutes.
- Tribal laws and regulations are similar in promoting the health, safety, and welfare of tribal members. Tribal health authorities are responsible for isolation and quarantine practices within tribal lands in accordance with their respective laws.
- State and local laws and regulations regarding the issues of compelled isolation and quarantine vary widely. Historically, some states have codified extensive procedural provisions related to the enforcement of these public health measures, whereas other states rely on older statutory provisions that can be very broad. In some jurisdictions, local health departments are governed by the provisions of state law; in other settings, local health authorities may be responsible for enforcing state or more stringent local measures. In many states, violation of a quarantine order constitutes a criminal misdemeanor.
- Examples of other public health actions that can be compelled by legal authorities include disease reporting, immunization for school attendance, and tuberculosis treatment.

Federal Law

- The HHS Secretary has statutory responsibility for preventing the introduction, transmission, and spread of communicable diseases from foreign countries into the United States, e.g., at international ports of arrival, and from one state or possession into another.

- The communicable diseases for which federal isolation and quarantine are authorized are set forth through executive order of the President and include **cholera**, **diphtheria**, **infectious tuberculosis**, **plague**, **smallpox**, **yellow fever**, **viral hemorrhagic fevers**, and **severe acute respiratory syndrome (SARS)**. In April 2005, the President added to this list **Influenza caused by novel or reemergent influenza viruses that are causing, or have the potential to cause, a pandemic**.

- By statute, CBP and Coast Guard officers are required to aid in the enforcement of quarantine rules and regulations. Violation of federal quarantine rules and regulations constitutes a criminal misdemeanor, punishable by fine and imprisonment.

- Federal quarantine authority includes the authority to release persons from quarantine on the condition that they comply with medical monitoring and surveillance.

Interplay between Federal and State/Local Laws

- States and local jurisdictions have primary responsibility for isolation and quarantine within their borders. The federal government has authority under the Commerce Clause of the U.S. Constitution to prevent the interstate spread of disease.

- The federal government has primary responsibility for preventing the introduction of communicable diseases from foreign countries into the United States.

- By statute, the HHS Secretary may accept state and local assistance in the enforcement of federal quarantine regulations and may assist state and local officials in the control of communicable diseases.

- It is possible for federal, state, and local health authorities simultaneously to have separate but concurrent legal quarantine power in a particular situation (e.g., an arriving aircraft at a large city airport).

- Because isolation and quarantine are "police power" functions, public health officials at the federal, state, and local levels may occasionally seek the assistance of their respective law enforcement counterparts to enforce a public health order.

APPENDIX E

Executive Orders on Quarantinable Diseases

Executive Order 13295 of April 4, 2003

Revised List of Quarantinable Communicable Diseases

By the authority vested in me as President by the Constitution and the laws of the United States of America, including section 361(b) of the Public Health Service Act (42 U.S.C. 264(b)), it is hereby ordered as follows:

Section 1. Based upon the recommendation of the Secretary of Health and Human Services (the ``Secretary''), in consultation with the Surgeon General, and for the purpose of specifying certain communicable diseases for regulations providing for the apprehension, detention, or conditional release of individuals to prevent the introduction, transmission, or spread of suspected communicable diseases, the following communicable diseases are hereby specified pursuant to section 361(b) of the Public Health Service Act:

(a) Cholera; Diphtheria; infectious Tuberculosis; Plague; Smallpox; Yellow Fever; and Viral Hemorrhagic Fevers (Lassa, Marburg, Ebola, Crimean-Congo, South American, and others not yet isolated or named).

(b) Severe Acute Respiratory Syndrome (SARS), which is a disease associated with fever and signs and symptoms of pneumonia or other respiratory illness, is transmitted from person to person predominantly by the aerosolized or droplet route, and, if spread in the population, would have severe public health consequences.

Sec. 2. The Secretary, in the Secretary's discretion, shall determine whether a particular condition constitutes a communicable disease of the type specified in section 1 of this order.

Sec. 3. The functions of the President under sections 362 and 364(a) of the Public Health Service Act (42 U.S.C. 265 and 267(a)) are assigned to the Secretary.

Sec. 4. This order is not intended to, and does not, create any right or benefit enforceable at law or equity by any party against the United States, its departments, agencies, entities, officers, employees or agents, or any other person.

Sec. 5. Executive Order 12452 of December 22, 1983, is hereby revoked.

George W. Bush

THE WHITE HOUSE,

April 4, 2003.

the White House
President George W. Bush

For Immediate Release
Office of the Press Secretary
April 1, 2005

Executive Order: Amendment to E.O. 13295 Relating to Certain Influenza Viruses and Quarantinable Communicable Diseases

By the authority vested in me as President by the Constitution and the laws of the United States of America, including section 361(b) of the Public Health Service Act (42 U.S.C. 264(b)), it is hereby ordered as follows:

Section 1. Based upon the recommendation of the Secretary of Health and Human Services, in consultation with the Surgeon General, and for the purpose set forth in section 1 of Executive Order 13295 of April 4, 2003, section 1 of such order is amended by adding at the end thereof the following new subsection:

"(c) Influenza caused by novel or reemergent influenza viruses that are causing, or have the potential to cause, a pandemic.".

Sec. 2. This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, entities, officers, employees or agents, or any other person.

GEORGE W. BUSH

THE WHITE HOUSE,

April 1, 2005.

APPENDIX F

Quarantinable Disease Information

Cholera

(From http://www.cdc.gov/ncidod/dbmd/diseaseinfo/cholera_g.htm)

Disease History

In January 1991, epidemic cholera appeared in South America and quickly spread to several countries. A few cases have occurred in the United States among persons who traveled to South America or ate contaminated food brought back by travelers.

Cholera has been very rare in industrialized nations for the last 100 years; however, the disease is still common today in other parts of the world, including the Indian subcontinent and sub-Saharan Africa.

Although cholera can be life-threatening, it is easily prevented and treated. In the United States, because of advanced water and sanitation systems, cholera is not a major threat; however, everyone, especially travelers, should be aware of how the disease is transmitted and what can be done to prevent it.

What is cholera?

Cholera is an acute, diarrheal illness caused by infection of the intestine with the bacterium *Vibrio cholerae*. The infection is often mild or without symptoms, but sometimes it can be severe. Approximately one in 20 infected persons has severe disease characterized by profuse watery diarrhea, vomiting, and leg cramps. In these persons, rapid loss of body fluids leads to dehydration and shock. Without treatment, death can occur within hours.

How does a person get cholera?

A person may get cholera by drinking water or eating food contaminated with the cholera bacterium. In an epidemic, the source of the contamination is usually the feces of an infected person. The disease can spread rapidly in areas with inadequate treatment of sewage and drinking water.

The cholera bacterium may also live in the environment in brackish rivers and coastal waters. Shellfish eaten raw have been a source of cholera, and a few persons in the United States have contracted cholera after eating raw or undercooked shellfish from the Gulf of Mexico. The disease is not likely to spread directly from one person to another; therefore, casual contact with an infected person is not a risk for becoming ill.

What is the risk for cholera in the United States?

In the United States, cholera was prevalent in the 1800s but has been virtually eliminated by modern sewage and water treatment systems. However, as a result of improved transportation, more persons from the United States travel to parts of Africa, Asia, or Latin America where epidemic cholera is occurring. U.S. travelers to areas with epidemic cholera may be exposed to the cholera bacterium. In addition, travelers may bring contaminated seafood back to the United States; foodborne outbreaks have been caused by contaminated seafood brought into this country by travelers.

What should travelers do to avoid getting cholera?

The risk for cholera is very low for U.S. travelers visiting areas with epidemic cholera. When simple precautions are observed, contracting the disease is unlikely.

All travelers to areas where cholera has occurred should observe the following recommendations:

- Drink only water that you have boiled or treated with chlorine or iodine. Other safe beverages include tea and coffee made with boiled water and carbonated, bottled beverages with no ice.
- Eat only foods that have been thoroughly cooked and are still hot, or fruit that you have peeled yourself.
- Avoid undercooked or raw fish or shellfish, including ceviche.
- Make sure all vegetables are cooked avoid salads.
- Avoid foods and beverages from street vendors.
- Do not bring perishable seafood back to the United States.
- A simple rule of thumb is "Boil it, cook it, peel it, or forget it."

Is a vaccine available to prevent cholera?

At the present time, the manufacture and sale of the only licensed cholera vaccine in the United States (Wyeth-Ayerst) has been discontinued. It has not been recommended for travelers because of the brief and incomplete immunity it offers. No cholera vaccination requirements exist for entry or exit in any country.

Two recently developed vaccines for cholera are licensed and available in other countries (Dukoral®, Biotec AB and Mutacol®, Berna). Both vaccines appear to provide a somewhat better immunity and fewer side-effects than the previously available vaccine. However, neither of these two vaccines is recommended for travelers nor are they available in the United States.

Can cholera be treated?

Cholera can be simply and successfully treated by immediate replacement of the fluid and salts lost through diarrhea. Patients can be treated with oral rehydration solution, a prepackaged mixture of sugar and salts to be mixed with water and drunk in large amounts. This solution is used throughout the world to treat diarrhea. Severe cases also require intravenous fluid replacement. With prompt rehydration, fewer than 1% of cholera patients die.

Antibiotics shorten the course and diminish the severity of the illness, but they are not as important as rehydration. Persons who develop severe diarrhea and vomiting in countries where cholera occurs should seek medical attention promptly.

What is the U.S. government doing to combat cholera?

U.S. and international public health authorities are working to enhance surveillance for cholera, investigate cholera outbreaks, and design and implement preventive measures. The Centers for Disease Control and Prevention investigates epidemic cholera wherever it occurs and trains laboratory workers in proper techniques for identification of *V. cholerae*. In addition, the Centers for Disease Control and Prevention provides information on diagnosis, treatment, and prevention of cholera to public health officials and educates the public about effective preventive measures.

The U.S. Agency for International Development is sponsoring some of the international government activities and is providing medical supplies to affected countries.

The Environmental Protection Agency is working with water and sewage treatment operators in the United States to prevent contamination of water with the cholera bacterium.

The Food and Drug Administration is testing imported and domestic shellfish for *V. cholerae* and monitoring the safety of U.S. shellfish beds through the shellfish sanitation program.

With cooperation at the state and local, national, and international levels, assistance will be provided to countries where cholera is present, and the risk to U.S. residents will remain small.

Diphtheria

(From http://www.cdc.gov/ncidod/dbmd/diseaseinfo/diptheria_t.htm)

Clinical Features
Respiratory diphtheria presents as a sore throat with low-grade fever and an adherent membrane of the tonsils, pharynx, or nose. Neck swelling is usually present in severe disease. Cutaneous diphtheria presents as infected skin lesions which lack a characteristic appearance.

Etiologic Agent
Toxin-producing strains of *Corynebacterium diphtheriae.*

Incidence
Approximately 0.001 cases per 100,000 population in the U.S. since 1980; before the introduction of vaccine in the 1920s incidence was 100-200 cases per 100,000 population. Diphtheria remains endemic in developing countries. The countries of the former Soviet Union have reported >150,000 cases in an epidemic which began in 1990.

Complications
Myocarditis (inflammation of the heart muscle), polyneuritis (inflammation of several peripheral nerves at the same time), and airway obstruction are common complications of respiratory diphtheria; death occurs in 5%-10% of respiratory cases. Complications and deaths are much less frequent in cutaneous diphtheria.

Transmission
Direct person-to-person transmission by intimate respiratory and physical contact. Cutaneous lesions are important in transmission.

Risk Groups
In the pre-vaccine era, children were at highest risk for respiratory diphtheria. Recently, diphtheria has primarily affected adults in the sporadic cases reported in the U.S. and in the large outbreaks in Russia and New Independent States of the Former Soviet Union.

Challenges
Circulation appears to continue in some settings even in populations with >80% childhood immunization rates. An asymptomatic carrier state exists even among immune individuals. Immunity wanes over time; decennial booster doses are required to maintain protective antibody levels. Large populations of adults are susceptible to diphtheria in developed countries—appear to be increasing in developing countries as well.

In countries with low incidence, the diagnosis may not be considered by clinician and laboratory scientists. Prior antibiotic treatment can prevent recovery of the organism.

Limited epidemiologic, clinical and laboratory expertise on diphtheria.

Infectious Tuberculosis

(From http://www.cdc.gov/nchstp/tb/faqs/qa.htm)

What is TB?

Tuberculosis (TB) is a disease caused by bacteria called *Mycobacterium tuberculosis*. The bacteria usually attack the lungs. But, TB bacteria can attack any part of the body such as the kidney, spine, and brain. If not treated properly, TB disease can be fatal. TB disease was once the leading cause of death in the United States.

TB is spread through the air from one person to another. The bacteria are put into the air when a person with active TB disease of the lungs or throat coughs or sneezes. People nearby may breathe in these bacteria and become infected.

However, not everyone infected with TB bacteria becomes sick. People who are not sick have what is called latent TB infection. People who have latent TB infection do not feel sick, do not have any symptoms, and cannot spread TB to others. But, some people with latent TB infection go on to get TB disease.

People with active TB disease can be treated and cured if they seek medical help. Even better, people with latent TB infection can take medicine so that they will not develop active TB disease.

Why is TB a problem today?

Starting in the 1940s, scientists discovered the first of several medicines now used to treat TB. As a result, TB slowly began to decrease in the United States. But in the 1970s and early 1980s, the country let its guard down and TB control efforts were neglected. As a result, between 1985 and 1992, the number of TB cases increased. However, with increased funding and attention to the TB problem, we have had a steady decline in the number of persons with TB since 1992. But TB is still a problem; more than 14,000 cases were reported in 2003 in the United States.

This booklet answers common questions about TB. Please ask your doctor or nurse if you have other questions about latent TB infection or TB disease.

How is TB spread?

TB is spread through the air from one person to another. The bacteria are put into the air when a person with active TB disease of the lungs or throat coughs or sneezes. People nearby may breathe in these bacteria and become infected.

When a person breathes in TB bacteria, the bacteria can settle in the lungs and begin to grow. From there, they can move through the blood to other parts of the body, such as the kidney, spine, and brain.

TB in the lungs or throat can be infectious. This means that the bacteria can be spread to other people. TB in other parts of the body, such as the kidney or spine, is usually not infectious. People with active TB disease are most likely to spread it to people they spend time with every day. This includes family members, friends, and coworkers.

What is latent TB infection?

In most people who breathe in TB bacteria and become infected, the body is able to fight the bacteria to stop them from growing. The bacteria become inactive, but they remain alive in the body and can become active later. This is called latent TB infection. People with latent TB infection:

- Have no symptoms.
- Don't feel sick.
- Can't spread TB to others.
- Usually have a positive skin test reaction.
- Can develop active TB disease if they do not receive treatment for latent TB infection.

Many people who have latent TB infection never develop active TB disease. In these people, the TB bacteria remain inactive for a lifetime without causing disease. But in other people, especially people who have weak immune systems, the bacteria become active and cause TB disease.

What is active TB disease?

TB bacteria become active if the immune system can't stop them from growing. The active bacteria begin to multiply in the body and cause active TB disease. The bacteria attack the body and destroy tissue. If this occurs in the lungs, the bacteria can actually create a hole in the lung. Some people develop active TB disease soon after becoming infected, before their immune system can fight the TB bacteria. Other people may get sick later, when their immune system becomes weak for another reason.

Babies and young children often have weak immune systems. People infected with HIV, the virus that causes AIDS, have very weak immune systems. Other people can have weak immune systems, too, especially people with any of these conditions: substance abuse, diabetes mellitus, silicosis, cancer of the head or neck, leukemia or Hodgkin's disease, severe kidney disease, low body weight, certain medical treatments (such as corticosteroid treatment or organ transplants), and specialized treatment for rheumatoid arthritis or Crohn’s disease.

Symptoms of TB depend on where in the body the TB bacteria are growing. TB bacteria usually grow in the lungs. TB in the lungs may cause symptoms such as:

- A bad cough that lasts 3 weeks or longer.
- Pain in the chest.
- Coughing up blood or sputum (phlegm from deep inside the lungs).

Other symptoms of active TB disease are:

- Weakness or fatigue
- Weight loss
- No appetite
- Chills
- Fever
- Sweating at night

Plague

(From http://www.cdc.gov/ncidod/dvbid/plague/info.htm)

General Information

Plague, caused by a bacterium called *Yersinia pestis*, is transmitted from rodent to rodent by infected fleas.

Plague is characterized by periodic disease outbreaks in rodent populations, some of which have a high death rate. During these outbreaks, hungry infected fleas that have lost their normal hosts seek other sources of blood, thus increasing the increased risk to humans and other animals frequenting the area.

Epidemics of plague in humans usually involve house rats and their fleas. Rat-borne epidemics continue to occur in some developing countries, particularly in rural areas. The last rat-borne epidemic in the United States occurred in Los Angeles in 1924-25. Since then, all human plague cases in the U.S. have been sporadic cases acquired from wild rodents or their fleas or from direct contact with plague-infected animals.

Rock squirrels and their fleas are the most frequent sources of human infection in the southwestern states. For the Pacific states, the California ground squirrel and its fleas are the most common source. Many other rodent species, for instance, prairie dogs, wood rats, chipmunks, and other ground squirrels and their fleas, suffer plague outbreaks and some of these occasionally serve as sources of human infection. Deer mice and voles are thought to maintain the disease in animal populations but are less important as sources of human infection. Other less frequent sources of infection include wild rabbits, and wild carnivores that pick up their infections from wild rodent outbreaks. Domestic cats (and sometimes dogs) are readily infected by fleas or from eating infected wild rodents. Cats may serve as a source of infection to persons exposed to them. Pets may also bring plague-infected fleas into the home.

Between outbreaks, the plague bacterium is believed to circulate within populations of certain species of rodents without causing excessive mortality. Such groups of infected animals serve as silent, long-term reservoirs of infection.

Geographic Distribution of Plague

In the United States during the 1980s plague cases averaged about 18 per year. Most of the cases occurred in persons under 20 years of age. About 1 in 7 persons with plague died.

Worldwide, there are 1,000 to 2,000 cases each year. During the 1980s epidemic plague occurred each year in Africa, Asia, or South America. Epidemic plague is generally associated with domestic rats. Almost all of the cases reported during the decade were rural and occurred among people living in small towns and villages or agricultural areas rather than in larger, more developed, towns and cities.

The following information provides a worldwide distribution pattern:

- There is no plague in Australia.
- There is no plague in Europe; the last reported cases occurred after World War II.
- In Asia and extreme southeastern Europe, plague is distributed from the Caucasus Mountains in Russia, through much of the Middle East, eastward through China, and

then southward to Southwest and Southeast Asia, where it occurs in scattered, localized foci. Within these plague foci, there are isolated human cases and occasional outbreaks. Plague regularly occurs in Madagascar, off the southeastern coast of Africa.

- In Africa, plague foci are distributed from Uganda south on the eastern side of the continent, and in southern Africa. Severe outbreaks have occurred in recent years in Kenya, Tanzania, Zaire, Mozambique, and Botswana, with smaller outbreaks in other East African countries. Plague also has been reported in scattered foci in western and northern Africa.
- In North America, plague is found from the Pacific Coast eastward to the western Great Plains and from British Columbia and Alberta, Canada southward to Mexico. Most of the human cases occur in two regions; one in northern New Mexico, northern Arizona, and southern Colorado, another in California, southern Oregon, and far western Nevada.
- In South America, active plague foci exist in two regions; the Andean mountain region (including parts of Bolivia, Peru, and Ecuador) and in Brazil.

How Is Plague Transmitted?

Plague is transmitted from animal to animal and from animal to human by the bites of infective fleas. Less frequently, the organism enters through a break in the skin by direct contact with tissue or body fluids of a plague-infected animal, for instance, in the process of skinning a rabbit or other animal. Plague is also transmitted by inhaling infected droplets expelled by coughing, by a person or animal, especially domestic cats, with pneumonic plague. Transmission of plague from person to person is uncommon and has not been observed in the United States since 1924 but does occur as an important factor in plague epidemics in some developing countries.

Diagnosis

The pathognomic sign of plague is a very painful, usually swollen, and often hot-to-the touch lymph node, called a bubo. This finding, accompanied with fever, extreme exhaustion, and a history of possible exposure to rodents, rodent fleas, wild rabbits, or sick or dead carnivores should lead to suspicion of plague.

Onset of bubonic plague is usually 2 to 6 days after a person is exposed. Initial manifestations include fever, headache, and general illness, followed by the development of painful, swollen regional lymph nodes. Occasionally, buboes cannot be detected for a day or so after the onset of other symptoms. The disease progresses rapidly and the bacteria can invade the bloodstream, producing severe illness, called plague septicemia.

Once a human is infected, a progressive and potentially fatal illness generally results unless specific antibiotic therapy is given. Progression leads to blood infection and, finally, to lung infection. The infection of the lung is termed *plague pneumonia*, and it can be transmitted to others through the expulsion of infective respiratory droplets by coughing.

The incubation period of primary pneumonic plague is 1 to 3 days and is characterized by development of an overwhelming pneumonia with high fever, cough, bloody sputum, and chills. For plague pneumonia patients, the death rate is over 50%.

Treatment Information

As soon as a diagnosis of suspected plague is made, the patient should be isolated, and local and state health departments should be notified. Confirmatory laboratory work should be initiated, including blood cultures and examination of lymph node specimens if possible. Drug

therapy should begin as soon as possible after the laboratory specimens are taken. The drugs of choice are streptomycin or gentamycin, but a number of other antibiotics are also effective.

Those individuals closely associated with the patient, particularly in cases with pneumonia, should be traced, identified, and evaluated. Contacts of pneumonic plague patients should be placed under observation or given preventive antibiotic therapy, depending on the degree and timing of contact.

It is a U.S. Public Health Service requirement that all suspected plague cases be reported to local and state health departments and the diagnosis confirmed by CDC. As required by the International Health Regulations, CDC reports all U.S. plague cases to the World Health Organization.

Prevention

Plague will probably continue to exist in its many localized geographic areas around the world, and plague outbreaks in wild rodent hosts will continue to occur. Attempts to eliminate wild rodent plague are costly and futile. Therefore, primary preventive measures are directed toward reducing the threat of infection in humans in high risk areas through three techniques—environmental management, public health education, and preventive drug therapy.

Preventive Drug Therapy

Antibiotics may be taken in the event of exposure to the bites of wild rodent fleas during an outbreak or to the tissues or fluids of a plague-infected animal. Preventive therapy is also recommended in the event of close exposure to another person or to a pet animal with suspected plague pneumonia. For preventive drug therapy, the preferred antibiotics are the tetracyclines, chloramphenicol, or one of the effective sulfonamides.

Vaccines

The plague vaccine is no longer commercially available in the United States.

Smallpox

(From http://www.bt.cdc.gov/agent/smallpox/overview/disease-facts.asp)

The Disease

Smallpox is a serious, contagious, and sometimes fatal infectious disease. There is no specific treatment for smallpox disease, and the only prevention is vaccination. The name *smallpox* is derived from the Latin word for “spotted” and refers to the raised bumps that appear on the face and body of an infected person.

There are two clinical forms of smallpox. Variola major is the severe and most common form of smallpox, with a more extensive rash and higher fever. There are four types of variola major smallpox: ordinary (the most frequent type, accounting for 90% or more of cases); modified (mild and occurring in previously vaccinated persons); flat; and hemorrhagic (both rare and very severe). Historically, variola major has an overall fatality rate of about 30%; however, flat and hemorrhagic smallpox usually are fatal. Variola minor is a less common presentation of smallpox, and a much less severe disease, with death rates historically of 1% or less.

Smallpox outbreaks have occurred from time to time for thousands of years, but the disease is now eradicated after a successful worldwide vaccination program. The last case of smallpox in

the United States was in 1949. The last naturally occurring case in the world was in Somalia in 1977. After the disease was eliminated from the world, routine vaccination against smallpox among the general public was stopped because it was no longer necessary for prevention.

Where Smallpox Comes From

Smallpox is caused by the variola virus that emerged in human populations thousands of years ago. Except for laboratory stockpiles, the variola virus has been eliminated. However, in the aftermath of the events of October and October, 2001, there is heightened concern that the variola virus might be used as an agent of bioterrorism. For this reason, the U.S. government is taking precautions for dealing with a smallpox outbreak.

Transmission

Generally, direct and fairly prolonged face-to-face contact is required to spread smallpox from one person to another. Smallpox also can be spread through direct contact with infected bodily fluids or contaminated objects such as bedding or clothing. Rarely, smallpox has been spread by virus carried in the air in enclosed settings such as buildings, buses, and trains. Humans are the only natural hosts of variola. Smallpox is not known to be transmitted by insects or animals.

A person with smallpox is sometimes contagious with onset of fever (prodrome phase), but the person becomes most contagious with the onset of rash. At this stage the infected person is usually very sick and not able to move around in the community. The infected person is contagious until the last smallpox scab falls off.

Smallpox Disease	
Incubation Period (Duration: 7 to 17 days) *Not contagious*	Exposure to the virus is followed by an incubation period during which people do not have any symptoms and may feel fine. This incubation period averages about 12 to 14 days but can range from 7 to 17 days. During this time, people are not contagious.
Initial Symptoms *(Prodrome)* (Duration: 2 to 4 days) *Sometimes contagious**	The first symptoms of smallpox include fever, malaise, head and body aches, and sometimes vomiting. The fever is usually high, in the range of 101 to 104 degrees Fahrenheit. At this time, people are usually too sick to carry on their normal activities. This is called the *prodrome* phase and may last for 2 to 4 days.
Early Rash (Duration: about 4 days) *Most contagious*	A rash emerges first as small red spots on the tongue and in the mouth. These spots develop into sores that break open and spread large amounts of the virus into the mouth and throat. At this time, the person becomes most contagious. Around the time the sores in the mouth break down, a rash appears on the skin, starting on the face and spreading to the arms and legs and then to the hands and feet. Usually the rash spreads to all parts of the body within 24 hours. As the rash appears, the fever usually falls and the person may start to feel better. By the third day of the rash, the rash becomes raised bumps. By the fourth day, the bumps fill with a thick, opaque fluid and often have a depression in the center that looks like a bellybutton. (This is a major distinguishing characteristic of smallpox.) Fever often will rise again at this time and remain high until scabs form over the bumps.
Pustular Rash (Duration: about 5 days) *Contagious*	The bumps become pustules—sharply raised, usually round and firm to the touch as if there's a small round object under the skin. People often say the bumps feel like BB pellets embedded in the skin.
Pustules and Scabs (Duration: about 5 days) *Contagious*	The pustules begin to form a crust and then scab. By the end of the second week after the rash appears, most of the sores have scabbed over.
Resolving Scabs (Duration: about 6 days) *Contagious*	The scabs begin to fall off, leaving marks on the skin that eventually become pitted scars. Most scabs will have fallen off three weeks after the rash appears. The person is contagious to others until all of the scabs have fallen off.
Scabs resolved *Not contagious*	Scabs have fallen off. Person is no longer contagious.
* Smallpox may be contagious during the *prodrome* phase, but is most infectious during the first 7 to 10 days following rash onset	

Yellow Fever

(From http://www.cdc.gov/ncidod/dvbid/yellowfever/index.htm)

Disease Information

Yellow fever occurs only in Africa and South America. In South America sporadic infections occur almost exclusively in forestry and agricultural workers from occupational exposure in or near forests.

In Africa the virus is transmitted in three geographic regions:

- Principally and foremost, in the moist savanna zones of West and Central Africa during the rainy season,
- Secondly, outbreaks occur occasionally in urban locations and villages in Africa, and
- Finally, to a lesser extent, in jungle regions.

Yellow fever is a viral disease transmitted between humans by a mosquito. Yellow fever is a very rare cause of illness in travelers, but most countries have regulations and requirements for yellow fever vaccination that must be met prior to entering the country. General precautions to avoid mosquito bites should be followed. These include the use of insect repellent, protective clothing, and mosquito netting. Yellow fever vaccine is a live virus vaccine which has been used for several decades. A single dose confers immunity lasting 10 years or more. If a person is at continued risk of yellow fever infection, a booster dose is needed every 10 years. Adults and children over 9 months can take this vaccine. Administration of immune globulin does not interfere with the antibody response to yellow fever vaccine.

This vaccine is only administered at designated yellow fever vaccination centers; the locations of which can usually be given by your local health department. Information regarding registered yellow fever vaccination sites can be viewed at the CDC Travelers' Health Yellow Fever website.

Note: Vaccination recommendations have recently changed (MMWR Nov. 8, 2002). In addition, there have been recent reports documenting patients between 1996 and 2001 who developed severe illness potentially related to yellow fever vaccination.

Who Should Not Receive the Yellow Fever Vaccine?

Yellow fever vaccine generally has few side effects; fewer than 5% of vaccinees develop mild headache, muscle pain, or other minor symptoms 5 to 10 days after vaccination. Under almost all circumstances, there are four groups of people who should not receive the vaccine unless the risk of yellow fever disease exceeds the small risk associated with the vaccine. These people should obtain either a waiver letter prior to travel or delay travel to an area with active yellow fever transmission:

- Yellow fever vaccine should never be given to infants under 6 months of age due to a risk of viral encephalitis developing in the child. In most cases, vaccination should be deferred until the child is 9 to 12 months of age.
- Pregnant women should not be vaccinated because of a theoretical risk that the developing fetus may become infected from the vaccine.
- Persons hypersensitive to eggs should not receive the vaccine because it is prepared in embryonated eggs. If vaccination of a traveler with a questionable history of egg

hypersensitivity is considered essential, an intradermal test dose may be administered under close medical supervision. (Notify your doctor prior to vaccination if you think that you may be allergic to the vaccine or to egg products.)

- Persons with an immunosuppressed condition associated with AIDS or HIV infection, or those whose immune system has been altered by either diseases such as leukemia and lymphoma or through drugs and radiation should not receive the vaccine. People with asymptomatic HIV infection may be vaccinated if exposure to yellow fever cannot be avoided.

If you have one of these conditions, your doctor will be able to help you decide whether you should be vaccinated, delay your travel, or obtain a waiver. In all cases, the decision to immunize an infant between 6 and 9 months of age, a pregnant woman, or an immunocompromised patient should be made on an individual basis. The physician should weigh the risks of exposure and contracting the disease against the risks of immunization, and possibly consider alternative means of protection.

Medical Waivers

Most countries will accept a medical waiver for persons with a medical reason for not receiving the vaccination. CDC recommends obtaining written waivers from consular or embassy officials before departure. Travelers should contact the embassy or consulate for specific advice. Typically, a physician's letter stating the reason for withholding the vaccination and written on letterhead stationery is required by the embassy or consulate. The letter should bear the stamp used by a health department or official immunization center to validate the International Certificate of Vaccination.

Yellow fever vaccination requirements and recommendations for specific countries are available from the CDC Travelers' Health page.

Viral Hemorrhagic Fevers

(From http://www.cdc.gov/ncidod/dvrd/spb/mnpages/dispages/vhf.htm)

What are viral hemorrhagic fevers?

Viral hemorrhagic fevers (VHFs) refer to a group of illnesses that are caused by several distinct families of viruses. In general, the term "viral hemorrhagic fever" is used to describe a severe multi-system syndrome (multi-system in that multiple organ systems in the body are affected). Characteristically, the overall vascular system is damaged, and the body's ability to regulate itself is impaired. These symptoms are often accompanied by hemorrhage (bleeding); however, the bleeding is itself rarely life-threatening. While some types of hemorrhagic fever viruses can cause relatively mild illnesses, many of these viruses cause severe, life-threatening disease.

How are hemorrhagic fever viruses grouped?

VHFs are caused by viruses of four distinct families: arenaviruses, filoviruses, bunyaviruses, and flaviviruses. Each of these families share a number of features:

- They are all RNA viruses, and all are covered, or enveloped, in a fatty (lipid) coating.
- Their survival is dependent on an animal or insect host, called the natural reservoir.
- The viruses are geographically restricted to the areas where their host species live.

- Humans are not the natural reservoir for any of these viruses. Humans are infected when they come into contact with infected hosts. However, with some viruses, after the accidental transmission from the host, humans can transmit the virus to one another.
- Human cases or outbreaks of hemorrhagic fevers caused by these viruses occur sporadically and irregularly. The occurrence of outbreaks cannot be easily predicted.
- With a few noteworthy exceptions, there is no cure or established drug treatment for VHFs.

In rare cases, other viral and bacterial infections can cause a hemorrhagic fever; scrub typhus is a good example.

What carries viruses that cause viral hemorrhagic fevers?

Viruses associated with most VHFs are zoonotic. This means that these viruses naturally reside in an animal reservoir host or arthropod vector. They are totally dependent on their hosts for replication and overall survival. For the most part, rodents and arthropods are the main reservoirs for viruses causing VHFs. The multimammate rat, cotton rat, deer mouse, house mouse, and other field rodents are examples of reservoir hosts. Arthropod ticks and mosquitoes serve as vectors for some of the illnesses. However, the hosts of some viruses remain unknown -- Ebola and Marburg viruses are well-known examples.

Where are cases of viral hemorrhagic fever found?

Taken together, the viruses that cause VHFs are distributed over much of the globe. However, because each virus is associated with one or more particular host species, the virus and the disease it causes are usually seen only where the host species live(s). Some hosts, such as the rodent species carrying several of the New World arenaviruses, live in geographically restricted areas. Therefore, the risk of getting VHFs caused by these viruses is restricted to those areas. Other hosts range over continents, such as the rodents that carry viruses which cause various forms of hantavirus pulmonary syndrome (HPS) in North and South America, or the different set of rodents that carry viruses which cause hemorrhagic fever with renal syndrome (HFRS) in Europe and Asia. A few hosts are distributed nearly worldwide, such as the common rat. It can carry Seoul virus, a cause of HFRS; therefore, humans can get HFRS anywhere where the common rat is found.

While people usually become infected only in areas where the host lives, occasionally people become infected by a host that has been exported from its native habitat. For example, the first outbreaks of Marburg hemorrhagic fever, in Marburg and Frankfurt, Germany, and in Yugoslavia, occurred when laboratory workers handled imported monkeys infected with Marburg virus. Occasionally, a person becomes infected in an area where the virus occurs naturally and then travels elsewhere. If the virus is a type that can be transmitted further by person-to-person contact, the traveler could infect other people. For instance, in 1996, a medical professional treating patients with Ebola hemorrhagic fever (Ebola HF) in Gabon unknowingly became infected. When he later traveled to South Africa and was treated for Ebola HF in a hospital, the virus was transmitted to a nurse. She became ill and died. Because more and more people travel each year, outbreaks of these diseases are becoming an increasing threat in places where they rarely, if ever, have been seen before.

How are hemorrhagic fever viruses transmitted?

Viruses causing hemorrhagic fever are initially transmitted to humans when the activities of infected reservoir hosts or vectors and humans overlap. The viruses carried in rodent reservoirs are transmitted when humans have contact with urine, fecal matter, saliva, or other body excretions from infected rodents. The viruses associated with arthropod vectors are spread

most often when the vector mosquito or tick bites a human, or when a human crushes a tick. However, some of these vectors may spread virus to animals, livestock, for example. Humans then become infected when they care for or slaughter the animals.

Some viruses that cause hemorrhagic fever can spread from one person to another, once an initial person has become infected. Ebola, Marburg, Lassa and Crimean-Congo hemorrhagic fever viruses are examples. This type of secondary transmission of the virus can occur directly, through close contact with infected people or their body fluids. It can also occur indirectly, through contact with objects contaminated with infected body fluids. For example, contaminated syringes and needles have played an important role in spreading infection in outbreaks of Ebola hemorrhagic fever and Lassa fever.

What are the symptoms of viral hemorrhagic fever illnesses?

Specific signs and symptoms vary by the type of VHF, but initial signs and symptoms often include marked fever, fatigue, dizziness, muscle aches, loss of strength, and exhaustion. Patients with severe cases of VHF often show signs of bleeding under the skin, in internal organs, or from body orifices like the mouth, eyes, or ears. However, although they may bleed from many sites around the body, patients rarely die because of blood loss. Severely ill patient cases may also show shock, nervous system malfunction, coma, delirium, and seizures. Some types of VHF are associated with renal (kidney) failure.

How are patients with viral hemorrhagic fever treated?

Patients receive supportive therapy, but generally speaking, there is no other approved treatment or established cure for VHFs. Treatment with convalescent-phase plasma has been used with success in some patients with Argentine hemorrhagic fever.

How can cases of viral hemorrhagic fever be prevented and controlled?

With the exception of yellow fever and Argentine hemorrhagic fever, for which vaccines have been developed (but not licensed in the U.S.), no vaccines exist that can protect against these diseases. Therefore, prevention efforts must concentrate on avoiding contact with host species. If prevention methods fail and a case of VHF does occur, efforts should focus on preventing further transmission from person to person, if the virus can be transmitted in this way. Because many of the hosts that carry hemorrhagic fever viruses are rodents, disease prevention efforts include:

- Controlling rodent populations;
- Discouraging rodents from entering or living in homes or workplaces; and
- Encouraging safe cleanup of rodent nests and droppings.

For hemorrhagic fever viruses spread by arthropod vectors, prevention efforts often focus on community-wide insect and arthropod control. In addition, people are encouraged to use insect repellant, proper clothing, bednets, window screens, and other insect barriers to avoid being bitten.

For those hemorrhagic fever viruses that can be transmitted from one person to another, avoiding close physical contact with infected people and their body fluids is the most important way of controlling the spread of disease. Barrier nursing or infection control techniques include isolating infected individuals and wearing protective clothing. Other infection control recommendations include proper use, disinfection, and disposal of instruments and equipment used in treating or caring for patients with VHF, such as needles and thermometers.

In conjunction with the World Health Organization, CDC has developed practical, hospital-based guidelines titled “Infection Control for Viral Haemorrhagic Fevers In the African Health Care Setting.” The manual can help healthcare facilities recognize cases and prevent further hospital-based disease transmission using locally available materials and few financial resources.

Severe Acute Respiratory Syndrome (SARS)

(From http://www.cdc.gov/ncidod/sars/factsheet.htm)

SARS

Severe acute respiratory syndrome (SARS) is a viral respiratory illness caused by a coronavirus, called SARS-associated coronavirus (SARS-CoV). SARS was first reported in Asia in February 2003. Over the next few months, the illness spread to more than two dozen countries in North America, South America, Europe, and Asia before the SARS global outbreak of 2003 was contained. This fact sheet gives basic information about the illness and what CDC has done to control SARS in the United States.

The SARS Outbreak of 2003

According to the World Health Organization (WHO), a total of 8,098 people worldwide became sick with SARS during the 2003 outbreak. Of these, 774 died. In the United States, only eight people had laboratory evidence of SARS-CoV infection. All of these people had traveled to other parts of the world with SARS. SARS did not spread more widely in the community in the United States.

Symptoms of SARS

In general, SARS begins with a high fever (temperature greater than 100.4°F [>38.0°C]). Other symptoms may include headache, an overall feeling of discomfort, and body aches. Some people also have mild respiratory symptoms at the outset. About 10 percent to 20 percent of patients have diarrhea. After 2 to 7 days, SARS patients may develop a dry cough. Most patients develop pneumonia.

How SARS Spreads

The main way that SARS seems to spread is by close person-to-person contact. The virus that causes SARS is thought to be transmitted most readily by respiratory droplets (droplet spread) produced when an infected person coughs or sneezes. Droplet spread can happen when droplets from the cough or sneeze of an infected person are propelled a short distance (generally up to 3 feet) through the air and deposited on the mucous membranes of the mouth, nose, or eyes of persons who are nearby. The virus also can spread when a person touches a surface or object contaminated with infectious droplets and then touches his or her mouth, nose, or eye(s). In addition, it is possible that the SARS virus might spread more broadly through the air (airborne spread) or by other ways that are not now known.

What Does “Close Contact” Mean?

In the context of SARS, close contact means having cared for or lived with someone with SARS or having direct contact with respiratory secretions or body fluids of a patient with SARS. Examples of close contact include kissing or hugging, sharing eating or drinking utensils, talking to someone within 3 feet, and touching someone directly. Close contact does not include activities like walking by a person or briefly sitting across a waiting room or office.

CDC Response to SARS During the 2003 Outbreak
CDC worked closely with WHO and other partners in a global effort to address the SARS outbreak of 2003. For its part, CDC took the following actions:

- Activated its Emergency Operations Center to provide round-the-clock coordination and response.
- Committed more than 800 medical experts and support staff to work on the SARS response.
- Deployed medical officers, epidemiologists, and other specialists to assist with on-site investigations around the world.
- Provided assistance to state and local health departments in investigating possible cases of SARS in the United States.
- Conducted extensive laboratory testing of clinical specimens from SARS patients to identify the cause of the disease.
- Initiated a system for distributing health alert notices to travelers who may have been exposed to cases of SARS.

What CDC is Doing Now
CDC continues to work with other federal agencies, state and local health departments, and healthcare organizations to plan for rapid recognition and response if person-to-person transmission of SARS-CoV recurs. CDC has developed recommendations and guidelines to help public health and healthcare officials plan for and respond quickly to the reappearance of SARS in a healthcare facility or community. These are available in the document Public Health Guidance for Community-Level Preparedness and Response to Severe Acute Respiratory Syndrome (SARS). CDC provides the latest information on SARS on the SARS website.

Influenza*

(*Caused by novel or re-emergent influenza viruses that are causing, or have the potential to cause, a pandemic. From http://www.pandemicflu.gov/general/index.html.)

Pandemic Influenza

What's Happening Now?
A pandemic is a global disease outbreak. A flu pandemic occurs when a new influenza virus emerges for which people have little or no immunity, and for which there is no vaccine. The disease spreads easily person-to-person, causes serious illness, and can sweep across the country and around the world in very short time.

It is difficult to predict when the next influenza pandemic will occur or how severe it will be. Wherever and whenever a pandemic starts, everyone around the world is at risk. Countries might, through measures such as border closures and travel restrictions, delay arrival of the virus, but cannot stop it.

Health professionals are concerned that the continued spread of a highly pathogenic avian H5N1 virus across eastern Asia and other countries represents a significant threat to human health. The highly pathogenic H5N1 avian flu virus has raised concerns about a potential human pandemic because:

- It has proven to be transmitted from birds to mammals and, in some limited circumstances, to humans, and
- Like other influenza viruses, it continues to evolve and could develop greater affinity for human cells.

Since 2003, a growing number of human H5N1 cases have been reported in Azerbaijan, Cambodia, China, Djibouti, Egypt, Indonesia, Iraq, Thailand, Turkey, and Vietnam. More than half of the people infected with the H5N1 virus have died. Most of these cases are all believed to have been caused by exposure to infected poultry. There has been no sustained human-to-human transmission of the disease, but the concern is that H5N1 will evolve into a virus capable of human-to-human transmission.

Avian Influenza Viruses

Avian (bird) flu is caused by influenza A viruses that occur naturally among birds. There are different subtypes of these viruses because of changes in certain proteins (hemagglutinin [HA] and neuraminidase [NA]) on the surface of the influenza A virus and the way the proteins combine.

Each combination represents a different subtype. All known subtypes of influenza A viruses can be found in birds. The avian flu currently of concern is a highly pathogenic H5N1 subtype.

Avian Influenza in Birds

Avian influenza is a virus that infects wild birds (such as ducks, gulls, and shorebirds) and domestic poultry (such as chickens, turkeys, ducks, and geese). AI strains are divided into two groups based upon the ability of the virus to produce disease in poultry: low pathogenic avian influenza (LPAI) and highly pathogenic avian influenza (HPAI).

LPAI, or “low path” avian influenza, naturally occurs in wild birds and can spread to domestic birds. In most cases it causes no signs of infection or only minor symptoms in birds. These strains of the virus pose little threat to human health. LPAI H5 and H7 strains have the potential to mutate into HPAI and are therefore closely monitored.

HPAI, or “high path” avian influenza, is often fatal in chickens and turkeys. HPAI spreads more rapidly than LPAI and has a higher death rate in birds. HPAI H5N1 is the type rapidly spreading in some parts of the world.

Wild birds worldwide carry avian influenza viruses in their intestines, but usually do not get sick from them. Infected birds shed influenza virus in their saliva, nasal secretions, and feces. Domesticated birds can become infected with avian influenza virus through direct contact with infected waterfowl or other infected poultry, or through contact with surfaces (such as dirt or cages) or materials (such as water or feed) that have been contaminated with the virus.

Human Infection with Avian Influenza Viruses

"Human influenza virus" usually refers to those subtypes that spread widely among humans. There are only three known A subtypes of influenza viruses (H1N1, H1N2, and H3N2) currently circulating among humans. It is likely that some genetic parts of current human influenza A

viruses originally came from birds. Influenza A viruses are constantly changing, and other strains might adapt over time to infect and spread among humans.

The risk from avian influenza is generally low to most people, because the viruses do not usually infect humans. Highly pathogenic H5N1 is one of the few avian influenza viruses to have crossed the species barrier to infect humans, and it is the most deadly of those that have crossed the barrier.

Most cases of highly pathogenic H5N1 avian influenza infection in humans have resulted from contact with infected poultry (e.g., domesticated chicken, ducks, and turkeys) or surfaces contaminated with secretion/excretions from infected birds.

So far, the spread of highly pathogenic H5N1 avian influenza virus from person to person has been limited and has not continued beyond one person. Nonetheless, because all influenza viruses have the ability to change, scientists are concerned that the highly pathogenic H5N1 avian influenza virus circulating in Asia, Europe, and Africa one day could be able to infect humans and spread easily from one person to another.

In the current outbreaks in Asia, Europe, and Africa, more than half of those infected with the highly pathogenic H5N1 avian influenza virus have died. Most cases have occurred in previously healthy children and young adults. However, it is possible that the only cases currently being reported are those in the most severely ill people, and that the full range of illness caused by the highly pathogenic H5N1 avian influenza virus has not yet been defined.

Symptoms of avian influenza in humans have ranged from typical human influenza-like symptoms (e.g., fever, cough, sore throat, and muscle aches) to eye infections, pneumonia, severe respiratory diseases (such as acute respiratory distress), and other severe and life-threatening complications. The symptoms of avian influenza may depend on which virus caused the infection.

Because these viruses do not commonly infect humans, there is little or no immune protection against them in the human population. If the highly pathogenic H5N1 avian influenza virus were to gain the capacity to spread easily from person to person, a pandemic (worldwide outbreak of disease) could begin. No one can predict when a pandemic might occur. However, experts from around the world are watching the highly pathogenic H5N1 situation very closely and are preparing for the possibility that the virus may begin to spread more easily and widely from person to person.

For the most current information about avian influenza and cumulative case numbers, see the map on the CDC pandemic flu home page.

For more information about human infection, see http://www.cdc.gov/flu/avian/gen-info/avian-flu-humans.htm.

Vaccination and Treatment for H5N1 Virus in Humans

There currently is no commercially available vaccine to protect humans against H5N1 virus that is being seen in Asia, Europe, and Africa. Development is currently proceeding on pandemic vaccines based upon some already identified H5N1 strains.

The U.S. Department of Health and Human Services (HHS), through its National Institute of Allergy and Infectious Diseases (NIAID) and Food and Drug Administration, is addressing the

problem in a number of ways. These include the development of pre-pandemic vaccines based on current lethal strains of H5N1, collaboration with industry to increase the Nation's vaccine production capacity, and seeking ways to expand or extend the existing supply. We are also doing research in the development of new types of influenza vaccines.

Studies done in laboratories suggest that some of the prescription medicines approved in the United States for human influenza viruses should work in treating avian influenza infection in humans. However, influenza viruses can become resistant to these drugs, so these medications may not always work. Additional studies are needed to demonstrate the effectiveness of these medicines.

The H5N1 virus that has caused human illness and death in Asia is resistant to amantadine and rimantadine, two antiviral medications commonly used for influenza. Two other antiviral medications, oseltamavir and zanamavir, would probably work to treat influenza caused by H5N1 virus, but additional studies still need to be done to demonstrate their effectiveness.

For more information about H5N1 drug and vaccine development, see http://www.pandemicflu.gov/vaccine/#research

What would be the Impact of a Pandemic?

A pandemic may come and go in waves, each of which can last for six to eight weeks. An especially severe influenza pandemic could lead to high levels of illness, death, social disruption, and economic loss. Everyday life would be disrupted because so many people in so many places become seriously ill at the same time. Impacts can range from school and business closings to the interruption of basic services such as public transportation and food delivery.

A substantial percentage of the world's population will require some form of medical care. Health care facilities can be overwhelmed, creating a shortage of hospital staff, beds, ventilators and other supplies. Surge capacity at non-traditional sites such as schools may need to be created to cope with demand.

The need for vaccine is likely to outstrip supply and the supply of antiviral drugs is also likely to be inadequate early in a pandemic. Difficult decisions will need to be made regarding who gets antiviral drugs and vaccines.

Death rates are determined by four factors: the number of people who become infected, the virulence of the virus, the underlying characteristics and vulnerability of affected populations and the availability and effectiveness of preventive measures.

How are We Preparing?

The United States has been working closely with other countries and the World Health Organization (WHO) to strengthen systems to detect outbreaks of influenza that might cause a pandemic. See Global Activities

The effects of a pandemic can be lessened if preparations are made ahead of time. Planning and preparation information and checklists are being prepared for various sectors of society, including information for individuals and families. See Planning & Response Activities.

HHS and other federal agencies are providing funding, advice, and other support to your state to assist with pandemic planning and preparation. Information on state/federal planning and

cooperation, including links to state pandemic plans, is available on this site. See State & Local Planning.

The federal government will provide up-to-date information and guidance to the public through the public media and this web site should an influenza pandemic unfold.

WHO Phases of a Pandemic

WHO has developed a global influenza preparedness plan, which defines the phases of a pandemic, outlines the role of WHO, and makes recommendations for national measures before and during a pandemic. The phases are:

Interpandemic Period

Phase 1: No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk of human infection or disease is considered to be low.

Phase 2: No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.

Pandemic Alert Period

Phase 3: Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.

Phase 4: Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans.

Phase 5: Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans but may not yet be fully transmissible (substantial pandemic risk).

Pandemic Period

Phase 6: Pandemic: increased and sustained transmission in general population.

Notes:

- The distinction between **Phases 1** and **2** is based on the risk of human infection or disease resulting from circulating strains in animals. The distinction is based on various factors and their relative importance according to current scientific knowledge. Factors may include pathogenicity in animals and humans, occurrence in domesticated animals and livestock or only in wildlife, whether the virus is enzootic or epizootic, geographically localized or widespread, and other scientific parameters.

- The distinction among **Phases 3**, **4,** and **5** is based on an assessment of the risk of a pandemic. Various factors and their relative importance according to current scientific knowledge may be considered. Factors may include rate of transmission, geographical location and spread, severity of illness, presence of genes from human strains (if derived from an animal strain), and other scientific parameters.

U.S. Government Stages of a Pandemic

The WHO phases provide succinct statements about the global risk for a pandemic and provide benchmarks against which to measure global response capabilities. In order to describe the U.S. government approach to the pandemic response, however, it is more useful to characterize the stages of an outbreak in terms of the immediate and specific threat a pandemic virus poses to the U.S. population. The following stages provide a framework for Federal Government actions:

Stage 0: New Domestic Animal Outbreak in Previously Unaffected Country (WHO Phase 3)

Stage 1: Suspected Human Outbreak Overseas (WHO Phase 3)

Stage 2: Confirmed Human Outbreak Overseas (WHO Phase 4 or 5)

Stage 3: Widespread Human Outbreaks in Multiple Locations Overseas (WHO Phase 6)

Stage 4: First Human Case in North America (WHO Phase 6)

Stage 5: Spread throughout United States (WHO Phase 6)

Stage 6: Recovery and Preparation for Subsequent Waves (WHO Phase 6 or 5)

APPENDIX G

Airport Quarantine Plan Example

The following information was extracted with permission from:

State of Georgia
Division of Public Health Emergency Operations Plan
Incident Annex 3
Infectious Disease Evaluation and Response at
Hartsfield-Jackson International Airport
Standard Operating Plan
Version 20: May 25, 2006

ANNEX 1

SPECIAL NEEDS POPULATION SHELTER (SNPS*) OPERATIONS

(*Note: A list of abbreviations is provided on page G-11)

Appropriate PPE and separation of the travelers and response staff should be encouraged and utilized. Level of PPE will be determined by the potential infectious agent(s). May also need to consider the isolation of those travelers that had close contact with the index ill traveler and the ill traveler's close personal contacts/family members.

SNPS will be established upon the authority of the DIRECTOR DPH, when it has been determined the aircraft travelers will require quarantine. Services will be provided by the various support agencies listed in this Annex. The basic setup, physical layout, staffing and guidance for shelters are documented in the American Red Cross Shelter Manuals and the DPH "Guidelines for the Care of Special Needs Populations During Disasters and Emergencies". The following are recommended amenities, suggested by the planning committee.

This Annex is divided into 4 subsections: Accommodations, Administration, Special Travelers, and Supplies and Amenities.

ACCOMMODATIONS

The SNPS plan is complicated by potential international travelers and those deemed a high risk under the FBI's passenger classification system. If the quarantine is caused by a terrorist event, it may require a large number of people to receive vaccination and/or prophylaxis (VP), to protect the community at large from an infectious disease of public health concern and to allow the federal law enforcement agency in charge a more controlled environment to investigate travelers.

The SNPS should be a building located on the airport grounds, allowing better security and ease of transporting the travelers. The current primary site should be a hangar and the secondary site should be a nearby building with appropriate room and facilities. Some of the more obvious factors to be considered include external and internal security measures and rest room and shower facilities. The layout should be such that other amenities may be accommodated for staff and travelers.

If a hangar is to be used, then it should be capable of providing space for the unique requirements for this SNPS. On the runway side, the hangar doors open, allowing the nose of

aircraft to enter the hangar. Having the travelers enter from the runway side protects them from the media, which may be located on the opposite side on the access road. The travelers will off load and register on the first floor, just inside the hangar doors. This allows the passengers and crew to be in a controlled access environment. Once in-processed, travelers will be escorted to the "residents" area. The restricted air access of the airport may limit the opportunity for the media to observe from the air.

Residents' area:
The primary residents area should be a climate controlled large warehouse like area, capable of accommodating up to 400 residents in an open, but semi-private environment. Depending on contagiousness/infectiousness of the agent, portable negative pressure equipment with High Efficiency Particulate Air (HEPA) filtration might be recommended and requested through DHR EM. Sleeping arrangements (using current ARC shelter information as guidance) should provide space for families, couples and singles (adult and teenager). Separate areas should be set up for unforeseen events requiring separation of specific populations. Appropriate arrangements should be made for the care and supervision of unaccompanied children under 18 years old and accompanied and unaccompanied pets.

An area for washing non-contaminated clothes will be requested through OHS-GEMA. A company that deals with contaminated linens will be requested through OHS-GEMA to provide laundry services. The travelers may be responsible for housekeeping of their own residential area, but adequate supplies will be requested through OHS-GEMA.

A religious area should be established for the travelers to practice their religious beliefs. The area should accommodate religious services as requested by the travelers.

A respite area for travelers should be provided.

A separate secured area should be provided for visitation between the travelers, immediate families, counselors, other consultation services and media. There should be a solid, shatter-resistant window separating the visitors from the travelers, with adequate telephone-like systems for them to talk. There will be no access between the rooms; no physical contact between visitors and travelers. There will be controlled and escorted access into both rooms, not allowing any physical contact between visitors and travelers. It is strongly recommended to have a portable HEPA filtration system installed.

A recreational area should be provided, so the travelers can play games, such as basketball, or to walk.

A children's playroom should be provided. A television, games and other toys (age dependent) should be provided. There will be at least 2 (two) adult attendants at all times in the room (this could be staffed by the aircrew).

Staff Area:
The SNPS EOC will be the administrative center for the SNPS. The following representatives should be expected to staff the EOC: ARC; OHS-GEMA, DPH, DHR EM representative, DFCS, Regional Coordinating Hospital, airport management; FBI, GBI, Atlanta PD, CBP and other law enforcement agencies as required; airline representative; and CDC, HHS Regional Emergency Coordinator, DHS-FEMA with stations with telephone and internet access, if requested. There will be additional stations set up as required. A dedicated line to the SOC and DHR EOC should be available.

The SNPS Administrative offices will be located in close proximity to the SNPS EOC. This will be the office for the DHD and other SNPS-ACC administrators as necessary.

The SNPS staff should establish a conference room for daily briefs, updates, dignitary visits and other administrative meetings as required.

Separate respite and recreational areas should be provided. The SNPS staff will be provided a separate sleeping/living area. This will be important when the staff cannot leave for the duration of the quarantine or for extended times. Most likely, these areas will be cubicle-like areas with a cot and electrical outlets, affording minimal privacy.

A separate shower and rest room facility will be requested through OHS-GEMA, but the style is unknown (semi-private to dorm-like). A separate clothes-washing area will be established.

Housekeeping services and an area for washing non-contaminated clothes will be requested through OHS-GEMA for the staff area, including the EOC, clinic, etc. A company that deals with contaminated linens will be requested through OHS-GEMA to provide laundry services.

A communication system should be established throughout the SNPS for announcements originating from the EOC. A separate system should be established to communicate with the residential area.

The loading dock should be available for the SNPS staff at all times. Access will be limited to staff only.

Media will have a separate facility, but near the SNPS, if available. Media will have limited, escorted access to the passengers, crew and staff.

ADMINISTRATION

Residents:
Parents or legal guardians may request and be authorized access to the SNPS to be with unaccompanied children or adults with special needs. Upon access to the SNPS, they become part of the cohort group.

Access to translators needs to be available.

ARC will help establish and maintain a small canteen. DFCS will assist with staffing the canteen, as the ARC personnel are not authorized in the area with biologically infected or potentially infected passengers and crew. Food, beverages and snacks will be coordinated through both ARC and OHS-GEMA and available on a 24-hour basis. If staffing is a possibility, it will be requested through OHS-GEMA, but may have to be coordinated by the air crew members, accomplished by the travelers. The menu will be as diverse as possible, to meet the needs of those with special medical, religious oriented, and vegetarian diets. Alcohol is unauthorized.

Luggage will be “matched” and distributed to the passengers and crewmembers after appropriate clearance by CBP.

On board animals will be handled and coordinated through GA Department of Agriculture, US Department of Agriculture, US Fish and Wildlife, CDC, OHS-GEMA and/or DPH Veterinarian.

Staff:

A Unified Command Structure will be established, which is NIMS compliant and follows the Georgia Emergency Operations Plan (GEOP) and DPH EOP.

Personnel required to prepare and initially staff the SNPS will report within 90-120 minutes after alert. The SNPS will be prepared to in-process and house the travelers within 2 (two) hours after the arrival of staff. Assistance to set-up the shelter will be coordinated with OHS-GEMA. In the interim, the travelers will be held in a secluded and secured area until it is prepared.

Personnel who are critical to the initial operation may require law enforcement assistance to the rally point, due to the traffic congestion in the metro Atlanta area. This needs to be considered and coordinated through the on-scene commander. The airport will provide secured transportation to the SNPS for not only the passengers, but also the staff.

It is accepted not all of the volunteers to staff the SNPS may receive pre-VP. Therefore, they will be part of the group that will receive VP in the initial hours of the set up. For situations when VP is not available, PPE will be provided and used as directed.

ARC, DFCS, OHS-GEMA, DHR MHDDAD local Emergency Management Agencies (EMAs) and DPH will provide the SNPS support for the travelers during their quarantine; assisting with feeding and clothing of the travelers; assisting with family notification for those who are in quarantine; and assisting with any financial issues of the quarantined travelers. Donated foods, supplies, clothing, equipment, etc will be managed and coordinated through OHS-GEMA.

Primary law enforcement responsibility is Atlanta Police Department (APD). They will coordinate additional needs and requirements with other local law enforcement agencies and CBP. DHR DFCS will request APD, Airport Detachment, to provide and coordinate certified law enforcement personnel to be stationed outside and inside the SNPS facility. Those law enforcement personnel stationed inside the SNPS will provide protection against intrusion, enforce quarantine, protection of staff from travelers, travelers from violent travelers and other duties as requested from DHR DFCS and/or DPH. Appropriate VP and/or PPE will be determined by the Unified Command section for those working/entering the residential area.

The FBI, Immigration and Customs Enforcement (ICE) and GBI will coordinate their law enforcement investigations, working with the APD (Airport Division), the affected airline's security, TSA, CBP, airport security and other state and federal officials. Local law enforcement will ensure unimpeded transportation access to the MTF, assist with transportation of lab specimens to the State Public Health Laboratory and/or the CDC laboratory and with emergency transportation of additional support personnel as requested by the Public Health Staff through OHS-GEMA, Airport Operations or DHR EM.

If the SNPS is established due to a terrorist event, DHS-FEMA may establish a Regional Response Coordination Center (RRCC), assisting as requested or required. The many federal assets will be available through the RRCC, including ESF 6 and ESF 8.

American Red Cross (ARC) will assist with establishment of the SNPS—coordinating food, water, cots, and other supplies. ARC will also coordinate, register, and in-process travelers staying in the SNPS and assist with family communications.

DHR Emergency Manager (EM) will provide assistance as needed upon request from the SNPS operations.

DHR Division of Family and Children's Services (DFCS) staff will coordinate the setup, function and maintenance of the SNPS. DHR Manager of SNPS will have operational oversight responsibility for the SNPS. Aircrew members will assist DFCS staff with passenger relations, shelter operations, and the care and well being of the unaccompanied children.

DPH Public Information Officer (PIO) will coordinate with the Joint Information Center (JIC) or other established joint communication center, assuming the lead for disseminating the Public Health information. The DPH PIO will coordinate messages and communication strategies with counterparts in DHR, DPH, and other partner agencies in and outsides the JIC before releasing any information. The PIO will coordinate communications and ensure updates with the media and the residents in the SNPS.

DPH Emergency Preparedness Team (EPT) will assist the DHD EC/EPS in coordinating information flow between the MTF(s), SNPS and the DHR Emergency Operations Center (EOC), if activated. The EPT will assist the DHD and the District EC/EPS as requested. If the DHR EOC is not activated, the DHR EM will be notified of events and requirements within the SNPS-ACC.

DPH Epidemiology Branch will conduct surveillance among the residents of the SNPS and responders and apply infection control measures as needed. A major component of this surveillance is to identify those exposed individuals who become infected and therefore, require separate isolation facilities.

The **State Medical Epidemiologist** (SME) will recommend vaccination and chemoprophylaxis of exposed travelers, responders, and SNPS personnel as indicated. The SME will provide oversight of the epidemiologic response with in the SNPS, including surveillance, chart reviews and other surveillance as required.

A DHD EC or Emergency Preparedness Specialist (EPS), from the metro Atlanta District Health Director's offices, will assist the assigned DHD with oversight of the SNPS; assist in the SNPS EOC; coordinate as required with other district, state and federal entities; and assist upon other requests as needed.

Mental Health Services Staff will be assigned by Division of Mental Health Developmental Disabilities and Addictive Diseases (MHDDAD) and other disaster mental health providers throughout the entire response. Adequate communication needs to be assured to minimize levels of stress within the family. Mental Health teams may be required. The SNPS staff will work with Public Health, assessing and determining those residents and staff requiring intervention. It is advisable to have a member of each team be available for impromptu consultations. Mental Health members shall provide seminars for the residents and staff, educating them in ways to help deal with their stressful environment. Very few of the passengers and crew should require routine mental health care. For those that will require this type of care, appropriate intervention services and counseling will be available through the DHR Mental Health Services.

Credentialing:
A credentialing system will be instituted and assigned badges will be prominently displayed at all times while on the SNPS grounds and in the SNPS facility. Those agencies that have vests and specific uniforms, may wear them along with the supplied badge. The EOC personnel will determine who has access and their level of access:

- **Logistics** will be white on black with “LOGISTICS” and limited to the dock area, but may have limited access to the staff area, including the EOC, clinic, etc as required to provide assistance;
- **Medical** will be red on white with “MEDICAL” and access to all areas. DPH personnel will also wear the Public Health vests;
- **Administrative** will be yellow on light blue with “ADMIN” and access to all areas except clinic and ward;
- **EOC personnel** will be yellow on black with “EOC” and have access to all areas;
- **Law Enforcement** will be green on tan with “LE” and access to all areas.

Visitors to the grounds and facility will initially be limited to the media, city, local county, state, and /or federal officials and authorized family members. All visitors, regardless of prominence (political or otherwise), will be escorted. Administration and DPH PIO/RC will coordinate the escorts. Assigned badges will be prominently displayed at all times while on the SNPS grounds and in the SNPS facility:

- **Government officials** will be orange on white with “GOV”, with limited escorted access to the non-travelers area and to any area that does not have infectious people.
- **Family members** will be white on orange with “GUEST”, with limited escort access to the visitation area. It will be up to the senior medical provider and EOC staff if access will be granted to the medical ward to visit family.
- **Media** will be black on white with “MEDIA” and always escorted while in the SNPS and be limited to non-passenger/non-patient care areas unless received appropriate VP.

SPECIAL TRAVELERS

If either the airlines or law enforcement have confirmed that a certified sex offender is part of the cohort group, that individual will be in a separate sleeping area. Additionally, sex offenders will not be allowed to have contact with any child under the age of 18 without at least one adult present. This is also true for prisoners in transit and other travelers of law enforcement interest. These individuals may be assigned constant surveillance.

Other considerations might include dignitaries, military personnel, people that are substance dependent and other persons of interest. Though too lengthy to be approached in this SOP, the UC staff will need to be aware of this consideration.

SUPPLIES AND AMENITIES

A secured, bonded area for storing travelers’ personal items will be provided.

An entertainment room will be requested through OHS-GEMA with a television, VCR, possibly a DVD player and stereo.

An internet cafe-like room will be requested through OHS-GEMA. There will be internet connections for those with their private computers. There will be community computers for

those without their computers. Printers will be available. This will allow business people to continue their work, students to maintain contact with their schools and to provide the opportunity for the passengers and crew to keep in touch with their families and friends.

A communication room will be requested through OHS-GEMA, with phones to accommodate the travelers, including phone setups for the hearing impaired. Fax machines will be provided. There should be free long distance for those without the funds or inability to pay the long distance fees.

Closing of Facility
In consultation with the SME, OHS-GEMA, DNR EPD, the EPA, and the owner of the location used, appropriate cleaning and decontamination of facility, resources and supplies will be accomplished. If this is not possible, these agencies will determine the appropriate demolition and disposal of the building. In addition, these agencies will determine the appropriate disposal of resources and supplies.

ANNEX 2

SPECIAL NEEDS POPULATION SHELTER/ALTERNATE CARE CENTER

If possible, the ill, exposed or infectious traveler will be treated in a local medical treatment facility, capable to evaluate and treat the traveler.

An ill traveler will not be transported to a local medical treatment facility without due consideration of the agent or disease that initiated the quarantine. Prior to transfer, the health care provider seeing the ill traveler, should consult with the receiving medical treatment facility. Grady EMS or other similarly equipped and trained patient transport unit need to be notified and requested through the Airport Rescue and Fire Fighting. The health care provider should also consult with the SME, the lead DHD over seeing the SNSP/ACC, and if necessary, the DPH DIRECTOR, ensuring there is no or acceptable Public Health risk to the receiving MTF and others in contact with the traveler.

If it is determined the ill travelers should not be transported, evaluated nor admitted to a local medical treatment facility, then this ANNEX 2 will assist in the establishment of an ACC.

Due to the complexity of the sheltering and medical care issues, the quarantine facility will be designated as an SNPS. Within the SNPS, an ACC may be established. The ACC may be set up as minimally as an outpatient clinic or as complex as an inpatient facility. DPH will provide oversight and logistical coordination of personnel and supplies. DPH will coordinate with the DHD SNPS Director the medical oversight of the DHR SNPS-ACC. The Atlanta Region's Metropolitan Medical Response System's (MMRS) Metropolitan Medical Strike Team (MMST) may assist DPH in setting up and staffing a clinic or inpatient facility, if required or requested by the SME or DIRECTOR DPH.

ADMINISTRATION

A Unified Command Structure will be established, which is NIMS compliant and follows the Georgia Emergency Operations Plan (GEOP) and DPH EOP.

HHS REC will work with other HHS Operating Divisions (OPDIVs) to coordinate the Emergency Support Function #8 (ESF #8) Health and Medical Response. Working with our partner agencies (NDMS, VA, and DoD) we will provide public health-related information regarding the cause of the event, and treat exposed individuals as well.

DHS-FEMA's NDMS Section ECs are responsible for coordinating NDMS activities, including DMAT, DMORT, etc.

DHR Emergency Manager (EM) will provide assistance as needed upon request from the SNPS ACC operations.

The **State Public Health Laboratory (PHL)** will assist the ACC medical staff with appropriate resources to provide laboratory testing. Some testing may need to be coordinated between the senior medical provider and the Director PHL. Laboratory results will be communicated to the senior medical provider or designee.

DPH Office of Pharmacy will assist the MMST and DMAT with pharmaceutical personnel and supply issues. OHS-GEMA, the Department of Homeland Security's Emergency Coordinators (DHS-ECs) and the Department of Health and Human Services Regional Emergency Coordinator (HHS-REC) may assist with obtaining personnel and supplies not available through the DPH Office of Pharmacy system.

DPH Public Information Officer (PIO) will coordinate with the Joint Information Center (JIC) or other established joint communication center, assuming the lead for disseminating the Public Health information. The DPH PIO will coordinate messages and communication strategies with counterparts in DHR, DPH, and other partner agencies in and outside the JIC before releasing any information. The PIO will coordinate communications and ensure updates with the media and the residents in the SNPS ACC.

DPH Emergency Preparedness Team (EPT) will assist the DHD EPS/EC in coordinating information flow between the MTF(s), SNPS ACC and the DHR Emergency Operations Center (EOC), if activated. The EPT will assist the DHD and the District EC/EPS as requested. If the DHR EOC is not activated, the DHR EM will be notified of events and requirements within the SNPS ACC.

DPH Epidemiology Branch will conduct surveillance among the patients and staff of the ACC and apply infection control measures as needed. The SME will provide oversight of the epidemiologic response within the ACC, including surveillance, chart reviews and other surveillance as required.

A DHD EC or Emergency Preparedness Specialist (EPS), from the metro Atlanta District Health Director's offices, will assist the assigned DHD with oversight of the SNPS ACC; and assist upon other requests as needed.

Physician and Nurse Staff will be assigned to the ACC from resources such as GA Disaster Medical Assistance Team (DMAT), MMST, GA Nurse Alert System (GNAS), GA Pharmacy Alert System (GPhAS), Georgia State Defense Force and/or other resources as provided by DPH and OHS-GEMA. The senior medical provider or designee will liaison with the Primary MTF for transported patients.

Mental Health Services Staff will be assigned by MHDDAD providers and other disaster mental health providers throughout the entire response. Adequate communication needs to be assured to minimize levels of stress within the staff. Mental health teams may be required. The ACC staff will work with Public Health, assessing and determining those patients and staff requiring intervention. It is advisable to have a member of each team be available for impromptu consultations. Mental health team members shall provide appropriate interventions for the patients and staff to help deal with their stressful environment. For patients with substance dependency, MHDDAD providers will assess need and appropriate treatment.

Radiological Services (diagnostic) may be coordinated with the MTFs, if the service is not available through the MMST or DMAT. The MMST and/or DMAT may request radiological assistance through the DPH. DPH may request assistance from DHS-ECs and HHS-REC.

MEDICAL OPERATIONS

The medical situation of the SNPS ACC may lead to altered standards of medical care for the residents and staff. The altered standards of medical care have to be evaluated and approved or waived by the DIRECTOR DPH, in consultation with DHR Legal Services, OHS-GEMA, Governor, Georgia Hospital Association (GHA) and/or other agencies as determined.

Due to the probable infectious nature of their exposure, all travelers and staff will be treated, to the extent possible, in the ACC. Medical staff will consult with the SME if transport to an MTF is being considered. In the event of exhausting existing healthcare system, a small inpatient unit may need to be established to care for those that may require an inpatient-like setting. If an inpatient-like setting becomes necessary, it will be placed as to prevent cross exposure of staff and exposed residents.

Outpatient ACC

This is defined as the area within the SNPS facility that cares for staff and residents requiring routine medical care, unrelated to the exposure, similar to a small outpatient clinic or urgent care clinic. Clinical services, including mental health, radiology and prescription medication dispensing, including refills, will be coordinated through DPH. Staffing suggestions are covered later in this document.

Ill residents and staff may be transported to an MTF if the required scope of care exceeds that of the clinic or if the resident or staff develops symptoms consistent with the disease or agent exposure. The EMS transport unit of choice is the Grady Biosafety Transport Unit.

Inpatient ACC

If the area healthcare system can no longer provide needed isolation and treatment standards and if directed by the DPH DIRECTOR, OHS-GEMA, CDC, DHS or other authoritative agency/legislative body (state and/or federal), the ACC may be required to be staffed and equipped to provide inpatient care to ill residents and staff.

Necessary medical resources may need to be procured through the Metropolitan Medical Response System (MMRS). If unsuccessful, the DPH may request the resources through OHS-GEMA.

The medical and nursing care will be performed by personnel appropriately trained and qualified to operate in an austere environment. If federal medical resources are required, they will be requested through OHS-GEMA.

Disposal of potentially infectious waste, linens, clothing and bedding will need to be recommended through the DPH Epidemiology and coordinated through DPH Environmental Health and OHS-GEMA.

Discharge planning for all residents and staff of the SNPS will be coordinated through the SME, in consultation with the DPH DIRECTOR.

General Staffing of the ACC

Separate inpatient and outpatient staffing arrangements should be considered and arranged whenever possible. Staffing requests will be made from DPH to HHS REC, OHS-GEMA or the Regional Coordinating Hospital, if required. The initial staffing requests should be made for either a DMAT or GSDF. Staffing ratio suggestion is based on the DoD Medical Emergency Modular System (MEMS) models, which is based on a 10 (ten) bed unit, with increments of 10 (ten), the following is recommended for staffing this ACC per 12 (twelve) hour shift:

- **Two physicians** (one responsible for the outpatient and one for inpatient care)
- **Two Physician's Assistants (PA) or Nurse Practitioners (NP)** (one assist with outpatient and one assist with inpatient care)
- **One Pharmacist** (responsible for the ACC; more would be assigned as the situation warrants)
- **One Pharmacy Technician**
- **Four nurses**; mix of Registered Nurses (RNs) and Licensed Practical Nurses (LPNs) (one RN to have oversight of the inpatient and one to oversee the outpatient care; one LPN to assist in the outpatient and one if an inpatient component exists)
- **Two nursing assistants** (to assist with inpatient care)
- **One medical unit secretary (responsible for the ACC)**
- **Two housekeepers** (one for outpatient care and one per 25 inpatient care)

(Reference DoD's MEMS)

Abbreviations and Acronyms

ACC-Alternate Care Center

ARC-American Red Cross

AFCEMA-Atlanta Fulton County Emergency Management Agency

BT-Bioterrorism

BT/EC-Bioterrorism/Emergency Coordinator

CDC-Centers for Disease Control and Prevention

DFCS-Division of Family and Children's Services

DHD-District Health Director

DHR-Department of Human Resources

DHR EM-Department of Human Resources Emergency Management

DHS-FEMA- Department of Homeland Security-Federal Emergency Management Agency

DHS EC-Department of Homeland Security Emergency Coordinator

DMAT-Disaster Medical Assistance Team

DoD-Department of Defense

DPH-Division of Public Health

EC-Emergency Coordinator

ED-Emergency Department

EM-Electron Microscope

EMA-Emergency Management Agency

EMS-Emergency Medical Service

EOC-Emergency Operations Center

EPS- Emergency Preparedness Specialist

EPT-Emergency Preparedness Team

ERT-A-Emergency Response Team-Advanced

FBI SAIC-Federal Bureau of Investigation Special Agent In Charge

GA HLS-Georgia Homeland Security

GBI-Georgia Bureau of Investigation

GISAC-Georgia Information Sharing and Analysis Center

HLS-Homeland Security (Federal)

MTF-Medical Treatment Facility

MHDDAD

MMRS-Metropolitan Medical Response System

MMST-Metropolitan Medical Strike Team

OCGA-Official Code of Georgia Annotated

OHS-GEMA- Georgia Emergency Management Agency

NP- Nurse Practioner

PA- Physician Assistant

PAO-Public Affairs Officer

PIO

PCR-Polymerase Chain Reaction

PHL-Public Health Laboratory

PFO-Principal Federal Official

RC-Risk Communicator

SPX-Smallpox

SNPS-Special Needs Population Shelter

SNS-Strategic National Stockpile

SME-State Medical Epidemiologist

SOC-State Operations Center

VP-Vaccination and/or prophylaxis

APPENDIX H

Incident Command/Unified Command

Incident Command
[From the U.S. Department of Labor, Occupational Safety and Health Administration, http://www.osha.gov/SLTC/etools/ics/what_is_ics.html]

The ICS is a standardized on-scene incident management concept designed specifically to allow responders to adopt an integrated organizational structure equal to the complexity and demands of any single incident or multiple incidents without being hindered by jurisdictional boundaries.

In 1980, federal officials transitioned ICS into a national program called the National Interagency Incident Management System (NIIMS) (now known as the National Incident Management System [NIMS]), which became the basis of a response management system for all federal agencies with wildfire management responsibilities. Since then, many federal agencies have endorsed the use of ICS and several have mandated its use.

An ICS enables integrated communication and planning by establishing a manageable span of control. An ICS divides an emergency response into five manageable functions essential for emergency response operations: command, operations, planning, logistics, and finance and administration. Figure 1 below shows a typical ICS structure.

Figure 1 — Incident Command System Structure

The **Incident Commander** (IC) or the **Unified Command** (UC) is responsible for all aspects of the response, including developing incident objectives and managing all incident operations.

The IC is faced with many responsibilities when he/she arrives on scene. Unless specifically assigned to another member of the Command or General Staffs, these responsibilities remain with the IC. Some of the more complex responsibilities include:

- Establish immediate priorities especially the safety of responders, other emergency workers, bystanders, and people involved in the incident.
- Stabilize the incident by ensuring life safety and managing resources efficiently and cost effectively.

Determine incident objectives and strategy to achieve the objectives.

- Establish and monitor incident organization.
- Approve the implementation of the written or oral Incident Action Plan (IAP).

- Ensure adequate health and safety measures are in place.

The **Command Staff** is responsible for public affairs, health and safety, and liaison activities within the incident command structure. The IC/UC remains responsible for these activities or may assign individuals to carry out these responsibilities and report directly to the IC/UC.

- The **Information Officer's** role is to develop and release information about the incident to the news media, incident personnel, and other appropriate agencies and organizations.
- The **Liaison Officer's** role is to serve as the point of contact for assisting and coordinating activities between the IC/UC and various agencies and groups. This may include Congressional personnel, local government officials, and criminal investigating organizations and investigators arriving on the scene.
- The **Safety Officer's** role is to develop and recommend measures to the IC/UC for assuring personnel health and safety and to assess and/or anticipate hazardous and unsafe situations. The Safety Officer also develops the Site Safety Plan, reviews the Incident Action Plan for safety implications, and provides timely, complete, specific, and accurate assessment of hazards and required controls.

The **General Staff** includes Operations, Planning, Logistics, and Finance/Administrative responsibilities. These responsibilities remain with the IC until they are assigned to another individual. When the Operations, Planning, Logistics or Finance/Administrative responsibilities are established as separate functions under the IC, they are managed by a section chief and can be supported by other functional units.

- The **Operations Staff** is responsible for all operations directly applicable to the primary mission of the response.
- The **Planning Staff** is responsible for collecting, evaluating, and disseminating the tactical information related to the incident, and for preparing and documenting IAPs.
- The **Logistics Staff** is responsible for providing facilities, services, and materials for the incident response.
- The **Finance and Administrative Staff** is responsible for all financial, administrative, and cost analysis aspects of the incident.

The following is a list of Command Staff and General Staff responsibilities that either the IC or UC of any response should perform or assign to appropriate members of the Command or General Staffs:

- Provide response direction;
- Coordinate effective communication;
- Coordinate resources;
- Establish incident priorities;
- Develop mutually agreed-upon incident objectives and approve response strategies;
- Assign objectives to the response structure;
- Review and approve IAPs;
- Ensure integration of response organizations into the ICS/UC;

- Establish protocols;
- Ensure worker and public health and safety; and
- Inform the media.

The modular organization of the ICS allows responders to scale their efforts and apply the parts of the ICS structure that best meet the demands of the incident. In other words, there are no hard and fast rules for when or how to expand the ICS organization. Many incidents will never require the activation of Planning, Logistics, or Finance/Administration Sections, while others will require some or all of them to be established. A major advantage of the ICS organization is the ability to fill only those parts of the organization that are required. For some incidents, and in some applications, only a few of the organization's functional elements may be required. However, if there is a need to expand the organization, additional positions exist within the ICS framework to meet virtually any need.

For example, in responses involving responders from a single jurisdiction, the ICS establishes an organization for comprehensive response management. However, when an incident involves more than one agency or jurisdiction, responders can expand the ICS framework to address a multi-jurisdictional incident.

The roles of the ICS participants will also vary depending on the incident and may even vary during the same incident. Staffing considerations are based on the needs of the incident. The number of personnel and the organization structure are dependent on the size and complexity of the incident. There is no absolute standard to follow. However, large-scale incidents will usually require that each component, or section, is set up separately with different staff members managing each section. A basic operating guideline is that the Incident Commander is responsible for all activities until command authority is transferred to another person.

Another key aspect of an ICS that warrants mention is the development of an IAP. A planning cycle is typically established by the Incident Commander and Planning Section Chief, and an IAP is then developed by the Planning Section for the next operational period (usually 12- or 24-hours in length) and submitted to the Incident Commander for approval. Creation of a planning cycle and development of an IAP for a particular operational period help focus available resources on the highest priorities/incident objectives. The planning cycle, if properly practiced, brings together everyone's input and identifies critical shortfalls that need to be addressed to carry out the Incident Commander's objectives for that period.

Unified Command (UC)
(From U.S. Department of Labor, Occupational Safety and Health Administration, http://www.osha.gov/SLTC/etools/ics/what_is_uc.html.]

Although a single Incident Commander normally handles the command function, an ICS organization may be expanded into a Unified Command (UC). The UC is a structure that brings together the "Incident Commanders" of all major organizations involved in the incident in order to coordinate an effective response while at the same time carrying out their own jurisdictional responsibilities. The UC links the organizations responding to the incident and provides a forum for these entities to make consensus decisions. Under the UC, the various jurisdictions and/or agencies and non-government responders may blend together throughout the operation to create an integrated response team.

The UC is responsible for overall management of the incident. The UC directs incident activities, including development and implementation of overall objectives and strategies, and approves

ordering and releasing of resources. Members of the UC work together to develop a common set of incident objectives and strategies, share information, maximize the use of available resources, and enhance the efficiency of the individual response organizations.

The UC may be used whenever multiple jurisdictions are involved in a response effort. These jurisdictions could be represented by:

- Geographic boundaries (such as two states, Indian Tribal Land);
- Governmental levels (such as local, state, federal);
- Functional responsibilities (such as fire fighting, oil spill, Emergency Medical Services (EMS));
- Statutory responsibilities [such as federal land or resource managers, responsible party under the Oil Pollution Act of 1990 (OPA) or the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)]; or
- Some combination of the above.

Actual UC makeup for a specific incident will be determined on a case-by-case basis taking into account: (1) the specifics of the incident; (2) determinations outlined in existing response plans; or (3) decisions reached during the initial meeting of the UC. The makeup of the UC may change as an incident progresses, in order to account for changes in the situation. The UC is a team effort, but to be effective, the number of personnel should be kept as small as possible.

Frequently, the first responders to arrive at the scene of an incident are emergency response personnel from local fire and police departments. The majority of local responders are familiar with National Incident Management System (NIMS) ICS and are likely to establish one immediately. As local, state, federal, and private party responders arrive on-scene for multi-jurisdictional incidents, responders would integrate into the ICS organization and establish a UC to direct the expanded organization. Although the role of local and state responders can vary depending on state laws and practices, local responders will usually be part of the ICS/UC.

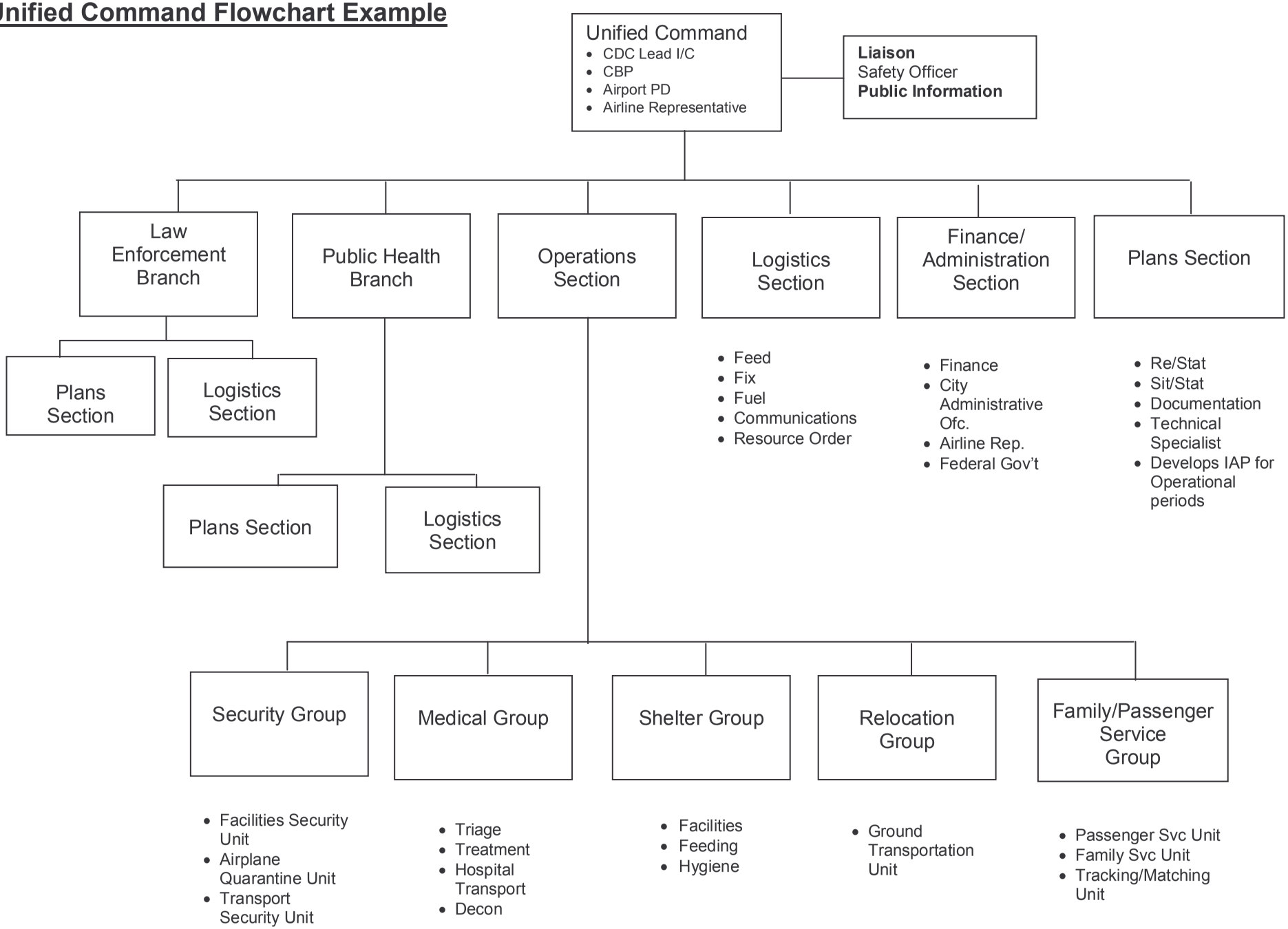
Members in the UC have decision-making authority for the response. To be considered for inclusion as a UC representative, the representative's organization must:

- Have jurisdictional authority or functional responsibility under a law or ordinance for the incident;
- Have an area of responsibility that is affected by the incident or response operations;
- Be specifically charged with commanding, coordinating, or managing a major aspect of the response; and
- Have the resources to support participation in the response organization.

The addition of a UC to the ICS enables responders to carry out their own responsibilities while working cooperatively within one response management system. Under the National Contingency Plan (NCP), the UC may consist of a pre-designated On-Scene Coordinator (OSC), the state OSC, the Incident Commander for the Responsible Party (RP), and the local emergency response Incident Commander.

(The following page shows an example of an international airport UC structure.)

Unified Command Flowchart Example



APPENDIX I

Abbreviations

APHIS ..... Animal and Plant Health Inspection Service
APIS ..... Advance Passenger Information System
CBP ..... U.S. Customs and Border Protection
CDC ..... Centers for Disease Control and Prevention
CFR ..... U.S. Code of Federal Regulations
DGMQ ..... CDC Division of Global Migration and Quarantine
DHS ..... Department of Homeland Security
DOT ..... U.S. Department of Transportation
eAPIS ..... Electronic Advance Passenger Information System
EMS ..... Emergency Medical Services
FAA ..... Federal Aviation Administration
FBI ..... Federal Bureau of Investigation
FEMA ..... Federal Emergency Management Agency
FWS ..... U.S. Fish and Wildlife Service
GOARN ..... Global Outbreak and Response Network
GPHIN ..... Global Public Health Intelligence Network
HAN ..... Health Alert Network/Health Alert Notice
HHS ..... Department of Health and Human Services
IC ..... Incident Command
ICS ..... Incident Command System
JIC ..... Joint Information Center
MOA ..... Memorandum of Agreement
MOU ..... Memorandum of Understanding
NIMS ..... National Incident Management System
NRP ..... National Response Plan
OSHA ..... Occupational Safety and Health Administration
PPE ..... Personal Protective Equipment
SARS ..... Severe Acute Respiratory Syndrome
TB ..... Tuberculosis
TSA ..... Transportation Security Administration
UC ..... Unified Command
USDA ..... U.S. Department of Agriculture
UTL ..... Universal Task List
WHO ..... World Health Organization

APPENDIX J

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    - Division of Global Migration and Quarantine
      - Atlanta Quarantine Station
      - Boston Quarantine Station
      - Chicago Quarantine Station
      - Honolulu Quarantine Station
      - Houston Quarantine Station
      - Los Angeles Quarantine Station
      - New York Quarantine Station
      - San Francisco Quarantine Station
      - Seattle Quarantine Station
      - Washington Quarantine Station
    - Division of Healthcare Quality Promotion
  - Food and Drug Administration
- Department of Homeland Security
  - Customs and Border Protection
  - Immigration and Customs Enforcement
  - Office of Policy Development
  - Transportation Security Administration
- Department of Justice
  - Federal Bureau of Investigation
- Department of Labor
  - Occupational Safety and Health Administration
- Department of Transportation
  - Federal Aviation Administration
  - Office of the Secretary of Transportation
- Executive Office of the President
  - Office of Management and Budget
  - White House Homeland Security Council

State, Local, and Territorial Governments

- California
  - Los Angeles Fire Department
  - California Department of Health
- Virginia
  - Fairfax County Attorney's Office
- Washington
  - Washington Department of Health
- Guam Customs and Quarantine Agency

International

- Commission to Investigate the Introduction and Spread of SARS in Ontario and Toronto, Canada
- The Canadian Red Cross Society

United Nations

- International Civil Aviation Organization (ICAO)

Professional/Trade Organizations

- Airports Council International-North America (ACI-NA)
- Air Transport Association (ATA)
- Council of State and Territorial Epidemiologists (CSTE)
- International Air Transport Association (IATA)
- National Air Carrier Association (NACA)

Air Industry

- Airlines
  - Delta Airlines
  - Lufthansa
  - Northwest Airlines
  - United Airlines
- Airports
  - Atlanta Hartsfield Airport
  - Singapore Changi Airport (Taiwan)
  - Lester B. Pearson International Airport (Toronto)
  - Honolulu International Airport
  - John F. Kennedy International Airport
  - Seattle-Tacoma International Airport

- Airport Operators
  - Greater Toronto Airports Authority
  - Los Angeles World Airports
  - The Port Authority of New York and New Jersey
  - Miami-Dade Aviation Department (Florida)