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Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

County of San Diego
Health and Human Services Agency

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County of San Diego, Health and Human Services Agency
Pandemic Influenza
and Other Highly Infectious Respiratory Transmitted Disease
Response Plan
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APPROVAL PAGE

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COUNTY OF SAN DIEGO
HEALTH AND HUMAN SERVICES AGENCY

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Table of Contents

COUNTY OF SAN DIEGO
HEALTH AND HUMAN SERVICES AGENCY

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

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I. Executive Summary

An influenza pandemic has a very significant potential to cause rapid increases in death and illness among all age groups and even among the healthy population. Planning and preparedness before the next pandemic strikes is critical for an effective response. This *Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan* describes a coordinated local strategy to prepare for and respond to an influenza pandemic that supplement the State and Federal Plans.

Influenza causes seasonal epidemics of disease resulting in an average of 36,000 deaths each year. A pandemic – or significant global epidemic – occurs when there is a mutation in the influenza virus so that most or all of the world's human population has no previous exposure and is thus vulnerable to the virus. Three pandemics occurred during the 20th century, the most severe of which, in 1918, caused over 500,000 U.S. deaths and more than 20 million deaths worldwide. Recent outbreaks of human disease caused by avian (bird) influenza strains in Asia and Europe highlight the potential of new strains to be introduced into the human population. Recent studies suggest that avian strains are mutating genetically and may be more capable of causing severe disease in humans. These strains have become endemic in some wild birds. If these strains re-assort with human influenza viruses they can effectively be spread between humans and a pandemic can occur.

Characteristics of an influenza pandemic that must be considered in preparedness and response planning include: 1) simultaneous impacts in communities across the U.S., limiting the ability of any municipality or county to provide support and assistance to other areas; 2) an overwhelming burden of ill persons requiring hospitalization or outpatient medical care; 3) shortages and delays in the availability of vaccines and antiviral drugs; 4) disruption of national and community infrastructures including transportation, commerce, utilities and public safety; and 5) global spread of infection with outbreaks throughout the world. Certain assumptions must be made in regard to this plan:

Assumptions:

1. There may be a prior warning of a coming pandemic based on reliable reports from the Center for Disease Control and Prevention (CDC) and the World Health Organization (WHO) that includes severe morbidity and mortality and efficient person to person transmission
2. No vaccine or specific prophylactic medication may be available initially
3. It may take six months to produce an adequate supply of vaccine for the entire U.S. population

4. The Centers for Disease Control and Prevention will purchase vaccine and distribute it to states.
5. The pandemic waves will last about one month and peak at two weeks
6. The community must be prepared for multiple waves and reintroduction
7. Personal residence/home is the first and preferred choice for quarantine of contacts
8. Minors in quarantine must stay with an adult caretaker
9. This plan lists all roles that may be required for quarantine but all roles may not be activated based on severity and extent of the public health emergency
10. Typical incubation of influenza is two days (range one to four days)
11. The infectious period (viral shedding) peaks on second day of symptoms
12. Fifty (50) percent of persons with influenza virus do not develop symptoms but still shed virus
13. The amount of virus shed correlates with height of an infectious person's temperature.

Since vaccine and an adequate supply of antiviral drugs may not be available for many months, isolation and quarantine, use of personal protective equipment (e.g. masks) and respiratory hygiene measures will be the only available strategies to deploy. The federal government is making plans to effectively respond to pandemic influenza. This has been done through programs specific for influenza and those focused more generally on increasing preparedness for bioterrorism and other emerging infectious disease health threats.

Vaccination is the primary strategy to reduce the impact of a pandemic, however, the time required to develop a vaccine for a new strain and the limited overall U.S. influenza vaccine production capacity represents barriers to optimal prevention. The Center for Disease Control and Prevention (CDC) has developed uniform recommendations for vaccine and antiviral use as of November 2004. Enhancing existing U.S. and global influenza surveillance networks can lead to earlier detection of a pandemic virus or one with pandemic potential to limit the spread of the disease. Plans are in place to increase U.S. influenza vaccine manufacturing capacity through a partnership with industry to assure that vaccine can be produced at any time throughout the year and diversifying existing vaccine production technology to rapidly expand to meet vaccine needs in a pandemic. Enhanced planning by local public and private health care sectors to assure the ability to distribute vaccine, targeting supply to priority groups, and monitoring vaccine effectiveness and adverse events from vaccination are also critical to meet pandemic influenza response goals.

Early in a pandemic, after the WHO and CDC have declared a specific affected area and criteria for a suspect case and before vaccine is available or during a period of limited supply, use of other interventions may have a significant effect. For example, antiviral drugs are effective as therapy against susceptible influenza virus strains when used early in infection and can be used as a preventive measure to prevent infection (prophylaxis). In 2003, the antiviral drug oseltamivir was

added to the Strategic National Stockpile (SNS). CDC/CDHS Recommendations for Treatment with Antivirals (November 2004)

- Any person experiencing a potentially life-threatening influenza-related illness.
- Any person at high risk for serious complications of influenza and who is within the first two days of illness onset. Pregnant women should consult their primary provider regarding the use of influenza antiviral medications.

CDC/CDHS Recommendations for Chemoprophylaxis (November 2004)

All persons who live or work in institutions caring for people at high risk of serious complications of influenza infection, as well as vaccinated and unvaccinated residents of these institutions, should be given antiviral medications in the event of an institutional outbreak. Antiviral medications can be considered in other situations when the available supply of such medications is locally adequate. For further information on detection and control of influenza outbreaks in acute care facilities, go to http://www.cdc.gov/ncidod/hip/INFECT/flu_acute.htm.

When vaccine becomes available, local health departments (LHDs) should use existing security plans for vaccine storage, and develop distribution plans for administration to priority groups through clinics or local providers and healthcare centers.

Implementing infection control strategies to decrease the global and community spread of infection, while not changing the overall magnitude of a pandemic, may reduce the number of people infected early in the course of the outbreak, before vaccines or antiviral drugs are available for prevention. Screening persons arriving from affected areas and studies have shown limited value. Closing schools, restricting public gatherings, isolation and quarantine of exposed persons may be important strategies for reducing transmission. The application of these interventions will be guided by the evolving epidemiologic pattern of the pandemic.

Planning and coordination by state and local health departments with the health care system is critical to assure effective implementation of response activities and delivery of quality medical care in the context of increased demand for services. Coordination in planning and consistency in implementation with other emergency response plans, such as those for bioterrorist threats and Severe Acute Respiratory Syndrome (SARS) can improve efficiency and effectiveness. In addition, other federal public health emergency programs such as the Health Resources and Services Administration (HRSA) and the CDC Public Health Preparedness and Response Cooperative Agreements are providing states and local public health departments with resources to strengthen their ability to respond not only to bioterrorism attacks but naturally occurring infectious diseases and natural disasters. For example, initiatives and funding being provided by HRSA will help states improve coordination of health care services, emergency response capacity

and facilitate preparedness for influenza, smallpox, SARS, as well as other public health emergencies. In FY 2004, the U.S. Department of Health & Human Services (HHS) introduced a cross-cutting critical benchmark for state pandemic influenza preparedness planning as part of this Department's awards to states to improve hospitals' and public health's response to bioterrorism and other diseases. The goal of this planning activity is to assure implementation of an effective response including the delivery of quality medical care in the context of the anticipated increased demand for services in a pandemic (www.hhs.gov/asphep/FY04benchmarks.html). Completing pandemic preparedness and response plans and testing them in tabletop and field exercises are key next steps. All totaled since September 11, 2001, HHS has invested more than $3.7 billion in strengthening the Nation's public health infrastructure.

Pandemic influenza response activities are outlined by pandemic phase, a classification system developed by the World Health Organization (WHO) in 1999.

World Health Organization (WHO) Stages of Alert

Phases of a Pandemic	
Pandemic Phase	**Definition**
Phase 0	
Level – 0	No recognized human infections caused by a novel influenza strain
Level – 1	Novel (new) Virus Alert • Novel virus infection detected in a human • Little or no immunity in the general population • Potential, but not inevitable precursor to a pandemic
Level – 2	Two or more human cases but no documented person to person transmission
Level - 3	Pandemic Alert • Novel virus demonstrates sustained person-to-person transmission and causes multiple cases in one country lasting for more than two weeks. • Accompanied by intensified local, state, U.S. and global surveillance and other response activities such as activation of local response plans
Phase 1	
	Pandemic Imminent • Novel virus causing unusually high rates of morbidity and mortality in one country and has spread to other countries

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

	• Disease containment strategies implemented
Phases of a Pandemic	
Pandemic Phase	**Definition**
Phase – 2	
	Pandemic • Further spread of novel virus with involvement of multiple continents and global disease spread • Disease containment strategies implemented (immunization, antiviral prophylaxis, activation of emergency response plans
Phase – 3	• Signals end of first pandemic wave
Phase – 4	Second Wave After the number of cases fall and the pandemic appears to be ending, typically a second wave of cases occur within several months
Phase – 5	Pandemic Over Cessation of successive pandemic "waves," accompanied by the return (in the U.S.) of the more typical wintertime "epidemic" cycle.

The purpose of a local Pandemic Influenza Response Plan is:

- To define and recommend preparedness activities that should be undertaken before a pandemic.
- To describe federal and state coordination of a pandemic response and their collaboration with the local level including definition of roles, responsibilities, and actions.
- To describe interventions that should be implemented as components of an effective influenza pandemic response.

The goals of a Pandemic Response are to:

- Limit morbidity and mortality of influenza and its complications during a pandemic.
- Decrease social disruption and economic loss.

The key Pandemic Preparedness and Response Principles are:

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

- Detect novel influenza strains through clinical and virologic surveillance of human and animal influenza disease.

- Implement a vaccination program that rapidly administers vaccine to priority groups. In a pandemic,

    1) Initially vaccine will likely not be ready for distribution. Because of this, antiviral drug therapy and interventions such as respiratory precautions and/or isolation and quarantine to decrease exposure and/or transmission of infection will be important approaches to decrease the disease burden and potentially the spread of the pandemic until vaccine becomes available.

    2) Vaccine will require six to eight months to produce. Vaccine will need to first be targeted to priority groups that are defined on the basis of several factors as defined by the federal government such as the risk of occupational infections/ transmission (e.g., health care workers); the responsibilities of certain occupations in providing essential public health and safety services; impact of the circulating pandemic virus on various age groups; and heightened risks for persons with specific conditions.

    3) Later in the pandemic, vaccine supply will approximate demand, and vaccination of the full at-risk population can occur.

- Determine the susceptibility of the pandemic strain to existing influenza antiviral drugs and target use of available supplies; avoid inappropriate use to limit the development of antiviral resistance and ensure that this limited resource is used effectively.

    1) The objective of antiviral prophylaxis is to prevent influenza illness. Prophylaxis would need to continue throughout the period of exposure in a community. The objective of treatment is to decrease the consequences of infection. For optimal impact, treatment needs to be started as soon as possible and within 48 hours of the onset of illness.

    2) Two classes of drugs are used to prevent and treat influenza infections.

        - *Adamantines* (amantadine and rimantadine) are effective as prophylaxis and have been shown to decrease the duration of illness when used for treatment of susceptible viruses. However, resistance often develops during therapy.

- *Neuraminidase inhibitors* (NI; oseltamivir and zanamivir) also are effective for prophylaxis and treatment of susceptible strains. New data suggests that NI treatment can decrease complications such as pneumonia and bronchitis, and decrease hospitalizations. The development of antiviral resistance, to date, has been uncommon.

3) The available supply of influenza antiviral medications is limited and production cannot be rapidly expanded: there are few manufacturers and these drugs have a long production process. In 2003, oseltamivir was added to the SNS.

4) Developing guidelines and educating physicians, nurses, and other health care workers before and during the pandemic will be important to promote effective use of these agents in the private sector.

- Implement measures to decrease the spread of disease internationally, within the U.S., and locally, guided by the epidemiology of the pandemic.

1) Infection control in hospitals and long-term care facilities prevent the spread of infection among high-risk populations and health care workers.

2) If a novel influenza strain spread between people causes outbreaks in other countries or the U.S., measures such as screening travelers from affected areas, limiting public gatherings, closing schools, and/or isolation and quarantine of exposed persons could slow the spread of disease. Decisions regarding use of these measures will need to be based on their effectiveness and the epidemiology of the pandemic.

3) Planning by local health departments and the health care system is important in addressing potential impacts to the health care system. Strategies would be to increase hospital bed availability, including deferring elective procedures, more stringent screening for admission, and earlier discharge with follow-up by home health care personnel. Local coordination can help direct patients to hospitals with available beds and distribute resources to sites where they are needed.

4) Not all ill persons will require hospital care but many may need other support services. These include home health care, delivery of prescription drugs, and meals. Local planning is needed to address the delivery of these and to address essential community functions such as police, fire, and utility service.

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

- Communicate effectively with the public, health care providers, community leaders, and the media.

    1) Informing health care providers and the public about influenza disease and the course of the pandemic, the ability to treat mild illness at home, voluntary quarantine, the availability of vaccine, and priority groups for earlier vaccination will be important to ensure appropriate use of medical resources and avoid possible panic or overwhelming of vaccine delivery sites.

    2) Effective communication with community leaders and the media also is important to maintain public awareness, avoid social disruption, and provide information on evolving pandemic response activities.

The purpose of this response plan is to provide a procedure guide for the County of San Diego to follow before, during and after a pandemic situation. This pandemic influenza response plan follows CDC and CDHS guidelines for developing a pandemic influenza response plan. It is important to note that while the plan focuses on influenza, it is also intended to serve as the template for responding to large-scale outbreaks of other highly infectious respiratory transmitted diseases such as Severe Acute Respiratory Syndrome (SARS).

This Response Plan should be read and understood prior to a pandemic situation. It is a dynamic document that will be updated to reflect new developments in the understanding of the disease agent, its spread, treatment and prevention. This plan will also incorporate changes in response roles and improvements in response capability developed through ongoing planning efforts.

The County of San Diego Office of Emergency Services (OES) is responsible for the County of San Diego "all-hazards" Operational Area Emergency (OAE) Plan that encompasses all County agencies. Within the OAE plan, Annex E includes the responsibilities of the Health & Human Services Agency (HHSA) Public Health Services (PHS) during a disaster affecting the public's health. The Response Plan presented here may be integrated as an appendix to Annex E, along with plans for mass prophylaxis activities, local administration of the Strategic National Stockpile and smallpox preparedness. As such, the elements of this plan are based on the existing emergency response structure, authorities and responsibilities identified in the *Unified San Diego County Emergency Services, Operational Area Emergency Plan* and Annex E.

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

A. List of Abbreviations and Terms

STATE	**CDHS**	California Department of Health Services
	DCDC	Division of Communicable Disease Control
	IB	Immunization Branch
	VFC	Vaccine for Children Program
	VRDL	Viral and Rickettsial Disease Laboratory
	DISB	Disease Investigation and Surveillance Branch
	EPO	Emergency Preparedness Office
	OPA	Office of Public Affairs
	OES	Office of Emergency Service, Office of the Governor
	CAHAN	California Health Alert Network
	CPA	California Pharmacist Association
	CMA	California Medical Association
FEDERAL	**CDC**	Centers for Disease Control and Prevention
	EMSA	Emergency Medical Services Authority, Health and Human Services Agency
	JEOC	Joint Emergency Operations Center, DHS and EMSA
	RDMHC	Regional Disaster Medical/Health Coordinator, DHS and EMSA
	SEMS	Standardized Emergency Management System
	EPA	US Environmental Protection Agency
	FBI	Federal Bureau of Investigation
	FDA	Food and Drug Administration
	SNS	Strategic National Stockpile – 12 hr push packages of pharmaceuticals, equipment and supplies
	NOVEL VIRUS	New strain or type of virus without vaccine or treatment available
	HHS	U.S. Department of Health Services
SAN DIEGO COUNTY	**LHD**	Local Health Department
	EMAN	Emergency Medical Alert Network
	CASS	County Alert Services System
	CCR	California Code of Regulations
	CHSC	California Health and Safety Code
	COC	County Operations Center
	DEH	Department of Environmental Health
	DOC	Departmental Operations Center
	DSW	Disaster Service Workers
	EMS	Emergency Medical Services
	EOC	Emergency Operations Center
	HHSA	County of San Diego Health and Human Services Agency
	MEO	Medical Examiner's Office
	PHS	Public Health Services
	PIO	Public Information Officer
	QA Net	Hospital and County communications software program – Quality Assurance Network
	EPDMR	Emergency Preparedness and Disaster Medical Response
	RDMHC	Regional Disaster Medical/Health Coordinator

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

II. INTRODUCTION

A. Background/Threat

New strains of influenza viruses can emerge unpredictably and spread rapidly and pervasively throughout susceptible populations. A significant change in the virus's genetic structure might mean that the entire world population would be vulnerable to a new strain or type of influenza without an effective vaccine or treatment. Influenza pandemics, or global epidemics, occurred three times during the 20th century: in 1918 "Spanish Flu," 1957 "Asian Flu," and 1968 "Hong Kong Flu." The 1918 pandemic resulted in more than 500,000 deaths in the United States and over 20 million deaths globally and is noted as the worst natural disaster in modern times.

Experts agree that future pandemics of influenza are likely, if not inevitable. In the United States alone, preliminary estimates indicate that an influenza pandemic would cause between 89,000 and 207,000 deaths and that the economic impact would range from $71 billion to $166 billion, not including disruptions to commerce.

Influenza is a highly contagious viral disease spread through inhalation of the virus in the air. People may be immune to some strains of the virus either because they had that strain in the past or received influenza vaccine of that strain. If the strain has changed significantly, little or no immunity exists. If a novel and highly contagious strain of the influenza emerges, influenza pandemic can occur and affect populations around the world. During the early stages, there will be little or no effective vaccine, and supplies of antiviral drugs may be inadequate (for both treatment and chemoprophylaxis). To induce immunity, individuals may require two doses of the new vaccine, administered 30 days apart. Mass prophylaxis and targeted points of dispensing (POD) must be designed and planned for deployment of prophylaxis if needed.

San Diego County with its west coast location and major ports of entry from Asia (the most likely location for novel virus development) may be among the first U.S. locations for influenza pandemic to be established. Most experts believe that identification of a novel influenza strain would occur one to six months before outbreaks begin to occur in the U.S. In contrast to other types of public health emergencies, this lead-time allows some additional pandemic influenza preparedness efforts to be implemented. However, planning efforts should also consider a scenario where there will be no lead warning time. A local isolation and quarantine plan must be designed, planned and deployed when needed.

Widespread illness throughout the County and State increases the likelihood of significant shortages of healthcare workers and other first responders who provide critical community services. The duration of a pandemic would range from months to a year or more. Surge

capacity for medical staff and supplies must be ready to activate. The Centers for Disease Control (CDC) estimates that the impact on California and San Diego County would include:

CDC Estimates of Percent of Population Affected by the Next Pandemic	Number Affected in California (Pop. 32,268,301)	Number Affected in San Diego County (Pop. 2,813,833)
Up to 35% of pop. will become ill with flu	11,293,906	984,841
Up to 19% of pop. will require out-patient visits	6,054,763	534,628
Up to 0.4% of pop. will require hospitalization	127,442	11,255
Up to 0.1% of pop. will die of flu-related causes	28,409	2,814

Pre-pandemic planning is essential if influenza pandemic-related morbidity, mortality, and social disruption are to be minimized. The sudden and unpredictable emergence of pandemic influenza and its potential to cause severe health, social and economic consequences necessitate developing a local health plan to customize and locally operationalize the State plan and to implement preparedness activities called for by that plan. Local disease containment strategies must be in place and prepared to deploy.

B. Purpose

The purpose of this *Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan* is to lessen the impact of a widespread epidemic of influenza on the residents of the County of San Diego by providing a guide for the County of San Diego Health and Human Services Agency (HHSA) and community health care providers for detection and response to an influenza pandemic event.

The objectives of this plan are to:

- Minimize serious illness and overall deaths
- Minimize disruption to critical social and medical services
- Establish emergency response procedures
- Practice emergency response drills
- Identify partners and resources
- Enhance overall disease surveillance and reporting
- Improve gaps in public health, healthcare, and community partner infrastructure

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

The *Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan* should be read and understood prior to the event by those responsible for implementing the plan. It is a dynamic document needing to be updated when changes occur or when planning efforts improve response capability.

In addition to preparing the County of San Diego to respond to an actual pandemic, increasing awareness among the public health, medical, and emergency response communities will foster greater concern about "routine," annual influenza epidemics, which kill an average of 20,000 Americans every winter. Prompt improvements in infrastructure to address the major elements of pandemic preparedness can have immediate and lasting benefits for routine influenza epidemics and can also mitigate the effect of the next pandemic. For example, increasing routine, annual influenza vaccination coverage levels in high-risk patients will not only reduce their risk of dying or being hospitalized during routine flu seasons, but will also facilitate access for targeting immunizations of such patients such as by the pneumococcal vaccine to reduce secondary bacterial pneumonia.

Assumptions:

1. There may be a prior warning of a coming pandemic based on reliable reports from CDC and WHO characterized by severe morbidity and mortality and efficient person to person transmission
2. No vaccine or specific prophylactic medication may be available initially
3. It may take five months to produce an adequate supply of vaccine for the entire U.S. population
4. The pandemic waves will last about one month and peak at two weeks
5. The community must be prepared for multiple waves and reintroduction
6. Personal residence/home is the first and preferred choice for quarantine of contacts
7. Minors in quarantine must stay with an adult caretaker
8. This plan lists all roles that may be required for quarantine but all roles may not be activated based on severity and extent of the public health emergency
9. Typical incubation of influenza is two days (range one to four days)
10. The infectious period (viral shedding) peaks on second day of symptoms
11. Fifty (50) percent of persons with influenza virus do not develop symptoms but still shed virus
12. The amount of virus shed correlates with height of an infectious person’s temperature.

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

III. AUTHORITIES AND REFERENCES

Responses at the federal, state, and local levels would be determined by the stages of alert of the influenza pandemic as outlined by the World Health Organization and federal, state, and local public health statutes and regulations.

A. World Health Organization (WHO) Stages of Alert

Phases of a Pandemic	
Pandemic Stage	**Definition**
Novel (new) Virus Alert	• novel virus detected in one or more humans • little or no immunity in the general population • potential, but not inevitable precursor to a pandemic
Pandemic Alert	• novel virus demonstrates sustained person-to-person transmission and causes multiple cases in the same geographic area
Pandemic Imminent	• novel virus causing unusually high rates of morbidity and mortality in widespread geographic areas
Pandemic	• further spread with involvement of multiple continents
Second Wave	• after the number of cases falls and the pandemic appears to be ending, typically a second wave of cases occurs within several months
Pandemic Over	• cessation of successive pandemic "waves", accompanied by the return (in the U.S.) of the more typical wintertime "epidemic" cycle

B. The Federal Role

The Federal government has assumed primary responsibility for a number of key elements of the national plan, including:

- Vaccine research and development.
- Coordinating national and international surveillance.
- Assessing and potentially enhancing the coordination of vaccine and antiviral capacity, and coordinating public-sector procurement.
- Assessing the need for and scope of a suitable liability program for vaccine manufacturers and persons administering the vaccine.

- Developing a national "clearinghouse" for vaccine availability information, vaccine distribution, and redistribution.
- Developing a vaccination adverse events surveillance system at the national level.
- Developing a central (national) information database/exchange/clearinghouse on the Internet.
- Deployment of the SNS if requested by the State.

C. The State Role

Novel Virus Alert Stage

California Department of Health Services (CDHS) activities will be limited to monitoring the progress of the disease and surveillance to detect the arrival and spread of the disease in California. WHO and CDC will carry out novel virus detection. The local health departments (LHD) will be notified and updated regularly.

Pandemic Alert Stage

CDHS will monitor reports of disease spread and meet with surveillance partners to activate and augment surveillance systems. The State Viral and Rickettsial Disease Laboratory (VRDL) in Richmond will increase laboratory surveillance.

The CDHS Immunization Branch (IB) will maintain close contact with CDC and the Food and Drug Administration (FDA) to obtain information on plans for vaccine delivery. IB will work with local health departments and representatives of the private/non-profit medical sector to plan delivery and administration of vaccines when or if they are available.

The CDHS Division of Communicable Disease Control (DCDC) will meet with the California Medical Association and the California Pharmacists Association to plan for vaccine administration and for antiviral and antimicrobial supplies. The IB will prepare training materials for vaccine administrators. SNS deployment will be determined.

CDHS DCDC will provide technical information, public information, and press releases to be used by the CDHS Office of Public Affairs (OPA). Public information will include travel alerts, guidelines on limiting the spread of the disease, and information about when and where to obtain medical care. The CDC's Epidemiology Program Office (EPO) and the California DCDC will ensure communication among epidemiology programs, laboratory surveillance, and emergency management agencies (EMAs). CDC EPO and the EMAs will address personnel and equipment shortfalls. The California Health Alert Network (CAHAN)

and Emergency Medical Alert Network (EMAN) will disseminate State and LHD communication.

Pandemic Imminent Stage

Pandemic alert activities will intensify. Surveillance efforts will be increased for both influenza illness and the circulation of the influenza virus. If vaccine is available, the distribution system will be deployed and security measures will be put in place to ensure that vaccine will be given first to groups with highest priority for receiving them. DCDC and OPA will step up information flow to LHDs, medical providers and all other stakeholders.

DCDC and OPA will provide translations of all public information messages into Spanish and the 14 other major languages in California. The State Office of Emergency Services (OES), local OES, Emergency Medical Services (EMS), Public Health Services (PHS), and hospitals will activate the emergency response system.

Local medical examiners and funeral directors will be advised to prepare for increases in the number of fatalities they will have to handle.

Pandemic Stage

Surveillance efforts will be challenged. Emphasis will be shifted from detecting all cases caused by the influenza virus to monitoring demographic characteristics that may indicate a need to revise priority groups for receiving vaccine and antiviral medications if available supplies are limited. Vaccine delivery will be maximized if available, and the system to detect possible adverse reactions to the vaccine will be closely monitored. SNS will be deployed, Points of Dispensing (POD) sites will be set up and the surge capacity plan will be activated.

Second Wave

All agencies and health care providers should make use of the interim period to prepare for a resurgence of disease. This includes addressing shortfalls in supplies, personnel, and pharmaceuticals.

Although there are likely to be medical resources and technical assistance available from state and federal agencies, San Diego County will manage the local response during the pandemic, including temporary redirection of personnel and financial resources from other programs to deal with this public health emergency.

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

D. Local Command and Control Response

The State will communicate with local health agencies through the California Health Alert Network (CAHAN).

In addition to its longstanding all-hazards planning, the County of San Diego has done extensive bioterrorism response planning that addresses the expanded role of the Health & Human Services Agency in a public health emergency.

These plans address how the local response will be integrated into the overall *Unified San Diego County, Emergency Services Organization, Operational Area Emergency Plan, Public Health Operations, Annex E.* The chapters include procedures for command and control, detection and notification of public health threats, and position checklists (job action sheets) that describe the roles of key Public Health Services personnel during a public health emergency. Since many aspects of the public health response would be the same, this Influenza Pandemic Response Plan focuses on response characteristics unique to pandemic influenza.

County of San Diego HHSA Responsibilities for Pandemic Influenza Planning

The County of San Diego Health and Human Services Agency (HHSA) is the lead agency responsible for the management of this plan. The County HHSA Public Health Officer has primary responsibility for the plan. The Chief of Community Epidemiology is responsible for aspects related to epidemiology, disease investigation and scope of isolation and quarantine. The HHSA Lead for Focus Area A (Bioterrorism Planning and Preparedness) is responsible for updating the overall plan as information changes or CDC and CDHS provide new guidance.

Public Health Officer's Role

The County Public Health Officer is authorized under the California Health and Safety Code to take such measures as may be necessary to prevent the spread of a communicable disease. In the event of a known or suspected pandemic influenza case, the Public Health Officer, working with the County Board of Supervisors and other officials, will obtain information pertaining to the incident, assess the health risk to the community, notify appropriate agencies, coordinate disease prevention and control measures with local, regional, state and federal agencies, and guide the response.

Investigation of a Pandemic Influenza Case

The investigation and tracking of a suspected, probable, or confirmed case of pandemic influenza will be a joint endeavor between HHSA's Public Health Services (PHS) Community

Epidemiology Branch and the State of California, Department of Health Services (CDHS), with HHSA as the lead agency. The Chief of Community Epidemiology will coordinate surveillance and epidemiologic investigation activities in accordance with Community Epidemiology practice.

Notification of Officials and Activation of Response Network

Pandemic influenza is usually a naturally occurring event. The first indication of a possible event will most likely be a suspect patient from an area hospital or clinic. Once Community Epidemiology staff suspects a case of avian influenza and it is deemed a threat to public health, the communication tree in **Command and Control-Attachment 1 – Activation Process for a Public Health Emergency** may be activated by the Public Health Officer. HHSA's Community Epidemiology keeps a current list of 24/7 contact information for the groups listed on the communication tree.

Lead Federal Agency

CDC is the lead federal agency and the on-scene commander for the coordination of United States Government personnel and assets.

CDC's protocols, procedures, and materials will be used by CDHS to guide response activities related to pandemic influenza.

Lead State Agency

Responsibility for managing the State's response to a pandemic influenza case in California resides with the Director of the CDHS. CDHS will provide needed assets for sustained operations, as requested through the State EOC.

Local Operational Area and Lead Agency

The Standardized Emergency Management System (SEMS) requires the establishment of Operational Areas for responses to an emergency situation. The San Diego Operational Area encompasses the unincorporated areas of San Diego County and the 18 incorporated cities. For all health related issues, the County of San Diego Health and Human Services Agency is the lead agency within this Operational Area. The County Public Health Officer will lead Operational Area public health decision-making.

Activation of County Emergency Operations Center and County Multi-Casualty Plan (Annex D)

If the magnitude of the crisis warrants, the Public Health Officer or Emergency Medical Services, Emergency Preparedness and Disaster Medical Response Chief may request the activation of the County Emergency Operations Center (EOC) through the County Office of Emergency Services (OES) Duty Officer and other officials. The Emergency Medical Services (EMS) Duty Officer or EOC staff may activate the *Multi-Casualty Plan, Annex D,* of the *Unified San Diego County Emergency Services Organization Operational Area Emergency Plan*. Depending on the scope of the event, potential responders may include local, state and/or federal emergency/disaster, public health, law enforcement and private health agencies.

As part of *Annex D* and the opening of the EOC, all area hospitals will be notified of the activation of the County EOC and provided with necessary emergency management information.

Command and Control for the Operational Area

Once activated, the County EOC will assume all command and control responsibilities for the Operational Area. The Chief Administrative Officer is the incident commander of the EOC. The EOC will interface with other County Departmental Operations Centers (DOCs) in San Diego, as well as city, hospital, and State Emergency Operation Centers. These additional Operations Centers act in concert with the County EOC using the command and control procedures set forth in the Standardized Emergency Management System (SEMS). Key positions in the County EOC are described in the *Unified San Diego County Emergency Services Organization, Operational Area Emergency Plan (County Emergency Plan)*. The Public Health Officer is a key member of the advisory staff to the policy section of the EOC. When not at the EOC the Public Health Officer will have a key management role at the HHSA or EMS DOC.

Local Public Officials

The Chief Administrative Officer, as the incident commander of the EOC, regularly briefs the County Board of Supervisors on emergency events. Once any state of emergency is declared locally by the CAO, the Board of Supervisors has to certify the state of emergency and recertify it on a regular basis, with a certification not to exceed fourteen days.

Activation of Other County Annexes (located on the County's intranet)

In addition to *Annex D, Annex E (Public Health Operations*), and *Annex G (Care and Shelter Operations)* will also be activated as needed. *Annex E* provides guidance to Public Health Nursing and Community Epidemiology for their response. *Annex G* provides operational plans to open emergency care and shelters under the direction of the American Red Cross. The County

has the primary responsibility to provide public health nursing support to shelters. Mass medication and/or vaccine "point of dispensing" (POD) sites may be activated in cooperation with the American Red Cross pre-selected sites and the *County of San Diego Stockpile and Mass Prophylaxis Plan*. *Annex P (Terrorism)* could be activated to guide the EOC response if the pandemic is deemed a bioterrorism event and not a naturally occurring event.

Communications with the Professional Community

A comprehensive public health response to a pandemic includes the timely dissemination of event-related information, disease control, and prevention recommendations to first responders, law enforcement, healthcare professionals and other involved public and private agencies. The County Emergency Plan has an *Annex I (Communications*) and a team of professionals to assist in this endeavor.

Once the County Health Officer establishes that an outbreak or unusual disease event has occurred and a potential threat to public health exists, healthcare providers throughout San Diego will be notified by some or all of the following methods, as needed:

- E-mail using the Emergency Medical Alert Network (EMAN)
- The California Health Alert Network (CAHAN)
- The QA Net
- The 800 mgHz radio system
- The County Alert Service System (CASS)
- BLAST FAX – San Diego County Medical Society Alert System

EMAN will be used to electronically alert participating members about the suspected agent, clinical presentation, treatment protocols, and control recommendations. EMAN participants include directors of hospital emergency rooms and major laboratories, infectious disease physicians, and other stakeholders.

Communications with the General Public

The dissemination of public information and media relations will be key components in the early response to a pandemic influenza crisis. The goal will be to provide the public with timely, comprehensive and accurate information on control measures, signs and symptoms, quarantine, etc. This will help to stem public anxiety and assist in crowd and disease control measures. Recent population studies suggest that responses during actual disasters rarely result in panic but understandable behaviors occur such as seeking information, questioning authorities, and undertaking precautionary measures even if unwarranted.

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

To minimize misinformation and evoke appropriate public response to a naturally occurring public health emergency, public information releases will be coordinated with all involved agencies and disciplines. County Mental Health Services will be in contact with the media coordinator to discuss appropriate involvement in creation of press releases and public service announcements. County Mental Health Crisis Response leaders will take the lead in contacting the media coordinator during any public health emergency or disaster to discuss Mental Health's role in public outreach.

Public Health Services will release information after consultation with the appropriate local governmental agencies and stakeholders in accordance with the *Unified San Diego County, Operational Area Emergency Plan*. All information will be cleared through EOC and then directed to the County Chief Public Information Officer for dissemination.

Additionally, the San Diego County Public Information Officer (PIO) Network (a network that links public information officers from the County, hospitals, OES, and others throughout the county within a short time in the event of a public health disaster) will be activated to provide standardized risk communication strategies and key talking points for hospital PIOs and other PIOs.

In order to ensure communication and community participation during a pandemic influenza related event, the San Diego County Medical Society, the QAnet, the EMAN, the media, and other health and medical alert systems will be utilized to distribute vital information for the public.

Generally, public information should sketch out the "big picture" and emphasize that personal actions can affect the safety of others. Give the public actions they can take such as staying home from work or keeping children home from school when they are ill, frequent hand washing, and using respiratory hygiene to protect themselves and others from contracting disease. Identify resources that provide goods and services to help people comply with health orders such as setting up vaccination clinics in locations accessible to people without cars. Prepare the community for conditions of uncertainty and a potentially prolonged crisis. When tragic choices such as distribution of scarce life-saving medical resources arise, such public health decisions require full disclosure, with clearly stated facts and rationales for decisions, giving due diligence to distributing benefits and burdens justly.

Requests for Supplies, Equipment and Personnel

The EOC will be responsible for managing requests for mutual aid supplies, equipment, and personnel. Requests for Mutual Aid are made through the County EOC to the State's Regional Disaster Medical Health Coordinator. The EOC will coordinate personnel support through the city EOCs, County DOCs, and the State.

Public Health Services and other HHSA personnel will be activated as Disaster Service Workers, as needed. Job assignments and locations will be coordinated by the HHSA DOC and reported to the County EOC.

If the response to a disease occurrence requires resources beyond those immediately available to the Public Health Officer, assistance to supplement available resources will be sought from other local, regional, state and federal agencies. Additional personnel within certain specialties (e.g., epidemiologists, public health nurses) may be requested by the EOC, if necessary. Pursuant to the Standardized Emergency Management System (SEMS), the Governor's Office of Emergency Services (OES) will support Operational Area efforts by helping to obtain the resources necessary to manage an incident that exceeds local capabilities. OES Region VI RDMHC will generally act as the point of contact for obtaining mutual aid resources.

If it is determined that there are not enough patient beds or transportation resources within the State Mutual Aid Region, then the State OES will request activation of the National Disaster Medical System (NDMS). This mobilizes Disaster Medical Assistance Teams (DMAT) that can be on scene within 12 – 72 hours. State OES may also request the National Medical Response Team (NMRT-WMD) and the Strategic National Stockpile (SNS) in the event further personnel, equipment and pharmaceuticals are required.

Requests by County EOC for HHSA DOC Assistance

In coordination with County EOC, staff at the HHSA DOC and EMS DOC can assist with support needed for a variety of functions in an emergency situation. The HHSA DOCs will handle HHSA resource availability and the EMS DOC the emergency medical systems resource availability. EOC emergency medical and public health representatives shall then relay information regarding availability of resources to EOC Management as appropriate.

To allow for a timely and adequate response in an emergency, the County EOC and HHSA and EMS DOCs interfaces will be exercised on a regular basis, and specialized training will regularly be provided. The Exercise Coordinator within the HHSA Emergency Medical Services and Emergency Preparedness will coordinate "After Action Reports" related to Public Health and EMS exercises. The County of San Diego Office of Emergency Services will submit an extensive "After Action Report" for drills, as well as for actual activations.

Requests for Volunteers

The County EOC will also work with regional, state and federal agencies for volunteer mutual aid requests as needed. Anticipated assets, including an anticipated influx of medical volunteers, will be managed through the County EOC. Public advisories will alert volunteers where to

respond for processing. The County Alert Services System (CASS) will also alert pre-credentialed volunteer Clinical Disaster Service Workers or Medical Reserve Corps. The EMS Duty Officer at the EMS DOC, in conjunction with the San Diego County Medical Society, will manage this alerting process.

The County of San Diego EMS and Emergency Preparedness (EMS/EP) staff will continue to develop and maintain a capability for identifying medical resources, ambulance transportation providers and communication services within the Operational Area. EMS/EP will coordinate the procurement and allocation of these resources, as required to support disaster medical operations. A list of volunteer personnel that can be mobilized from these resources is included in **Command and Control Attachment 2 – Volunteer Resources Available in an Emergency**.

Requests for Hospital Resources and Personnel

The County EMS DOC will work with local hospital DOCs to determine the resource and personnel needs for the entire hospital system in the County of San Diego, as well as the best manner of acquiring and delivering them. The San Diego County Quality Assurance Network (QA Net) will aid in the rapid location and management of supplies, equipment, and personnel and will assist with hospital communications.

Requests for Transportation

Transportation assets will be acquired through the County EOC and will be routed appropriately. Ambulance requests will go through the EOC and EMS DOC and will be routed through the County Ambulance Coordinator. The Ambulance Coordinator will be in direct contact with EMS staff in the Operations Section of the EOC, as well as with EMS staff at the EMS DOC.

Requests for Additional, Specialized Personnel

Specialized, additional resources will be obtained by contacting the California Governor's Office of Emergency Services (OES) through the County EOC. The following people may assist in the treatment, holding, and forward movement of patients out of the Operational Area and the disposition of the deceased:

- National Disaster Medical System (NDMS) personnel,
- Disaster Medical Assistance Teams (DMATs), and
- Disaster Mortuary Operations Response Teams (DMORTs).

Department of Defense assets will be activated through the County EOC or by another federal agency such as the Federal Bureau of Investigation (FBI), if needed.

Investigation and Tracking of Additional Pandemic Influenza Cases

Community Epidemiology is responsible for investigating and tracking, suspected, probable and/or confirmed cases and their contacts. HHSA DOC can mobilize additional HHSA staff who can assist with investigation and reporting tasks.

Isolation and Quarantine

The Public Health Officer has the responsibility to activate emergency isolation and quarantine procedures outlined in the **Isolation and Quarantine section** of this plan and if needed to designate one or more sites as an isolation and/or quarantine site. The Public Health Officer will work with city DOCs where individual hospitals are located, as well as with the appropriate County DOCs in developing and carrying out directives.

Point of Dispensing Sites

The response will be directed by the Public Health Officer and co-managed by the Chief, Public Health Nursing, Immunization Program Coordinator and the SNS Coordinator.

A team will be notified and activated in whole or in part through the HHSA and EMS DOCs or the EOC at the direction of the Public Health Officer. The Teams' contact information is stored in the County Alert Services System (CASS). The protocol for activation is diagrammed in **Command and Control Attachment 3 – Activation of Clinical Disaster Service Workers.**

The *Stockpile and Mass Prophylaxis Plan* designates procedures for dispensing points and immunization clinics and is located in Section VI A of this Plan.

Security/Law Enforcement

Managing security issues for an event is the responsibility of the County EOC. The EOC, through the County Law Enforcement Coordinator, will request support from appropriate local law enforcement agencies. Included in the Coordinator's scope is the ability to request Mobile Field Forces from the City of San Diego Police Department and County Sheriff's Department. These forces can be mobilized rapidly and sent to areas of need. Additional law enforcement mutual aid assets will be requested as needed from the region and the state via the Law Enforcement Coordinator at the County EOC.

The most probable needs for security personnel will be to:

- Guard medication/vaccine storage facilities and medication/vaccine as it is transported,

- Provide a secure environment at clinic sites and field dispensing sites,
- Accompany public health field workers that make home visits to provide vaccine or medication
- Provide security for patients in isolation at hospitals and in quarantine facilities, and
- Provide security, if needed, for suspect cases and contacts.

If an area needs to be evacuated for any reason, the Law Enforcement Coordinator at the County EOC will assist the local law enforcement jurisdiction in coordinating this activity. Any needed hospital evacuations will be executed under the auspices of the individual hospital's DOC and may be coordinated with the County EOC, EMS DOC, County Public Health Officer, and the County Law Enforcement Coordinator as needed.

Essential Community Functions

Essential community functions will be monitored and controlled under the guidance of the County EOC. County EOC representatives will regularly report on water and electricity availability and on wastewater disposal. Requests for additional security for any essential function or operation will be addressed by the County EOC.

Legal Guidance

County Counsel will be available when the County EOC is activated. Legal issues regarding any aspect of the event will be referred to County Counsel. The Powers of the Health Officer are outlined in the Health and Safety Code Section 101475, 101030, 101405, and Government Code Section 8558 located in Section E. **Public Health Legal Statutes and Regulations** page 31-32.

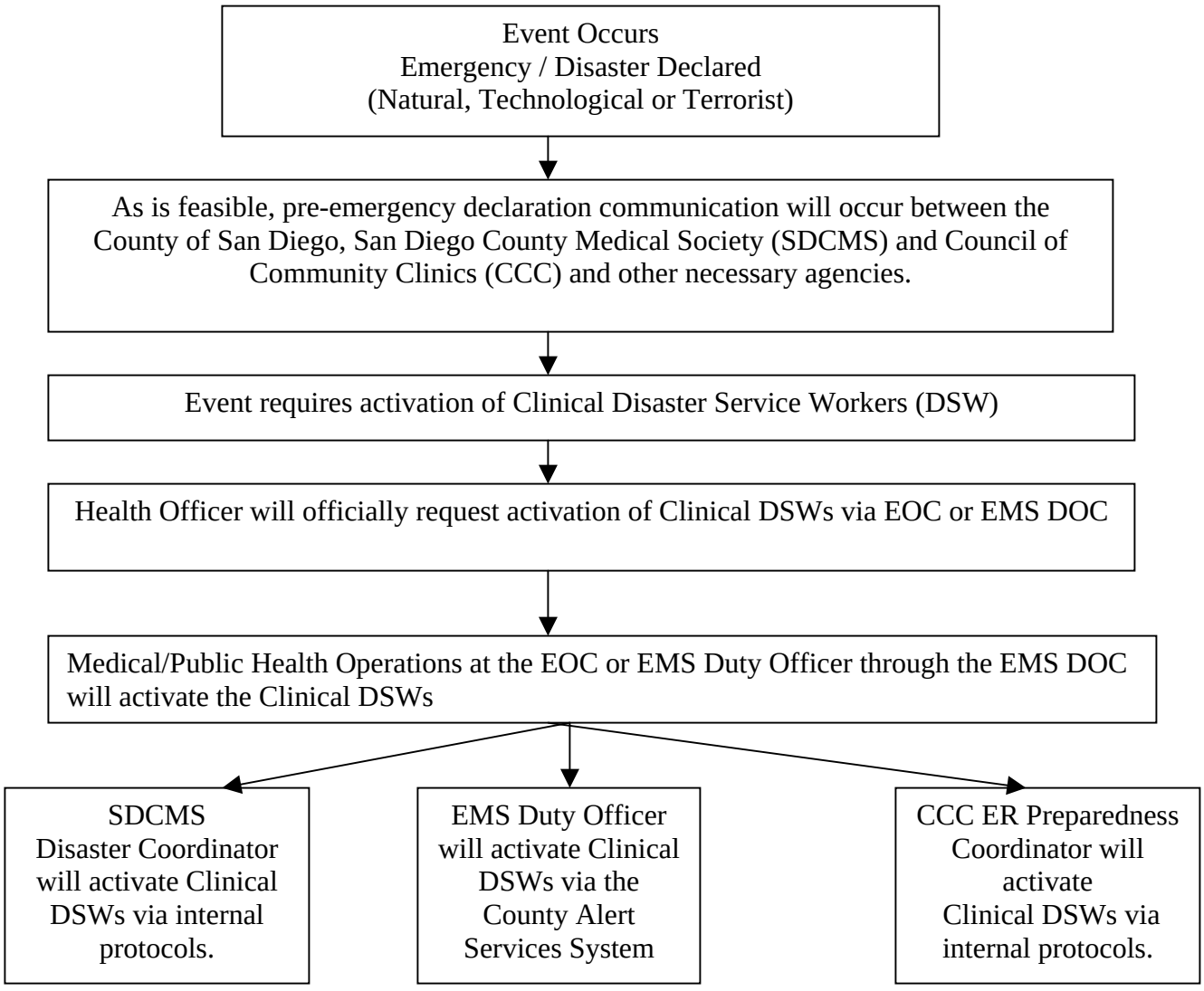
Deactivation of the County EOC

Command and Control will remain at the County EOC level until the EOC is officially deactivated. The County Chief Administrative Officer will direct deactivation related to this Plan with consultation from the County Public Health Officer, Director of the County of San Diego Office of Emergency Services, other officials and other key EOC staff and advisors.

PANDEMIC INFLUENZA AND OTHER HIGHLY INFECTIOUS RESPIRATORY TRANSMITTED DISEASE RESPONSE PLAN

Command and Control - Attachment 3 – Activation of Clinical Disaster Service Workers

Activation of Clinical Disaster Service Workers
Flow Chart



Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

IV. LOCAL PUBLIC HEALTH RESPONSE PROCEDURES

In the early stages of a pandemic, there may be no vaccine. The *Federal Planning Guide* indicates that a minimum of six to eight months would elapse before the tens of millions of doses needed could be produced for distribution. When vaccine first becomes available the demand will likely exceed the supply.

Pharmaceutical delivery will become an important issue during a pandemic. While antiviral agents will play a role in both prophylaxis and treatment of influenza, the existing supplies would certainly fall short of the need. As the pandemic progresses, there may not be sufficient supplies of antibiotics for treating persons with complications of influenza such as pneumonia.

In addition to supply problems, other difficulties such as resistance to the drugs are associated with use of antiviral agents. CDC and CDHS established interim priorities for target groups and the use of limited supplies for prophylaxis versus therapy November 2004.

CDC encourages the use of amantadine or rimantadine for chemoprophylaxis and use of oseltamivir or zanamivir for treatment, as supplies allow, in part to minimize the development of adamantane resistance among circulating influenza viruses. People who are at high risk of serious complications from influenza may benefit most from antiviral medications.

Chapter VI of this Plan, the *Stockpile and Mass Prophylaxis Plan*, describes the San Diego County/Operational Area plan for mass prophylaxis. This plan contains additional position checklists for workers at immunization/medication dispensing sites (POD) and at a warehouse established to coordinate the distribution of vaccines or antibiotics to these sites, if needed.

Isolation of symptomatic victims and quarantine of exposed individuals may be essential to ending influenza pandemic. These interventions are addressed in Chapter VII of this Plan.

It is essential to maintain the human infrastructure of the medical and first responder community during an epidemic. The absence of services provided by these personnel would pose a serious threat to public safety or would significantly interfere with the ongoing response to the pandemic. These key personnel, who may also be the County's first priority for administration of influenza vaccine or antiviral pharmaceuticals, would include health care, first responders and utility personnel.

Indications for Treatment with Antivirals

- Any person experiencing a potentially life-threatening influenza-related illness.

- Any person at high risk for serious complications of influenza and who is within the first two days of illness onset. Pregnant women should consult their primary provider regarding use of influenza antiviral medications.

Chemoprophylaxis

All persons who live or work in institutions caring for people at high risk of serious complications of influenza infection, as well as vaccinated and unvaccinated residents of these institutions, may be given antiviral medications in the event of an institutional outbreak. Antiviral medications may be considered in other situations when the available supply of such medications is locally adequate.

Antiviral Medications from the Strategic National Stockpile (SNS)

The United States has a limited supply of influenza antiviral medications stored in the SNS for emergency situations that they are willing to release for use in an outbreak setting such as an acute care hospital or long-term care facility. Only State or Territory Health Departments can request these medications in the SNS. A county experiencing an influenza outbreak must first utilize local resources of antivirals. If they were unavailable or insufficient, the local health department (LHD) would then convey the need to the California Department of Health Services (CDHS). Any requests to CDC for SNS assets *must* be made through CDHS.

In a pandemic declared emergency, the County of San Diego Public Health Officer will direct the handling and administration of pharmaceuticals in cooperation with California DHS.

Response

A. Novel Virus Alert Stage

Novel virus detected in one or more humans. Little or no immunity in the general population. Potential, but not inevitable, precursor to a pandemic.

1. Surveillance

- Monitor bulletins from CDC and CDHS regarding virologic, epidemiologic, and clinical findings associated with new variants isolated within or outside the U.S.

- Communicate with appropriate partners and stakeholders and review major elements of enhanced surveillance activities; review, modify and update plan as needed.

- Activate enhanced local surveillance to detect importation and local spread in coordination with the State Viral and Rickettsial Disease Laboratory (VRDL) in Richmond.

- Obtain appropriate reagents from the VRDL, if appropriate, to detect and identify the novel strain.

2. Vaccine and Pharmaceutical Delivery

- Meet with hospitals, health care providers, and other partners and key stakeholders to review major elements of the vaccine distribution plan, including plans for storage, transport, and administration of vaccines and antiviral pharmaceuticals.

- Modify plan as needed to account for updates, if any, on recommended target groups and projected vaccine supply.

- Review and train regarding mass prophylaxis plan, strategic national stockpile and surge capacity.

3. Emergency Response and Communications

- Test local communication systems, including CASS, 800 mgHz radios, EMAN and CAHAN, to ensure that local and statewide communications are functional.

- Notify hospitals, health care providers, and other partners and key stakeholders of the novel virus alert.

- Modify communications plan (and written materials) as needed (in collaboration with local and state officials) to account for updates, if any, on projected effects of the novel virus.

- Ensure ongoing coordination among surveillance, epidemiology, laboratory, EMS, OES, and other local response efforts.

- Develop and/or update press release templates. Develop materials for responding to questions that may come from the media.

B. Pandemic Alert Stage

Novel virus demonstrates sustained person-to-person transmission and causes multiple cases in the same geographic area.

Novel virus alert activities will be continued at a more advanced level and other activities will be added.

1. Surveillance

- Fully activate enhanced surveillance activities. Assess functionality, timeliness, and completeness of data entry and dissemination, data links, and feedback mechanisms throughout the local system.

- Monitor daily CDC, state and local reports, which will include information from the following sources:

  - County Laboratory and local collaborating laboratories.
  - California sentinel physicians who report directly to CDC and/or CDHS.

- Meet with surveillance partners to increase the amount of patient demographic information collected, in order to identify groups with increased risk.

- Inform surveillance partners of the need to increase specimen collection for detection of novel virus and alert laboratories to prepare for increased numbers of specimens.

- If requested by VRDL, distribute specimen collection kits to hospitals and clinicians and obtain cooperation to facilitate sending isolates to County laboratory or VRDL.

- Assess inventory of laboratory equipment and supplies and obtain what is needed for influenza testing.

- Assess inventory of medical equipment and supplies (including ventilators, ICU equipment, and oxygen saturation monitors) and obtain what is needed as is feasible.

- Develop contingency plans for procurement of laboratory equipment and supplies, and also for possible redirection and hiring of additional laboratory employees, including clerical/data entry personnel.

- Review plan on the Isolation and Quarantine (I & Q) Plan. Inform I & Q facilities to review emergency plans, prepare facility and place on alert.

2. Vaccine and Pharmaceutical Delivery

During the pandemic alert stage, vaccine would not yet be available, and may not be for several months.

- Monitor reports from the CDC, FDA, and CDHS to obtain information on plans for vaccine manufacture.

- Prepare to implement plan for storing and delivering vaccine as it becomes available to County of San Diego government. Review plan on Vaccine Storage and SNS.

- Review elements of plans for vaccine delivery with partners and key stakeholders. Review plan on SNS and Mass Prophylaxis and Point of Dispensing (POD) Set-up Protocol.

- Ensure that human resources, equipment, and plans for mass immunization clinics are in place. Review plan on Mass Prophylaxis and SNS Management.

- Obtain latest CDHS recommendations for priority groups for vaccine allocation.

- Meet with local pharmacist and medical providers and institutions to discuss potential need to:

  - increase antiviral and antimicrobial supplies.
  - increase role of pharmacists in vaccine delivery.
  - administer vaccine for surge capacity.

- If vaccine is available, coordinate with CDHS to receive the state satellite broadcast refresher training or videos on vaccine administration techniques for persons who do not normally administer vaccines (MD, DDS, PA, NP, MA, pharmacist) but may be enlisted to do so in a pandemic.

  - arrange for viewing by appropriate groups.
  - provide video copies of the broadcast for local training.

- Coordinate training for those County staff (PHN, RN, LVN, CDI), who will need training/refresher on POD set-up and management, contact surveillance, I & Q, personal protective equipment (PPE), respiratory isolation, decontamination, and specimen collection as needed.

- Ensure adequate supply of N-95 masks, gowns, gloves, goggles, and deploy local PPE stockpile.

3. Emergency Response and Communications

- Ensure communication among the epidemiology and laboratory surveillance programs, public health and emergency management.

- Alert surveillance groups to increase surveillance activities.

- Identify contact person (and backup person) for communication with CDHS.

- Identify spokesperson (and backup person) for communication with press, public, etc.

- Prepare fact sheets detailing responses to questions coming from the media and the public:

  - include documents intended for electronic distribution on the County of San Diego web site.
  - include travel alert information received from the State and/or CDC.

- Respond to media inquiries regarding outbreak. See **"Risk Communication and Public Information"** section.

- Notify hospitals, health care providers, emergency responders, community clinics, medical examiners, and mortuary organizations via CAHAN, EMAN, 800 mgHz radios, CASS, QAnet or other means as needed.

- Increase laboratory surveillance and disease surveillance.

- Alert emergency responders to work with EMS to inventory critical supplies and solve problems arising from high response volumes.

- Alert Medical Reserve Corps, American Red Cross, neighborhood-watch, and/or other community-based response organizations.

- Conduct inventory of critical equipment, supplies, and personnel, including availability of hospital beds, antiviral pharmaceuticals, refrigerated depots for vaccines, and transport for delivery of vaccines. Review plan on Vaccine Storage Plan, Surge Capacity, SNS and Mass Prophylaxis Plan, Point of Dispensing Site Protocol, Isolation and Quarantine Plan as needed with key volunteers and staff.

- Activate surge capacity plan to address personnel and supply shortfalls to request mutual aid from other states and/or counties.

- Prepare isolation tents and equipment. Review plan on assembly of equipment to staff responsible.

- Send bulletins to private providers using Physician's Bulletin list and EMAN.

- Issue guidelines on influenza precautions for workplaces, emergency departments, airlines, schools, jails and prisons, public safety agencies, and individuals.

C. Pandemic Imminent Stage

Novel virus causing unusually high rates of morbidity and mortality in widespread geographic areas.

In the pandemic imminent stage the pandemic alert activities will continue at an intensified level.

1. Surveillance

- Outside of normal surveillance season, verify that hospital and health care surveillance has been activated and San Diego County is receiving ongoing reports of suspect cases within the county.

- Report the data collected to all participating facilities as well as to CDHS.

- Analyze the inpatient data to determine which population groups are at greatest risk and provide the information to CDHS and to those determining priority groups for vaccine allocation when the supply is limited.

- Maintain increased laboratory surveillance and other activities outlined previously in the pandemic alert section.

2. Vaccine and Pharmaceutical Delivery

- Continue activities as listed in pandemic alert stage, including meetings with the local pharmacist and medical associations and healthcare associates.

- Increase public information effort designed to keep ill persons at home, providing translations into Spanish and other languages commonly spoken in San Diego County.

- If vaccine delivery date is predicted by CDC, work with CDHS to:
  - establish local delivery date.
  - review distribution plan and update when new information is available.
  - obtain signed agreements with hospitals and private providers on priority order of groups to receive vaccine.
  - alert to need for security at immunization sites.
  - alert to need for reporting adverse events to Vaccine Adverse Events Reporting System (VAERS) system.

- If vaccine is available, fully activate the Vaccination Plan.

- Obtain data on antiviral and antimicrobial supplies.

- Prepare or update recommendations and plans for allocation of antiviral and antimicrobial supplies per federal guidelines.

3. Emergency Response and Communications

- Notify hospitals, health care providers and first response agencies of pandemic imminent stage. Set up information flow to all partners and stakeholders, including posting information on County website, CAHAN, EMAN, CASS, QA Net.

- Update documents and fact sheets based on current surveillance information.

- Provide translations of all public information messages into Spanish and the other major languages in San Diego County.

- Monitor set-up and operations of designated I & Q facility.

- Implement public health education campaign with emphasis on the following:

  - hand washing.
  - stay home rather than spread the influenza virus.
  - check on family, friends living alone.
  - vaccination clinic and POD locations for priority groups.
  - signs, symptoms.
  - medication safety and storage.

- Activate emergency response system, including Emergency Operations Center and/or HHSA Operations Center, as appropriate.

- Conduct inventory of critical supplies/personnel and solve problems as is feasible: shortage of supplies (gloves, safety needles, masks, ventilators), personnel shortage.

- Activate Mental Health Response Plan for counseling/psychiatric services (Mental Health Teams).

D. Pandemic Stage

Further spread of influenza disease with involvement of multiple continents.

1. Surveillance

Influenza morbidity and mortality surveillance systems will likely become overwhelmed.

- Continue to monitor selected vital statistics for mortality and morbidity data received from the inpatient diagnosis and causes of death surveillance system to establish age- and geographic area-specific rates.

- Use above data to establish priority groups for immunization as vaccine availability changes, providing data to CDHS, hospitals, and private providers.

- Continue to monitor reports from WHO, CDC, and CDHS on national and worldwide morbidity and mortality data.

- Laboratory surveillance will focus on detection of antigenic drift variants and resultant viruses that could limit the efficacy of vaccines produced against the original pandemic strain.

2. Vaccine and Pharmaceutical Delivery

Continue all pandemic imminent activities. Presumably vaccine would be available for a sizable proportion of the population at some point.

- Monitor Vaccine Adverse Effect Reporting System (VAERS) data for evidence of adverse reactions to the influenza vaccine. Report findings routinely to CDHS.

- Modify recommendations and agreements on priority groups for receiving the vaccine per federal guidelines to reflect greater availability of vaccine.

- Review surveillance data for changes in risk factors that could require modification of recommendations.

- Monitor availability of antiviral pharmaceuticals.

3. Emergency Response and Communications

All of the activities of the pandemic imminent stage and the following:

- Notify hospitals, heath care providers, and first responder agencies of Pandemic Stage.

- Monitor operations of Isolation and Quarantine (I & Q) facilities. Set up isolation tents in accordance with the I & Q Plan if needed.

- Increase public information effort designed to keep ill persons at home, providing translations into Spanish and other major languages in San Diego County.

- EOC may request law enforcement mutual aid, if needed. If law enforcement mutual aid system is overwhelmed, the Governor may issue a waiver to allow the National Guard and military to act as law enforcement.

- EOC may request medical mutual aid, and if the State medical/health mutual aid system is overwhelmed, the State may request health care workers from other states and/or the federal government.

E. Second Wave

Typically in a pandemic, the number of new cases of influenza peaks and then declines, giving the impression that the pandemic is over. Then within a few months, influenza incidence once again increases. State and local officials and health care providers need to remain vigilant for a return of the pandemic activity. This is especially difficult given that all personnel and supplies involved in responding to the pandemic may be exhausted by prior efforts to respond. The perceived "end of the pandemic" may be viewed as an opportunity to relax and recover. However, all essential functions should be restored to return to pandemic imminent status.

Public health personnel who provide the data to CDHS may still be backlogged with reports, but should be encouraged to maintain extra staffing levels if possible.

All sources of surveillance data will need to be educated that their contributions are still essential because of the likelihood of a second wave.

Immunization efforts in lower risk groups should continue as vaccine becomes available to increase "herd immunity" in the population in the event of a second wave.

Laboratory surveillance should also return to pandemic imminent status while maintaining surveillance for possible antigenic drift.

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

V. RISK COMMUNICATIONS AND PUBLIC INFORMATION PLAN

This plan describes the County of San Diego's approach to:

- Facilitating cooperation among all involved parties (e.g., government officials, health experts, industry, and the public).
- Persuading and directing the behavior of individuals or communities.
- Promoting informed decision-making about the acceptability of known risks.
- Educating and correcting false or misleading information.

A. Mental Health – Critical Incident Stress Management (CISM)

Objective

To enhance the County's ability to respond to the emotional impact of an influenza pandemic event, the objectives of the Mental Health Disaster Response Team prior to, during and after the event are to:

- Implement the rules, policies, regulations, and guidelines of the Federal Emergency Management Agency (FEMA) as related to mental health.
- Adhere to the Standardized Emergency Management System (SEMS).
- Adhere to the National Incident Management System (NIMS).
- Provide local mental health response as appropriate, and as available resources permit.
- Collaborate mental health response with federal, state, and local governmental departments as well as the involved private sector partners.
- Educate and enhance Mental Health Staff's ability to respond to mental health needs during an influenza pandemic related event.
- Evaluate and address related long-term mental health needs of the community.

Key Activities

The Mental Health Disaster Response Team will be responsible for the following activities during an influenza pandemic event:

- Assess related mental health needs of community, victims, families, mental health clients, emergency workers and their families.
- Provide oversight and coordination of County Disaster Mental Health Response Teams, including Critical Incident Stress Management response.

- Coordinate mental health response of community partners.
- Provide County Mental Health staff and community partners with literature and educational materials on human response to disasters, stress reduction and self-help information, and support Public Health community education efforts.
- Staff phone banks:

  - Provide information, education and crisis counseling via phone line for victims and their families.
  - Staff second phone line for emergency workers and their families to provide information, education and crisis counseling via phone line.
  - Assure mental health clients' concerns are addressed.

- In the event of a Presidential declaration of disaster, initiate the application process for federal funding. Apply for all FEMA funded disaster crisis counseling assistance grants. Prepare mandated reports for the federal government.
- Conduct debriefing, crisis counseling, and grief counseling of the impacted public, emergency workers and their families.

  - To assist in mitigation of "worried well," establish short-term, group debriefing sessions in communities to allow public to share concerns.
  - Participate in community meetings to assist in defusing public. (Note: Staff will be mindful of the "contagion" factor. It may be necessary to do "virtual" mental health response via media – TV, radio, newspaper).

- Respond to requests for on-scene support by activating staff to respond to the Emergency Command Post.
- Contact and work with Office of Media and Public Affairs and/or media coordinator to review risk communication procedures and discuss their appropriate involvement in creation of public service announcements or press releases. Mental Health Crisis Response team leaders should that the lead in contacting the media coordinator during any public health emergency or disaster to discuss the Mental Health role in public outreach.

- Other Mental Health interventions include:

  - Work with schools to assist children and their families with recovery.
  - Work with media relations to promote "mental hygiene."
  - Supportive listening for victims and response workers to process frustration, grief and loss.
  - Referral and Linkage
  - Information Sharing

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

- Operate the Access and Crisis Line.
- Provide education on "natural" response to disasters to public.
- Provide individual, family and group counseling.
- Conduct Mental Health Assessment and triage for public.
- Provide anger management services.
- Assist victims with problem solving and organizing basic survival needs and tasks.
- Support community services to enhance their ability to provide services.
- Door to door canvassing to identify those who may need help –outreach.
- Distribute Mental Health brochures and resource handbooks to public.

The **Communications - Attachment 1 - Duties of Mental Health Staff** defines and identifies specific duties and names of responsible individuals for Mental Health. The **Mental Health Disaster Response Team** is a confidential list of Mental Health regional lead staff names, programs, and contact information. It contains the contact information for people listed under the duties section. This list is maintained and available at all times by the Mental Health Disaster Coordinator.

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

B. Information for the Media

1. Risk Communications and Public Information Plan

Dissemination and sharing of timely and accurate information with the health care community, the media, and the general public will be one of the most important facets of the pandemic response. Instructing the public in actions they can take to minimize their risk of exposure or actions to take if they have been exposed will reduce the spread of the pandemic and may also serve to reduce unnecessary demands on vital services.

The Public Health PIO in consultation with the Public Health Officer, Community Epidemiology staff, and Mental Health Crisis Team Leaders will identify public health and mental health issues and concerns that will or may need to be addressed through public information messages regarding pandemic influenza and will identify affected target audiences for messages. Mental Health Crisis Team Leaders should take the lead in contacting the media coordinator during any public health emergency or disaster to discuss Mental Health's role in public outreach.

Messages will address, but not be limited to, vaccine supply, antiviral use, low-tech prevention methods, and maintenance of essential services. They will also identify appropriate strategies for dissemination of messages including postings to the County Web site.

The following template to the media and public may be used and revised as appropriate to the actual event.

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

Figure 1: Influenza Alert for Public Release

FOR PUBLIC RELEASE

Influenza Alert

For Immediate Release Contact: _____

Date: _____ Title: _____

San Diego - Walt Ekard, San Diego County, Chief Administrative Officer, declared a public health emergency this morning/evening. Dr. Nancy L. Bowen, Public Health Officer, is alerting San Diego County residents to take precautions to minimize the spread of the influenza virus. There is a new strain of influenza virus that is unusually virulent, which means that most people have little or no natural immunity to protect them from illness. This means that, not only have more people come down with the "flu," the illness is likely to be more severe, *(Add data about current number of local hospitalizations, etc.)*

At this time, there is no vaccine available to prevent this new strain of the flu. This makes prevention measures even more important.

Symptoms of the flu include abrupt onset of chills and fever, muscle aches, sore throat, and cough. Those who develop "flu" symptoms should notify their health care provider.
Influenza virus is contagious from person-to-person. Infection spreads when droplets from a cough or sneeze of an infected person reach the mucous membranes of another person's mouth, nose, or eyes, or if they touch a surface or object (such as a doorknob or stair railing) contaminated with infectious droplets from sneezing or coughing and then touch their own mouth, nose, or eyes.

The risk of becoming ill can be reduced by frequent hand washing and keeping your hands away from your eyes, nose, and mouth. Also, try to avoid contact with people who have respiratory illnesses.

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

Those who become ill should stay home. This is crucial to prevent the spread of this disease to others, including co-workers and other people who would be encountered in public places.

If someone in the household has the flu, other family members can decrease their risk of becoming ill by wearing a mask over their nose and mouth whenever they come within six feet of the sick person. They should wear gloves whenever they come in contact with him or her or items they have handled and wash their hands after removing the gloves.

For more information, visit the San Diego County Web site at www.sdcounty.ca.gov.

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

Figure 7: Media Fact Sheet

Overview of Influenza Pandemic

- Pandemics result from the emergence of an influenza-A virus that is novel (new) for the human population.
- The hallmark of pandemic influenza is excess mortality--the number of deaths observed during an epidemic of influenza-like illness higher than the number expected.
- During this century, pandemics occurred in 1918, 1957, and 1968.
- 1918-19 "Spanish flu" A caused the highest known influenza-related mortality: at least 500,000 deaths in the United States, and 20 million worldwide.
- 1957-58 "Asian flu" A: 70,000 deaths in the United States.
- 1968-69 "Hong Kong flu" A: 34,000 deaths in the United States.
- Although mortality rates associated with the pandemics of 1957 and 1968 were confined primarily to the elderly and chronically ill, both pandemics were associated with high rates of illness, social disruption, and economic losses.
- The potential impact of an influenza virus in humans depends on its virulence (ability to cause severe illness or death) and on whether there is protective immunity in the population. Protective immunity will inhibit the virus' ability to be passed from person-to-person and will decrease the severity of illness.
- Influenza viruses undergo two kinds of change. One is a series of mutations over time that causes a gradual evolution of the virus, known as antigenic drift. The other is an abrupt change in the virus, known as antigenic shift, thus suddenly creating a new type of the virus.
- When antigenic shift occurs, the population does not have antibody protection against the virus.
- Birds are the primary reservoir for influenza viruses. All 15 recognized influenza A subtypes have been found in birds.

- In most years in the United States, influenza is responsible for 10,000-40,000 excess deaths, 50,000-300,000 hospitalizations, and approximately $1-3 billion in direct costs for medical care.

Influenza: Background Information

The influenza (flu) epidemics that happen nearly every year are important events. Influenza is a respiratory illness that makes hundreds of thousands of people sick each year. The illness can cause severe health problems for the elderly and for younger people with diseases like diabetes, heart or lung disease, and illness that can weaken the immune system. Typical primary influenza illness lasts about a week and is characterized by abrupt onset of fever, muscle aches, sore throat, and nonproductive cough. In some persons, severe malaise and cough can persist for several days or weeks.

Influenza infection not only causes primary illness but also can lead to severe secondary medical complications, including influenza viral pneumonia; secondary bacterial pneumonia; worsening of underlying medical conditions, such as congestive heart failure, asthma, or diabetes; or other complications such as ear infections (i.e., otitis media) in children.

Elderly persons (i.e., those 65 years and over) and persons with certain underlying medical conditions, such as chronic heart or lung disease, are at increased risk for developing complications from influenza infection. These complications increase the risk for hospitalization or death.

One of the most important features about influenza viruses is that their structure changes slightly but frequently over time (a process known as “drift”), and that this process results in the appearance of different strains that circulate each year. The composition of the flu vaccine is changed each year to help protect people from the strains of influenza virus that are expected to be the most common ones circulating during the coming flu season.

The ability of the vaccine to protect against influenza during a particular season depends on several factors, but particularly 1) the match between influenza strains in the vaccine and strains circulating in the community, and 2) the ability of each person's immune system to mount a protective response as a result of the vaccination. Although the vaccine may not prevent everyone who takes it from getting sick, it does reduce the risk of severe illness, hospitalization, and death. That's why it is so important for anyone who wants to reduce his or her risk of getting severely ill from influenza to receive the vaccine each year.

In contrast to the more gradual process of drift, in some years the influenza virus changes dramatically and unexpectedly through a process known as “shift.” Shift results in the appearance of a new influenza virus to which few (if any) people are immune. If this new virus

spreads easily from person-to-person, it could quickly travel around the world and cause increased levels of serious illness and death, affecting millions of people. **This is called pandemic influenza.**

Fortunately, pandemics don't occur very often. There has not been an influenza pandemic since 1968. In 1997, however, a flu virus, that had previously infected only birds, caused an outbreak of illness in humans. This virus, known as the "avian flu," resulted in 18 illnesses and six deaths in Hong Kong but did not easily spread from person-to-person. Still, it provided a frightening reminder that the next pandemic could occur at any time. Governments around the world took notice. The U.S. government worked with state and local governments and private-sector partners to develop strategies and programs that would prepare our country for a pandemic. The disease has spread since then but still does not have routine spread from person-to-person.

How Does an Influenza Pandemic Start?

There are three main types of influenza viruses: A, B, and C. Influenza C causes only mild disease and has not been associated with widespread outbreaks. Influenza types A and B, however, cause epidemics nearly every year.

A pandemic is possible when an influenza A virus makes a dramatic change (i.e., "shift"). This shift results in a new or "novel" virus to which the general population has no immunity. The appearance of a novel virus is the first step toward a pandemic. However, the novel influenza A virus also must spread easily from person-to-person (and cause serious disease or death) for a pandemic to occur. Influenza B viruses do not undergo shift and do not cause influenza pandemics.

The source for type A influenza viruses is birds, but influenza A viruses also infect animals such as pigs and horses, as well as people. The last two pandemic viruses were combinations of bird and human influenza viruses. Many people believe that these new viruses emerged when an intermediate source, such as a pig, was infected by both human and bird influenza A viruses at the same time, so that a new virus was created. Events in Hong Kong in 1997, however, showed that this is not the only way that humans can become infected with a novel virus. Sometimes, an avian influenza virus can "jump the species barrier" and move directly from birds to humans and cause disease.

Since, by definition, a novel virus is a virus that has never previously infected humans, or hasn't infected humans for a long time, it's likely that almost no one will have immunity, or antibody, to protect them against the novel virus. Therefore, anyone exposed to the virus--young or old, healthy or weak--could become infected and get sick. If the novel virus is related to a virus that circulated long ago, older people might have some level of immunity. It is possible that the novel virus may be especially dangerous to some age groups that are not usually at risk of severe

illness or death from annual influenza. Such widespread vulnerability makes a pandemic possible and allows it to have potentially devastating impact.

How Does a Pandemic Spread?

Although all pandemics begin with the appearance of a novel virus, most novel viruses do not spread and cause pandemics. It's more common for a novel virus to be detected and cause illness in a few people, but not go on to infect large numbers of people. For a novel virus to cause a pandemic, a sequence of events must occur over time. However, the phases will not occur simultaneously around the world.

The Impact of a Pandemic: How Serious Might It Be?

There's no simple answer to the question of how serious a pandemic might be. It all depends on how virulent (severe) the virus is, how rapidly it can spread from population to population, and the effectiveness of pandemic prevention and response efforts. The 1918 Spanish flu is an example of a worst-case scenario because the strain was highly contagious and quite deadly. This pandemic killed more Americans than all the wars of the 20th century. Since our world today is vastly more populated, and people travel the globe with ease, the spread of a next pandemic could be more rapid than that of previous pandemics.

The impact of a pandemic isn't measured only by how many people will die. If millions of people get sick at the same time, major social consequences will occur. If many doctors and nurses become ill, it will be difficult to care for the sick. If the majority of a local police force is infected, the safety of the community might be at risk. If air traffic controllers are all sick at once, air travel could grind to a halt, interrupting not only business and personal travel, but also the transport of life-saving vaccines or antiviral drugs. Therefore, a vital part of pandemic planning is the development of strategies and tactics to address all these potential problems.

Historical Overview

History suggests that influenza pandemics have probably happened during at least the last four centuries. During the 20th century, three pandemics and several "pandemic scares" occurred.

Ongoing Influenza Defense Tactics

Fighting the flu in the U.S. is a yearly battle that requires the combined resources of the Department of Health and Human Services, the World Health Organization (WHO), vaccine and drug companies, state and local health authorities, and the medical community. Early detection of changes in influenza viruses and rapid development of effective vaccines are the keys to

defending against influenza each year and responding to the possibility of a pandemic. The cycle of surveillance and vaccine formulation is a never-ending process.

Ongoing Surveillance

The first line of defense against influenza is a worldwide surveillance system coordinated by the World Health Organization (WHO). This system makes it possible for changes in circulating influenza viruses and the emergence of novel influenza A viruses to be detected as soon as possible.

The task of identifying circulating strains of influenza--whether known or novel--is done by a worldwide network of 110 National Influenza Centers and many other WHO laboratories in 83 countries. WHO Collaborating Reference Centers for Influenza in London, Atlanta, Melbourne, and Tokyo coordinate the system and intensively analyze samples of virus isolated and collected by approximately 180 laboratories.

Each year, some influenza virus isolates from laboratories in the U.S. and overseas is sent to the Centers for Disease Control and Prevention (CDC) in Atlanta. Tests are done to determine the antigenic and molecular make-up of the viruses. CDC examines the viruses to determine which are the most important emerging influenza viruses and their ability to cause outbreaks, and then provides this information at yearly meetings held by the Food and Drug Administration (FDA) and by WHO so it can be used to formulate vaccine for the next influenza season.

During January through March, WHO, FDA, and CDC undertake the process of deciding which strains will be selected for vaccine production in the U.S.

In addition, the CDC actively monitors U.S. disease activity and deaths related to influenza between October and May of each year. This information is provided each week in influenza surveillance summaries.

Vaccine Development

The best method of preventing and reducing the severity of the flu is the timely development, distribution, and administration of influenza vaccine. The influenza vaccine used each year is an inactivated trivalent vaccine. This means that the flu vaccine contains three inactivated (or "killed") flu viruses that protect against three different strains of influenza virus (one influenza B and two influenza A strains). Because the current licensed vaccines are inactivated vaccines, flu vaccine cannot cause the flu-- a common misconception. The effectiveness of the trivalent vaccine depends upon the "match" between strains of influenza that are circulating and the viruses in the vaccine. Although there is no guarantee that the strains picked for the vaccine will

be the strains that go around during the following flu season, the match between vaccine strains and circulating strains is good about 90 percent of the time.

The vaccine strain selection process requires surveillance information collected year-round. In late January of each year, the FDA's Vaccines and Related Biological Products Advisory Committee (VRBPAC) reviews worldwide surveillance data. The Committee usually makes an initial recommendation about at least one of the three strains to be included in the vaccine. By mid-February, the WHO completes its review and makes recommendations for the Northern Hemisphere vaccine. The WHO repeats this process in September for Southern Hemisphere vaccine recommendations. In March, VRBPAC meets to finalize the recommendations for the U.S. influenza vaccine.

While the vaccine strain selection process is going on, the four influenza vaccine manufacturers licensed in the U.S. begin preparations for vaccine production. Because flu vaccine viruses are grown inside eggs, manufacturers must buy enough eggs to manufacture 80 million or more doses of vaccine. The FDA prepares the specific viral material for the manufacturers to use, in order to begin vaccine production. During the manufacturing process, the live viral ingredient is killed so that the vaccine will not cause people to become sick with the flu. As the manufacturers produce vaccine, FDA reviews safety data. The last steps of vaccine preparation include production and bottling of vaccine, distribution to vaccine providers, and administration to patients. All this must be done in time for vaccination campaigns to begin by late September.

Working closely with State and local health authorities, partners in the private sector, CDC, FDA, and vaccine manufacturers have built a successful program for vaccine delivery each year. CDC and its Advisory Committee on Immunization Practices (ACIP) issue recommendations each year for the prevention and control of influenza. ACIP strongly recommends influenza vaccine for any person, 6 months of age or older, who is at increased risk for complications of influenza. Groups at increased risk include persons 65 years of age and older; residents of nursing homes and other chronic-care facilities; adults and children with chronic lung, heart, metabolic, kidney, or immune system disorders; and women who will be in the 2nd or 3rd trimester of pregnancy during the influenza season. Influenza vaccine also should be given to people who have close contact with high-risk persons, such as health care providers, family members of such persons, and others such as medical volunteers. The reason for vaccinating the close contacts is to prevent transmission of flu viruses to people who are at high risk for developing serious complications from flu. Influenza vaccine should also be administered to any person who wishes to reduce the likelihood of becoming ill with influenza.

Antiviral Drugs

In addition to vaccines, antiviral drugs are available for both the prevention and treatment of influenza. Currently, there are two classes of drugs--amantadines and neuraminidase inhibitors.

The amantadines (amantadine and rimantadine) are approved for the treatment and prophylaxis of influenza A only. The neuraminidase inhibitors (zanamivir and oseltamivir) have activity against both influenza A and B, but are currently approved by FDA only for treatment.

To prevent the flu, antiviral drugs must be taken consistently before infection occurs. When used to reduce the impact of the flu for someone who is already infected, antiviral drugs must be taken within two days after flu symptoms start. It is important to know that antiviral drugs can have some potentially serious side effects.

In non-pandemic situations, antiviral drugs have been useful in helping to control outbreaks in settings such as nursing homes, where many people could become sick with flu and develop serious complications. In addition, antiviral pharmaceuticals can be useful in preventing influenza in certain individuals who have a weakened immune systems and, therefore, would not respond to the vaccine, or in those who have a known allergic reaction to the vaccine. There are important differences among the influenza antiviral drugs, including age-approved indications, side effects, and costs. A knowledgeable health care professional should be consulted when they are used.

During a pandemic, antiviral drugs are likely to play an important, but limited role. Guidelines have been developed by the CDHS and CDC to address how antiviral drugs should be used during a pandemic.

Preparing for the Next Pandemic

In the event of a pandemic, good surveillance, timely vaccine development and production, and the ability to administer vaccine to large numbers of people in a short amount of time will be very important.

The vaccination program during a pandemic is different from current annual flu shot programs in several respects:

- More people will want and need to be vaccinated, so we will need a larger supply of vaccine.
- The warning period before a pandemic is likely to be short. Because the current vaccine manufacturing process takes a minimum of 6 months, it is likely that there will no or limited vaccine at the beginning of a pandemic to vaccinate everyone who wants it.
- It may be necessary for an individual to receive two doses of vaccine to be fully protected against the virus.

In addition, communication and emergency response systems are in place to assist in managing a pandemic. Since 1993, federal, state and local health officials have been working on several

different preparedness efforts to reduce pandemic influenza-related deaths, sickness, and social disruption including enhancing surveillance and early detection of a novel virus, and improving the public health infrastructure so that pandemic-related programs can be effectively administered.

Source of "Information for the Media:" http://www.cdc.gov/od/nvpo/pandemics/

DRAFT

County of San Diego

STOCKPILE AND MASS PROPHYLAXIS PLAN

Public Information Version

(Revision in Progress)

Last Updated: February 2004

TABLE OF CONTENTS

3.0 Dispensing

CHAPTER I

CONCEPT OF OPERATIONS

Introduction:

The terrorist attacks of September 11, 2001, in New York, Washington D.C. and Pennsylvania and the subsequent introduction of anthrax into the postal system on the East Coast of the United States necessitated the mass prophylaxis against anthrax for thousands of Americans.

The dispensing of antibiotics and vaccines to thousands, perhaps millions, of individuals requires advanced emergency preparedness planning on the organizational and structural level as well as the identification of necessary personnel and physical resources. The national Centers for Disease Control and Prevention (CDC) and the Office of Emergency Preparedness (OEP) within the US Department of Health and Human Services played a major role in the East Coast prophylaxis efforts. On the other hand, any state, region, or local jurisdiction must face the possibility that federal resources may not be available to assist if multiple areas require treatment sites simultaneously. Good advance planning at the local level will help ensure a coordinated response effort that will not only protect the health and safety of its citizens but will also foster confidence in the public health system's ability to respond to an emergency. The San Diego County Mass Prophylaxis Plan is a fluid document that changes as new issues arise.

The Plan was designed utilizing the State of California Mass Prophylaxis Planning Guide and is enhanced based on lessons learned from exercises and the mass prophylaxis efforts on the East coast. While this plan is developed to utilize the Strategic National Stockpile (SNS), planning efforts include the use of local or regional resources first, as directed by California's Standardized Emergency Management System (SEMS). This plan is considered an annex or "part of an Annex" of the San Diego County Operational Area Metropolitan Medical Response System Biological Weapons of Mass Destruction Response Plan

Overview:

When a suspected or confirmed act of bioterrorism or when certain naturally occurring disease occur, it may be necessary to initiate mass immunization or prophylaxis operations. The County Public Health Officer is responsible for the overall management of Public Health Services within the Operational Area during such an event. Through the coordinated efforts of the Public Health Officer, and the County Emergency Operations Center (EOC), clinical distribution sites will be established, personnel and supplies will be deployed, and the public will be informed as to how to access these services.

The concept of operations involves requesting, receiving, storing, distributing and tracking medical resources and materials from local, state, and federal stockpiles. The County of San Diego Stockpile and Mass Prophylaxis Plan concept of operations contains three key sections. 1) Requesting and Receiving Resources, 2) Establishing and Operating a Distribution Warehouse, and 3) Establishing and Operating Community-based Dispensing Sites. A brief overview of each of these sections is provided below. The details of this concept of operations are contained within the individual sections of the plan. The total concept of operations is exercised through County designed tabletops and functional exercises as well as through the SNS program Exercise Workbook.

Requesting and Receiving Resources:

California's Standardized Emergency Management System (SEMS) will be utilized for requesting any resources from the State Vendor-Supplied Cache or the Strategic National Stockpile (SNS) during a disaster, terrorism event, or public health emergency.

Prior to the request for outside resources, local resources will be utilized. The priority for the use of local resources is first to dispense to exposed persons and healthcare workers, first responders and public safety personnel. Once the determination has been made that the local Operational Area resources will be inadequate, the Public Health Officer will direct the request for additional resources from the Region, State, and federal government utilizing the California Standardized Emergency Management System.

Once the request for additional resources has been made, the County Emergency Operations Center (EOC) , Health and Human Services Agency (HHSA) or Emergency Medical Services, Medical Operations Center (MOC) becomes the coordinating entity. A San Diego representative will respond to the state Receipt, Storage, and Staging (RSS) warehouse to serve as liaison to the EOC and Health Officer. The State will provide transportation and security from the state's RSS site to the local RSS site. The County is then responsible to provide warehousing, command and control, security, asset tracking management, transportation, dispensing, and patient tracking for all resources and materials received, distributed and dispensed.

Distribution Warehouse:

The Local RSS will be referred to henceforth as the distribution warehouse to avoid confusion. The distribution warehouse will be utilized to receive and store the pharmaceutical resources and supplies from the state. A site manager will be designated to maintain command and control of the distribution warehouse. Inventory management will be coordinated with the state RSS and local dispensing sites.

In a large-scale event, the distribution warehouse will distribute and provide inventory management for emergency pharmaceuticals and resources entering the county. The function of the distribution warehouse is to fill order requests from dispensing sites, track distribution, and coordinate further state and federal mutual aid. (Refer to chart 1.1 Strategic National Stockpile Responsibility Flowchart).

Dispensing Sites:

Dispensing sites can be any facility such as a hospital, clinic, or mass prophylaxis site where local, state, or SNS assets will be allocated to provide mass immunizations and dispensing prophylactic antibiotics, and other medical supplies. Over 80 potential dispensing sites have been selected throughout the six HHSA regions within the County of San Diego. They include schools, churches, community centers and sport/entertainment venues. In addition, the Red Cross would open and provide support staff for facilities within the County for Mass Shelter Operations that they have agreements with to add additional dispensing sites if needed. The Red Cross has comprehensive information on the resources available at each of 600 facilities, which is included in a separate plan. The school sites will be considered the primary locations due to the large number of schools in the County, convenient locations and on-site resources available.

Non-school sites or door-to-door services will be considered secondarily depending on the type and scale of the event or situation. Alternative sites also include hospitals, medical offices and community clinics.

STRATEGIC NATIONAL STOCKPILE
RESPONSIBILITY FLOWCHART

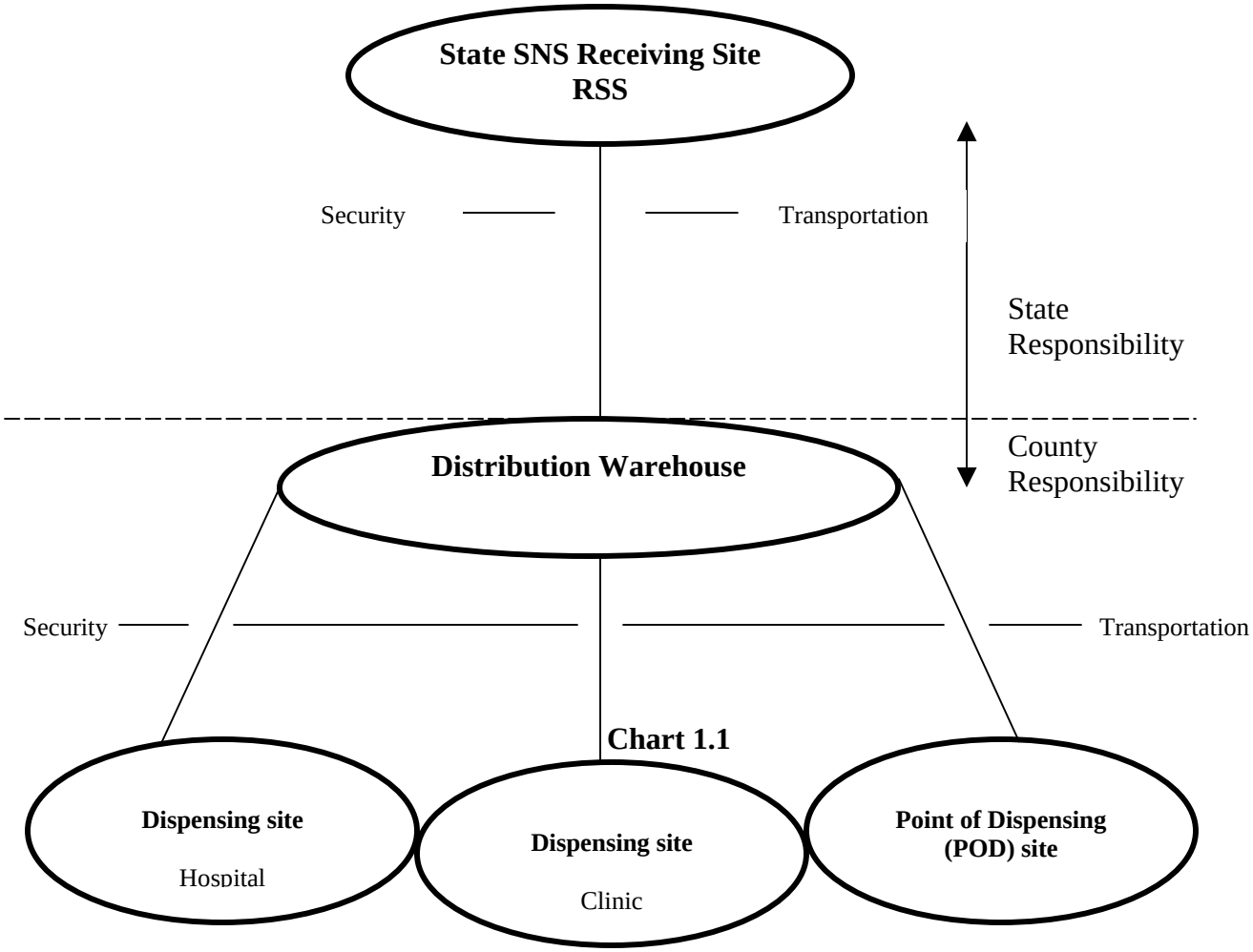


Chart 1.1

CHAPTER II

OPERATIONS

1.0 REQUESTING AND RECEIVING RESOURCES

Overview:

If a large-scale disease outbreak or other emergency that requires medical and/or pharmaceutical resources occurs, it will most likely be necessary to activate the California's Medical and Health Mutual Aid System. This will enable the County of San Diego to acquire necessary supplies to mitigate the public health needs of the community for such a large-scale event.

The Health Officer, working with the County EOC, will direct the request of resources through California's Medical/Health Mutual Aid System. When Operational Area resources are anticipated to be depleted or inadequate, a request will be made to the Regional Disaster Medical/Health Coordinator (RDMHC) or designated staff. If regional resources are inadequate or delayed the RDMHC will forward the request to the state. The request will be processed by the Joint Department Health Services (DHS) / Emergency Medical Services Agency (EMSA) Medical/Health Emergency Operations Center (JEOC). If in-state resources are unable to fill the request in a timely manner, the JEOC will request the assistance from the SNS through the State Emergency Operations Center at the Governor's Office of Emergency Services (OES). The Governor, acting through OES, will request SNS assets directly from the CDC via the Department of Homeland Security. The Department of Homeland Security / CDC will then deliver the SNS assets to a pre-designated site in California. DHS and OES will meet the SNS and CDC Technical Advisory Response Unit (TARU) to take receipt of the SNS assets.

Upon receipt of the SNS assets, all prepackaged medical supplies; pharmaceuticals and antidotes will be immediately transported by the state to the local designated distribution warehouse. The distribution warehouse will be responsible for apportionment of the SNS assets to dispensing sites. The County Emergency Operations Center (EOC), Health and Human Services Agency (HHSA) or EMS Medical Operations Center (MOC) is designated as the coordinating entity. In general, although not recommended, any repackaging of bulk antibiotics will be done by the state at the Receiving Site, where they will also be counted.

A San Diego representative will respond to the state RSS to serve as liaison to the EOC and Health Officer. The State will provide transportation and security from the state's RSS to the local designated distribution warehouse.

The County of San Diego will designate a distribution warehouse to receive the SNS assets from the state. The County of San Diego will provide and maintain security, provide warehouse and inventory management at the distribution warehouse, and provide transportation and security to the dispensing sites. Local Law Enforcement coordinated by the Sheriffs Department, as the County Operation Area Law Coordinator, will coordinate security at the distribution warehouse, during transportation of supplies and medications, and at the dispensing sites.

Strategic National Stockpile Activation Checklist

When planning for, or responding to a need to provide mass prophylaxis, refer to the plan for local and state resources prior to activation of the Strategic National Stockpile. The following is the activation checklist for requesting state and federal stockpile assets.

- ❑ Initial Local Notifications
  - ❑ Public Health Officer
  - ❑ Assistant Deputy Director, Public Health Services
  - ❑ SNS Coordinator
  - ❑ Director, Emergency Medical Services and Emergency Preparedness
  - ❑ Epidemiology Duty Officer
  - ❑ Emergency Medical Services Duty Officer
  - ❑ County Office of Emergency Services Duty Officer
  - ❑ Higher level officials

- ❑ Identify required resource
  - ❑ Antibiotics
  - ❑ Ventilators
  - ❑ Medical Supplies
  - ❑ Vaccines
    - ❑ Anthrax
    - ❑ Smallpox
    - ❑ Immune Globulin Plasma
    - ❑ Botulism Antitoxin
  - ❑ Other

- ❑ Prepare justification for requesting assets from state or SNS

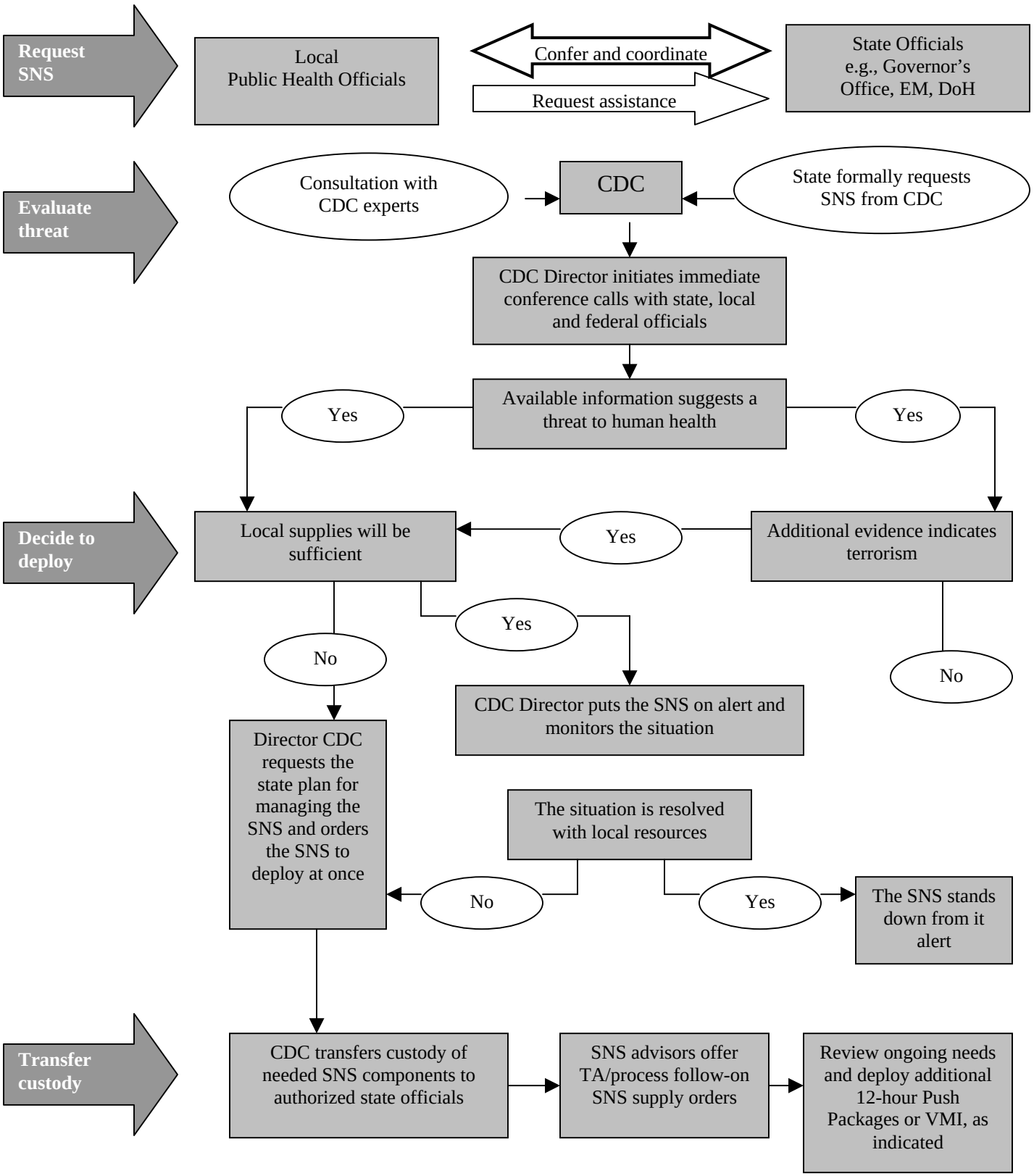
- ❑ Identify number of Distribution and Dispensing Sites to open
  - ❑ Identify Region(s)
  - ❑ Identify number of hospital sites
  - ❑ Identify number of clinic sites
  - ❑ Identify number of community-based dispensing sites
  - ❑ Identify initial staffing requirements
- ❑ Activate MOC / EOC
- ❑ Staffing Requirements Notifications
  - ❑ Medical Lead
  - ❑ Regional Manager(s)
  - ❑ Public Health Nurse Manger for Region(s)
  - ❑ Bioterrorism PHN for Region(s)
  - ❑ Pharmacy Lead
  - ❑ Mental Health Coordinator
  - ❑ County Law Enforcement Coordinator (Sheriff)
  - ❑ Distribution Warehouse Site Managers
  - ❑ Dispensing Site Manager

Requesting the Strategic National Stockpile
Justification Checklist

Request Justification

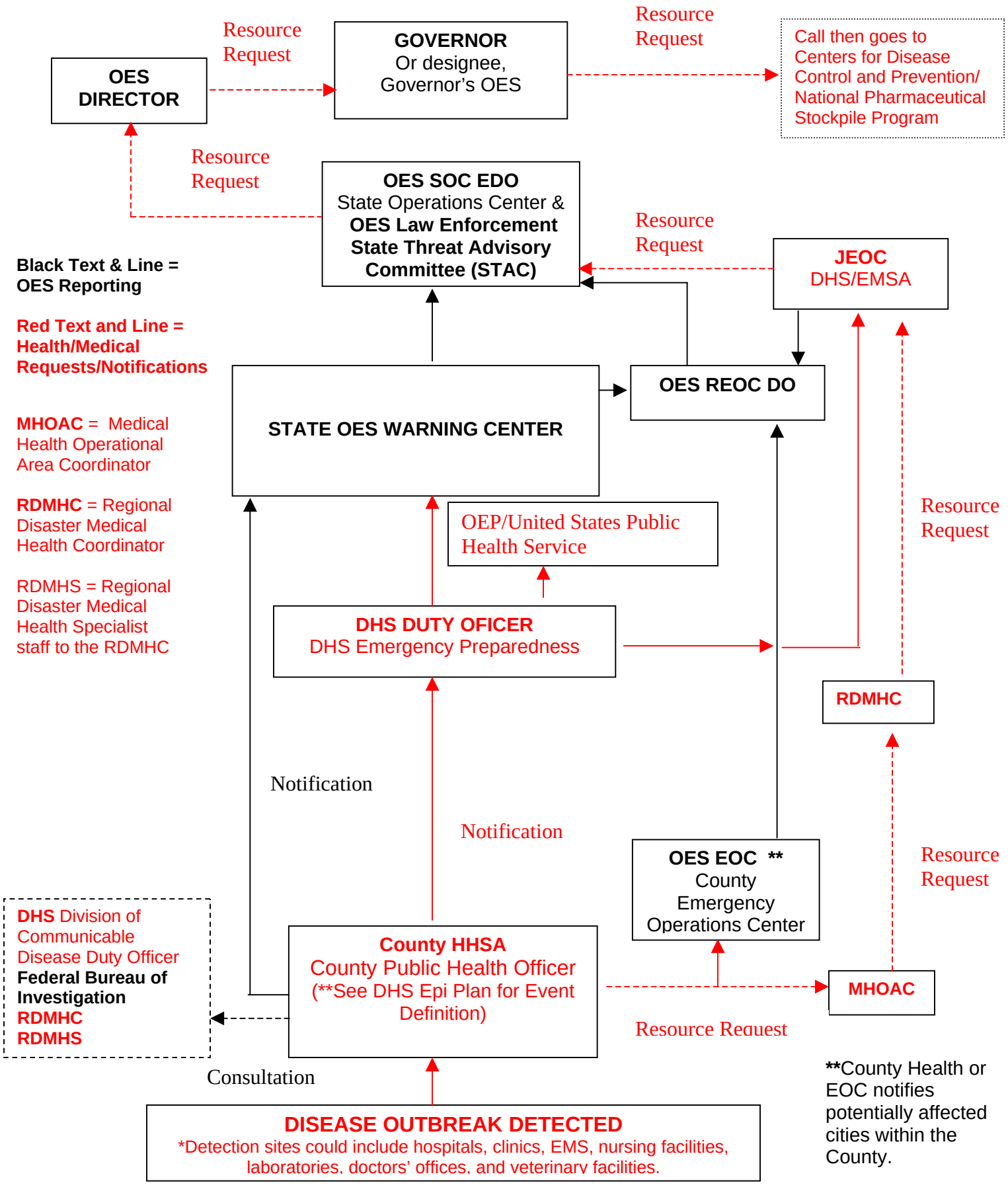
- ❑ Overt release of a chemical, biological agent or outbreak naturally occurring highly suspected or confirmed
- ❑ Claim of release by intelligence or law enforcement
- ❑ Indication from intelligence or law enforcement of a likely attack
- ❑ Clinical or epidemiological indications
    - ❑ Large number of ill persons with similar disease or syndrome
    - ❑ Large number of unexplained diseases, syndromes, or deaths
    - ❑ Unusual illness in a population
    - ❑ Higher then normal morbidity and mortality from a common disease or syndrome
    - ❑ Failure of a common disease to respond to usual therapy
    - ❑ Single case of disease from an uncommon agent
    - ❑ Multiple atypical presentations of disease agents
    - ❑ Similar genetic type in agents isolated from temporally or spatially distinct sources
    - ❑ Unusual, genetically engineered, or antiquated strain of the agent
    - ❑ Endemic disease or unexplained increase in incidence
    - ❑ Simultaneous clusters or similar illness in non-contiguous areas
    - ❑ Atypical aerosol, food, water transmission
    - ❑ Deaths or illness among animals that precedes or accompanies human death
    - ❑ Illnesses in people not exposed to common vent systems
- ❑ Positive Laboratory results or highly toxic agent or infectious disease
- ❑ Unexplained increase in emergency medical service requests resulting in significant, rapid decrease in resources and supplies

Requesting the Strategic National Stockpile



Adapted from the CDC Document

SNS Assets - NOTIFICATION/RESOURCE REQUEST MATRIX: Local to State



PHARMACEUTICAL RESOURCES

Local

There are local pharmaceutical resources available. Details are confidential for security purposes.

State Assistance

Medical/Health Mutual Aid System:

The state mutual aid system is implemented to acquire additional resources during major medical and health related incidents that impose increase demands on local medical and health supplies. As required by SEMS, the sequence of acquisition is 1) access local or regional assets through the mutual aid system; 2) purchase supplies through wholesalers; and 3) submit a Governor's request to the Centers for Disease Control and Prevention (CDC) for the Strategic National Stockpile (SNS) assets. Pharmaceuticals would be administered through referrals to local clinical sites established by the local public health agency.

State Departments' Agreement and Plan to Purchase Medical Supplies:

In December of 1998, the Emergency Medical Services Authority (EMSA), Department of Health Services (DHS), and the Department of General Services (DGS) signed a memorandum of understanding to engage in a cooperative effort to enable the State to procure medical and pharmaceutical supplies after a major disaster. This process will identify the supplies most likely to be needed, list the vendors who provide these supplies, and specify the process to purchase them.

If there is no immediate stock available, vendors will go to their distribution network to provide supplies ordered by the State. The vendors are major wholesalers that distribute large quantities of pharmaceuticals on a national basis. Wholesalers have indicated that these supplies can be shipped within 24 hours to staging sites. However, these supplies must be redistributed to clinical sites, which will take additional time. Implementing the current Memorandum of Understanding between these entities to obtain these resources is a priority for EMSA, DHS, and DGS. In addition to these state agreements, the Governor has the ability to freeze pharmaceutical assets following the declaration of a state of emergency. Standby Orders give the Governor the authority to mobilize certain resources critical to responding to any declared emergency.

Federal Assistance

Strategic National Stockpile (SNS):

The CDC, in Atlanta, GA, has twelve emergency "Push Packages" strategically located around the country that can be delivered within 12 hours after the Governor makes a request. Antiviral medications have been added to the Push Packages.

Managed Inventory (MI):

If the incident requires a large or multi-phased response, or if only specific drugs/medications are needed, the CDC will prepare managed inventory (MI) packages – a component of the SNS – that will arrive within 24 to 36 hours. These packages can be tailored to provide specific medications or agents in the quantities needed. The MI can supplement the Push Package with medical material specific for response to the agent of concern and can deliver quantities greater than all twelve Push Packages combined.

STAFFING RESOURCES

Local

The following may be potential sources of staffing:

County of San Diego, Health and Human Services Agency
San Diego County Pharmacy Emergency Response Team (RxERT)
Volunteer Clinical Disaster Service Workers
Volunteer Organizations Active in Disasters / Medical Reserve Corps
General public using media requests for volunteers

If San Diego County needs assistance setting up and carrying out mass prophylaxis plans, the following resources may be available:

State Assistance

- American College of Emergency Physicians (ACEP)
- Association of Pharmacists
- Department of Health Services (DHS): Consultation and oversight, then staffing. Also has expertise available for assistance in obtaining, handling, and dispensing medications.
- Emergency Medical Services Authority (EMSA): Can coordinate DMAT activation, and can provide a Management Support Team (MST) for Operational Guidance and Logistical Support to the DMATs.

Federal Assistance

National Medical Response Team (NMRT):

These are four specialty teams available through the U.S. Public Health Services (ESF #8 in the Federal Response System). These teams, which are trained to respond to WMD events, have a pharmaceutical cache available.

SNS Technical Advisory Response Unit (TARU):

The CDC TARU is comprised of five to eight members and will provide technical assistance on all aspects of the SNS. The primary mission of the TARU is to receive SNS material at a designated location and facilitate transfer of SNS material to state and local authorities. The TARU will also assist with breakdown of bulk material, assist with dispensing and distribution issues, advise state and local authorities on future needs and requests and advise on storage and transportation issues.

Other Federal Resources:

It is important to note that there are other sources of Federal Assistance that could be provided. The Disaster Medical Assistance Teams (DMAT) of the National Disaster Medical System (NDMS) and the health care professionals of the Commissioned Corps Readiness Force (CCRF) of the US Public Health Service are also assets that are available to provide assistance and respond during an emergency.

The County of San Diego has a long history of collaboration with the local military assets in San Diego. This collaboration includes sharing of resources, participating in planning efforts, response efforts, and training and exercise opportunities.

2.0 DISTRIBUTION WAREHOUSE

Overview:
The distribution warehouse will be the receiving, storing, and staging area from which the SNS assets will be received and apportioned to the dispensing sites. The roles of the distribution warehouse include:

- Formally accept custody of SNS assets from the state
- Store SNS assets at the distribution warehouse for easy identification until the inventory control function issues it to dispensing sites
- Stage SNS assets according to delivery orders generated by the inventory control function for delivery by the apportionment function to dispensing sites
- Ensures the proper storage, handling, and transfer of controlled substances while material is in the custody of the distribution warehouse.
- Arrange and ensure security at the distribution warehouse through the Area Law Coordinator
- Arrange transportation through the distribution function to appropriate SNS assets from the distribution warehouse to the dispensing sites
- Maintain warehouse management functions
- Maintain inventory management functions

Distribution Warehouse Sites:
Primary and secondary distribution warehouses have been identified to receive, store, and stage the SNS assets that will be received from the CDC via the state of California to be apportioned to the dispensing sites. Each site meets the following requirements as specified per CDC guidelines:

- Adequate floor space 12,000 square feet total
    - 5,000 square feet for storage
    - 2,000 square feet for staging
    - 1,000 square feet for office space
    - 4,000 square feet for repackaging

    - Temperature/humidity control for 20° C - 25° C (68° F - 77° F)

    - Sufficient and emergency electrical power for lights, computers, printers, radios, portable refrigeration units, repackaging, and other electrical equipment. Each SNS 12-hour Push Package will contain eight self-contained portable refrigeration units that come with batteries that will maintain temperatures for 2.5 days. After that, the units will need electrical power (35 watts each). Each SNS also will come with an emergency generator to support refrigeration and repackaging equipment in the event emergency electrical power is required.

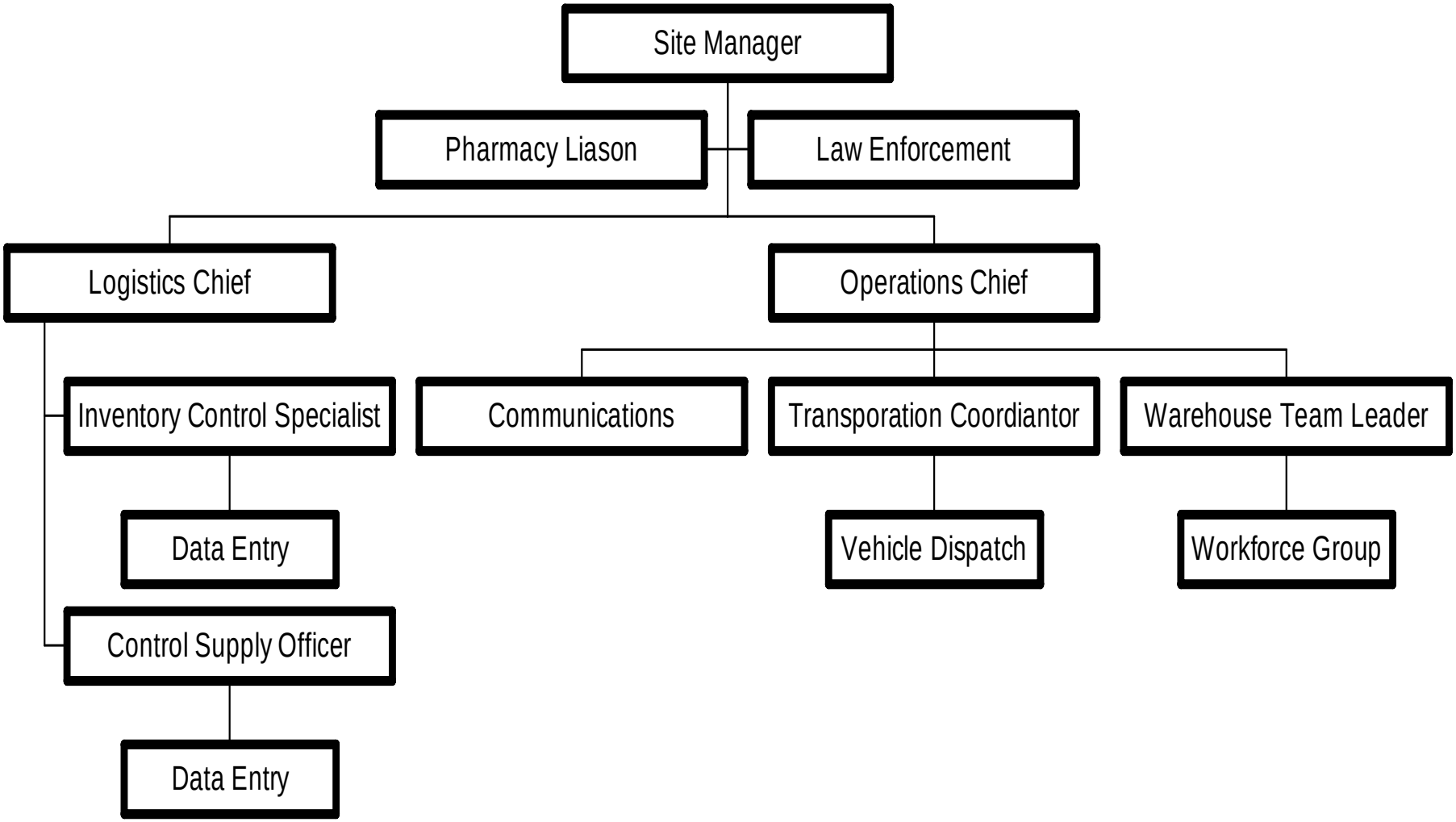
- Multiple access
- Loading docks
- 4,000-pound forklifts
- Adequate security

Command and Control:
Event command and control actions will be coordinated at the County's Emergency Operation Center (EOC) where political leaders, emergency managers, public health and law enforcement officials, and others will work side by side to evaluate information about an emergency and manage their response to it. An SNS liaison will respond to the EOC upon its' activation to coordinate mass prophylaxis resources. This liaison will be able to answer leadership's questions regarding the SNS, clarify leadership information and provide guidance to the mass prophylaxis site coordinator, and explain the mass prophylaxis and SNS operational status reports as necessary. On site a Distribution Warehouse Manager that will be identified to manage the roles and responsibilities of the distribution warehouse and communicate with the SNS liaison at the EOC. (Refer to chart 2.1 for Organizational Structure).

Process Flow Description:
(Refer to chart 2.2 & 2.3 for Distribution Warehouse Physical Layout)

The SNS assets will arrive by either aircraft or ground. The carrier is responsible for off-loading the SNS assets. After the Pharmacy signs for the SNS controlled inventory, the Distribution Warehouse Manager, working with the state (TARU if applicable), is responsible for overall material movement. Process flow is divided into 3 components.

Distribution Warehouse Organizational Chart
Chart 2.1



Staffing:
(Refer to chart 2.4 for Distribution Warehouse Personnel Chart)

Personnel assets will be requested through the EOC and directed to the site. For example, the Director of Emergency Medical Services Emergency Preparedness will contact General Services and Public Safety to request logistical personnel to staff the Distribution Warehouse. Additional resources may be requested from County Pharmacy, Fleet Maintenance, Office of Emergency Services (OES), and other County departments. Personnel will be required to maintain on-site operations as described in the position checklists and participate in the deactivation stage.

Disaster Service Workers (DSW) will respond to pre-designated collection points coordinated by County HHSA MOC for event specific registration and instructions for deployment to the distribution warehouse.

Distribution Warehouse Personnel Chart

NOTE. Lower/higher numbers may be used out of necessity based on the amount of materiel received.

Position	# Of People	Task	Potential Sources
Site Manager	1	Provides overall supervision of warehouse and assumes overall responsibility for receipt, repackaging and distribution of SNS assets and the return of unexpended resources.	EMS Duty Officer / OES Duty Officer
Security / Safety	4 or more	Responsible for providing site and transportation protection.	Local Law Enforcement (coordinated by County Sheriff)
Pharmacy Liaison	1	Coordinates with County pharmacist on pharmaceutical dispensing plan.	Pharmacists
Logistics Section Chief	1	Manages operational function of warehouse.	General Services
Operations Section Chief	1	Manages Logistical function of warehouse.	General Services
Inventory Control Specialist	1	Management of SNS assets delivered to the warehouse from the state.	General Services
Inventory Control Supply Officer	1	Management of assets apportioned and returned from dispensing sites.	General Services
Data Entry	2	Assist Inventory Control Specialist and Supply Officer in data entry of SNS assets received and apportioned to dispensing sites.	Regions
Communications Specialist	1	Responsible for warehouse and transportation communication capabilities.	County Communications
Transportation Coordinator	1	Ensure adequate transportation assets are available to move SNS assets from the warehouse to dispensing sites.	Fleet Maintenance
Vehicle Dispatch	1	Works with Transportation Coordinator to deliver SNS assets to dispensing sites.	Fleet Maintenance
Warehouse Team Leader	1	Overall supervision of operational workforce group	General Services / Public Safety
Workforce Group	20	4 sections: inspection, staging/receiving, storage/issue and distribution dock.	Public Safety

Chart 2.4

Distribution Warehouse Position Checklist – Incident Commander

Role:

- ❑ This position assumes overall responsibility for receipt, repackaging and distribution of SNS material and the return of unexpended assets.

On-site Operations:

- ❑ Review Position Checklist
- ❑ Conduct staff briefing(s).
- ❑ Establishes the Incident Command System (ICS).
- ❑ Works within ICS to establish Team Leaders, Work-force groups, and support staff.
- ❑ Determines the need for and/or assesses the request for resources.
- ❑ Approves the initial and re-supply orders of SNS material for distribution for mass prophylaxis sites and/or treatment centers on the basis of health, epidemiological, intelligence or inventory availability information.
- ❑ Coordinates, tracks and maintains medical material inventory using existing inventory and patient management systems.
- ❑ Works with TARU to order more material.
- ❑ Receives status reports of the warehouse through the Operations Supervisor

Deactivation Phase:

- ❑ Ensure that all records and reports are turned in to the appropriate official(s).
- ❑ Ensure that an After Action Review occurs and is documented.
- ❑ Participate in After Action review meetings, as required.

Distribution Warehouse Position Checklist-Security Personnel

On-site Operations:

- ❑ Review Position Checklist.
- ❑ Attend overall staff briefing as scheduled by Incident Commander.
- ❑ Coordinate Security of SNS personnel, equipment and material at the warehouse.
- ❑ Establish an entry control point at warehouse.
- ❑ Coordinate and provide security for controlled substances while in warehouse.
- ❑ Provide traffic, crowd and access control at the warehouse.
- ❑ Determine whether existing security measures are appropriate for meeting the potential threats that are identified.
- ❑ Assess alternate routes for entry and exit to the facility.
- ❑ Review the transportation infrastructure to determine routing of SNS material.
- ❑ Develop a tactical plan for security protection of the transportation vehicle used to move material to the mass prophylaxis sites.

Deactivation Phase:

- ❑ Ensure all records and reports are turned in to the Incident Commander.
- ❑ Identify issues for the After Action Report.

Distribution Warehouse Position Checklist-Operations Section Chief

On-site Operations:

- ❑ Review position checklist.
- ❑ Attend overall staff briefing as scheduled by Incident Commander.
- ❑ Receive mission objectives from warehouse Incident Commanders.
- ❑ Conduct a mission briefing to warehouse members.
- ❑ Distribute warehouse position checklists to functional areas.
- ❑ Coordinate and establish warehouse.
- ❑ Report supply needs to Logistics Section Chief.
- ❑ Supervise warehouse, communications and transportation control functions.
- ❑ Work with security to ensure the warehouse is protected.
- ❑ Coordinate work hours and request replacement workforce through the warehouse Logistics Chief.
- ❑ Coordinate eating and rest cycles with the warehouse Logistics Chief.

Deactivation Phase:

- ❑ Ensure all records and reports are turned in to the Incident Commander.
- ❑ Identify issues for the After Action Report.

Distribution Warehouse Position Checklist-Logistics Section Chief

On-site Operations:

- ❑ Review position checklist.
- ❑ Attend overall staff briefing as scheduled by Incident Commander
- ❑ Set up all communications equipment and establish communication protocols.
- ❑ Work with staff in each area to set up physical workstations.
- ❑ Arrange for procurement of additional equipment/supplies as needed.
- ❑ Work with Operations Section Chief to ensure that ordering, inventory and re-supply of the pharmaceutical cache meets standards.
- ❑ Make arrangements for food and beverages for all staff.
- ❑ Request additional staff as needed.
- ❑ Arrange for transportation of staff members to and from the treatment site.
- ❑ Provide logistical support as needed by each station.

Deactivation Phase:

- ❑ Ensure all records and reports are turned in to the Incident Commander.
- ❑ Supervise the break down and repacking of all equipment/supplies at each station.
- ❑ Arrange to have all equipment/supplies returned to place of origin.
- ❑ Ensure facility is cleaned and returned to former operating condition.
- ❑ Identify issues for the After Action Report.

Distribution Warehouse Position Checklist-Inventory Control Function Specialist

On-site Operations:

- ❑ Review position checklist.
- ❑ Attend overall staff briefing as scheduled by Incident Commander.
- ❑ Enter orders into inventory management system and create and issue document (given to Supply Officer in the warehouse).
- ❑ Track unused SNS material that will be returned to the CDC.
- ❑ Assist IC in tracking controlled substances.
- ❑ Report warehouse operations to IC and ensure instructions are followed at warehouse.
- ❑ Prepare supply requisition requests and forward to warehouse function area.
- ❑ Prepare proper paperwork to release controlled substances to mass prophylaxis sites.
- ❑ Request need for additional supplies to IC.

Deactivation Phase:

- ❑ Ensure all records and reports are turned in to the Incident Commander.
- ❑ Identify issues for the After Action Report.

Distribution Warehouse Position Checklist-Inventory Control Function Supply Officer

On-site Operations:

- ❑ Review position checklist.
- ❑ Attend overall staff briefing as scheduled by Incident Commander.
- ❑ Manage invoices at the warehouse.
- ❑ Receive issue document from Inventory Control Specialist and forward to warehouse Team Leader.
- ❑ Provide warehouse Team Leader with copy of forms to fill material requests.
- ❑ Provide Transportation Coordinator and drivers copies of needed forms and instructions to complete the mission.
- ❑ Upon return of driver, "close" mission account and inform warehouse Operations Section Chief.
- ❑ Manage the receipt of supply requisition and controlled substances release forms.
- ❑ Work with the warehouse Team Leader to ensure requested material is handled properly.

Deactivation Phase:

- ❑ Ensure all records and reports are turned in to the Incident Commander.
- ❑ Identify issues for the After Action Report.

Distribution Warehouse Position Checklist-Data Entry

On-site Operations:

- ❑ Review position checklist.
- ❑ Attend overall staff briefing as scheduled by Incident Commander.
- ❑ Enter SNS material data as it arrives from the CDC.
- ❑ Enter SNS data distributed to and returned from mass prophylaxis sites.
- ❑ Generate reports as requested.

Deactivation Phase:

- ❑ Ensure all records and reports are turned in to the Incident Commander.
- ❑ Assist with teardown and re-packing of areas as requested.
- ❑ Identify issues for the After Action Report.

Distribution Warehouse Position Checklist-Communications Specialist

On-site Operations:

- ❑ Review position checklist.
- ❑ Attend overall staff briefing as scheduled by Incident Commander.
- ❑ Provide timely status reports to the command and control function.
- ❑ Communicate driver reports of deliveries and en route problems.
- ❑ Communicate orders from mass prophylaxis sites.
- ❑ Issue necessary communication equipment.
- ❑ Serve as alternate vehicle dispatcher.

Deactivation Phase:

- ❑ Ensure all records and reports are turned in to the Incident Commander.
- ❑ Assist with teardown and re-packing of areas as requested.
- ❑ Identify issues for the After Action Report.

Position Checklist-Transportation Coordinator

On-site Operations:

- ❑ Review position checklist.
- ❑ Attend overall staff briefing as scheduled by Incident Commander.
- ❑ Acquire the location of the mass prophylaxis sites from the warehouse Incident Commander.
- ❑ Acquire the location of the mass prophylaxis sites from the warehouse Incident Command System.
- ❑ Ensure support for the modes of transportation used. Fuel, repair and recovery services for disabled vehicles must be available. Drivers should have a credit card that allows them to purchase fuel at any commercial location to avoid time wasted driving back to a public works.
- ❑ Delivery vehicles must have the ability to maintain SNS material in transit at appropriate temperatures to ensure its therapeutic efficacy. This requirement also implies that distribution personnel need to ensure that the locations to which they deliver move SNS materials inside immediately.
- ❑ Coordinate with the transportation security element to ensure that the security element that protects the personnel, material and equipment involved in management and distribution of the SNS is established.
- ❑ Review the transportation infrastructure to determine routing of SNS materials. Determine if there are any potential routing obstructions.
- ❑ Ensure all distribution vehicles have communication capabilities. Ensure the assigned radio frequencies.
- ❑ Coordinate with warehouse Incident Commander to ensure proper protocol is met to ensure distribution personnel follow chain of custody when delivering controlled substances.

Deactivation Phase:

- ❑ Ensure all records and reports are turned in to Incident Commander.
- ❑ Identify issues for After Action Report.

Distribution Warehouse Position Checklist-Vehicle Dispatch

On-site Operations:

- ❑ Review position checklist.
- ❑ Attend overall staff briefing as scheduled by Incident Commander.
- ❑ Take direction from Transportation Coordinator, work closely with Communications Specialist and Inventory Control Officer to ensure timely and appropriate delivery of SNS material.

Deactivation Phase:

- ❑ Ensure all records and reports are turned in to Incident Commander.
- ❑ Identify issues for After Action Report.

Distribution Warehouse Position Checklist-Team Leader

On-site Operations:

- ❑ Review your position checklist.
- ❑ Attend overall staff briefing(s) as scheduled by Incident Commander.
- ❑ Provide "on the spot" training to Warehouse Workforce Group.
- ❑ Ensure warehouse location has the required square feet of working space based on amount of material received.
- ❑ Maintain proper temperature control between 59-86 degrees Fahrenheit.
- ❑ Ensure sufficient power and a source of back-up power in the event of a power outage.
- ❑ Ensure security function has established an entry control point and facility lockdown.
- ❑ Ensure warehouse has adequate equipment to support movement of SNS assets.
- ❑ Supervise Warehouse Workforce Group manpower for material movement once off-loaded from aircraft or truck to staging area.
- ❑ Supervise manpower for material movement within the warehouse.
- ❑ Supervise manpower for material movement and supply loading onto distribution vehicles.
- ❑ If needed, supervise manpower to repackage SNS material.
- ❑ Work with TARU to establish a staging area for SNS assets.
- ❑ Work with TARU to separate materials that are not needed from the Push Package and return to the CDC, along with SNS shipping containers.
- ❑ Ensure controlled substances are secured in a locked area.
- ❑ Notify Operations Section Chief if additional manpower is needed or if injuries occur.

Deactivation Phase:

- ❑ Supervise the break down and repacking of all equipment/supplies.
- ❑ Ensure all records and reports are turned in to Incident Commander.
- ❑ Identify issues for the After Action Report.

Distribution Warehouse Position Checklists- Workforce Group
Inspection
Staging/Receiving
Storage/Issue
Carrier On-load

On-site Operations-Inspection Section:

- ❑ Review your position checklist.
- ❑ Attend overall staff briefing(s) as scheduled by Incident Commander.
- ❑ Coordinate with all warehouse sections to resolve erroneous discrepancies i.e., mistakes made by sections, (overages, shortages etc), not actual discrepancies.
- ❑ Return erroneous discrepancies to the proper warehouse section for correction and re-forwarding.
- ❑ Coordinate with warehouse team leader to resolve and process legitimate discrepancies i.e., actual broken, missing, overages, shortages, misidentifies, misdirected etc. Maintain log of all legitimate discrepancies.

On-site Operations-Staging and Receiving Section:

- ❑ Review your position checklist.
- ❑ Attend overall staff briefing(s) as scheduled by Incident Commander.
- ❑ Verify assets against carrier documentation.
- ❑ Annotate carrier documentation with any discrepancies i.e., broken, missing, overages, shortages, misidentified, misdirected etc.
- ❑ Forward all discrepancies (assets ad documentation) to the Inspection Section.
- ❑ Place assets in staging areas.
- ❑ Breakdown, sort, count and repackage assets.
- ❑ Bag/box and mark assets.
- ❑ Forward serviceable assets and documentation to the Storage and Issue Section.

On-site Operations-Storage and Issue Section:

- ❑ Review your position checklist.
- ❑ Attend overall staff briefing(s) as scheduled by Incident Commander.
- ❑ Verify received assets against documentation.
- ❑ Annotate documentation with any discrepancies i.e., broken, missing, overages, shortages, misidentified, misdirected, etc.
- ❑ Forward discrepancies (assets and documentation) to the Inspection Section.
- ❑ Locate property in appropriate warehouse storage/hold locations.
- ❑ Forward documentation to the Inventory Control Function Specialist.
- ❑ Pull and package issues (shipments) as directed by the Inventory Control Function Supply Officer.
- ❑ Forward issues (shipments) and documentation to the Carrier On-load Section (distribution dock).

On-site Operations – Carrier On-Load Section (Distribution Dock):

- ❑ Verify assets/shipments against documentation.
- ❑ Annotate documentation with any discrepancies i.e., broken, missing, overages, shortages, misidentified, etc.
- ❑ Forward all discrepancies (assets and documentation) to the Inspection Section.

- ❑ Load carrier.
- ❑ Provide driver with carrier documentation if applicable.
- ❑ Assist other Sections as workload permits.

Deactivation Phase:

- ❑ Break down and repack all equipment/supplies.
- ❑ Ensure all records and reports are turned in to Incident Commander.
- ❑ Identify issues for the After Action Report.

Distribution Warehouse Position Checklist-Pharmacy Liaison

Onsite Operations:

- ❑ Review your position checklist.
- ❑ Attend overall staff briefing(s) as scheduled by Incident Commander.
- ❑ Meet CDC TARU and provide authorized signature for receipt of SNS.
- ❑ Provide consultation on handling of pharmaceuticals to warehouse staff.
- ❑ Provide frequent updates to management at EOC.

Deactivation Phase:

- ❑ Assist with break down of station and proper repacking of pharmaceuticals.
- ❑ Ensure all records and reports are turned in to Incident Commander.
- ❑ Identify issues for After Action Report.

Inventory Management:
During an event, particularly in the first few days, local jurisdictions may be overwhelmed with patients and have a limited supply of material and assets available. Consequently, requests and orders for supplies may temporarily exceed local resources until the SNS assets arrive and is apportioned among the dispensing sites. It will be necessary to maintain accurate inventory balances to ensure resources are effectively apportioned. Inventory management includes:

- tracking all receipts;
- allocation of supplies;
- processing requests from clinical dispensing sites;
- creating issue documents for picking material;
- recording the locations to which it sends all material, equipment, and cargo containers;
- monitoring stock levels and working with the State and the CDC technical advisory response unit (TARU) to replenish material; and
- recovering unused SNS material and assets

Inventory will be managed by utilizing an Access database to track, apportion, process, record, and monitor all resources allocated to the dispensing sites. The initial allocation of supplies will be based on number of dispensing sites, actual and projected case counts for each site. A new inventory management software package is in the process of being purchased and tested. This software package will include bar coding and management of the inventory once fully operational.

Inventory management will provide for recording the order and creating an issue document. The receipt, store, stage function will use the issue document to pick and stage material by dispensing sites, treatment centers, and other locations. The distribution function will use the issue document to dispatch its transport vehicles to those locations.

The logistics section chief at each of the dispensing sites will manage the on-site inventory and will request additional resources by generating an order form to be processed at the distribution warehouse. This process can be initiated by computer generated order form, phone or radio communications from the Dispensing Site Manager to the Distribution Warehouse Manager.

Security:
The County of San Diego Sheriff's Department will coordinate law enforcement to maintain security at the distribution warehouse as well as during transport to distribute SNS assets to the dispensing sites.

- Facility security
    - Site survey
    - Perimeter fences
    - Secure area for storage of controlled substances
- Personnel security
    - Coordinate credentialing process
    - Route and traffic management coordination

Transportation:
The County fleet maintenance and/or the warehouse contractor will handle the distribution of the SNS assets from the distribution warehouse to the dispensing sites. An Access program will be utilized to track SNS assets from distribution to dispensing. Vehicle dispatching and credentialing of drivers for security purposes will take place at the distribution warehouse.

3.0 DISPENSING

Overview:

In the event of a suspected or confirmed bioterrorism attack or naturally occurring disease outbreak, mass prophylaxis or treatment sites may be necessary to treat large numbers of people. These sites may include schools, community centers, hospitals or clinics. Operating dispensing sites at locations other than established healthcare institutions allows them to continue routine operations and be available to treat symptomatic patients.

Dispensing Sites:

Over 80 potential community-based dispensing sites have been selected throughout the six HHSA regions within the County of San Diego. They include schools, churches, community centers and sport/entertainment venues. In addition, the Red Cross has agreements with over 600 schools within the County for Mass Shelter Operations and would facilitate opening and providing support staff for Point of Dispensing (POD) Site as necessary. The Red Cross has comprehensive information on the resources available at each of the schools. These sites will be considered the primary locations due to the large number of schools in the County, convenient locations and on-site resources available. Non-school sites or door-to-door services will be considered secondarily depending on the type and scale of the bioterrorism event or disease outbreak. (Appendix F lists the designated dispensing sites in San Diego County. For security reasons, this Appendix will only be released by permission of the San Diego SNS Coordinator or the County Health Officer.)

Physical Requirements & Logistical Considerations - Clinical Distribution Site

1. General Equipment/Supplies
   - Ropes, cones, stakes, etc. (crowd control system)
   - Vehicle for internal support
   - Sign-Making Supplies, computers, power strips, extension cords, printers

2. "Griage" Area
   - 5 or 6 Tables
   - 25 Chairs
   - Office Supplies, 100 pens/pencils, pencil sharpener
   - Forms:
     a) Instructions for Screening & Dispensing of Antibiotic Prophylaxis
     b) Medical Screening Form (Patient History/Physical)

3. Clinical Briefing Area *(To accommodate 50 people)*
   - 2 Tables or Podiums
   - 55 chairs
   - Microphones
   - Forms:
     a) Fact Sheets/Frequently Asked Questions
     b) Disease Fact Sheets
   - Standardized Presentation Materials
   - Presentation Materials Delivery Systems (i.e. PowerPoint)

Flip Chart
Colored Pens for Flip Chart
Office Supplies

4. Interview Area
   (25 interviewers and 25 patients -2 interviewers and 2 patients at each table)
   13 Tables
   50 Chairs
   Medications
   Table Top Computer
   Printer
   Power Strip
   Extension Cord
   Office Supplies
   Office Supplies

5. Physician Consult, if necessary
   1 Table
   2 chairs
   Office Supplies
   Physical Evaluation Equipment/Supplies if scheduled
   Guidance for Physician

6. Pharmacist Consult, if necessary
   1 Table
   2 Chairs
   Office Supplies
   Physical Evaluation Equipment/Supplies if scheduled.
   Guidance for Pharmacist

7. Special Needs Station
   1 Table
   1 Chair
   Office Supplies

8. Dispensing Area
   5 Tables
   15 Chairs
   Medications
   Drug labels
   Guidance for pharmacists
   Protocols
   Office Supplies

9. Mental Health
   1 Table
   2 Chairs
   Office Supplies

10. EXIT

11. Operations Desk

Table
3 Chairs
Office Supplies
Cell Phones
Radios
Copier (Leased)
High Speed, High Capacity Printer (Leased)
FAX Machine (Leased)
Radio Battery Chargers
Extension Cords
Power Strips
Flood Lights (number depends on location of site)
ALS Medical Kit
Cardiac Monitor/Defibrillator
Airway Kit with Oxygen, Masks, Cannulas and Intubation Supplies
Lap top computer with County access

Command and Control:

Each POD site will follow the SEMS organizational structure and will have the following key staff: Incident Commander, Operations/Logistics, Security, Greeting/Triage (Griage), Runners, Briefers, Interviewers, Pharmacy Dispensers, Physician, Mental Health Specialists and Translators. The IC will assume overall supervision of the site, liaison with the EOC/MOC and communicate with the media. All other personnel at the site are subordinate to the IC and will provide information to their supervisors who will report to the IC (see position checklists). The Operations/Logistics personnel will coordinate the acquisition and movement of needed supplies including drugs with the EOC and warehousing facilities. (Refer to Chart 3.1 for Organizational Chart).

Process Flow Description:
(Refer to Chart 3.2 for physical layout)

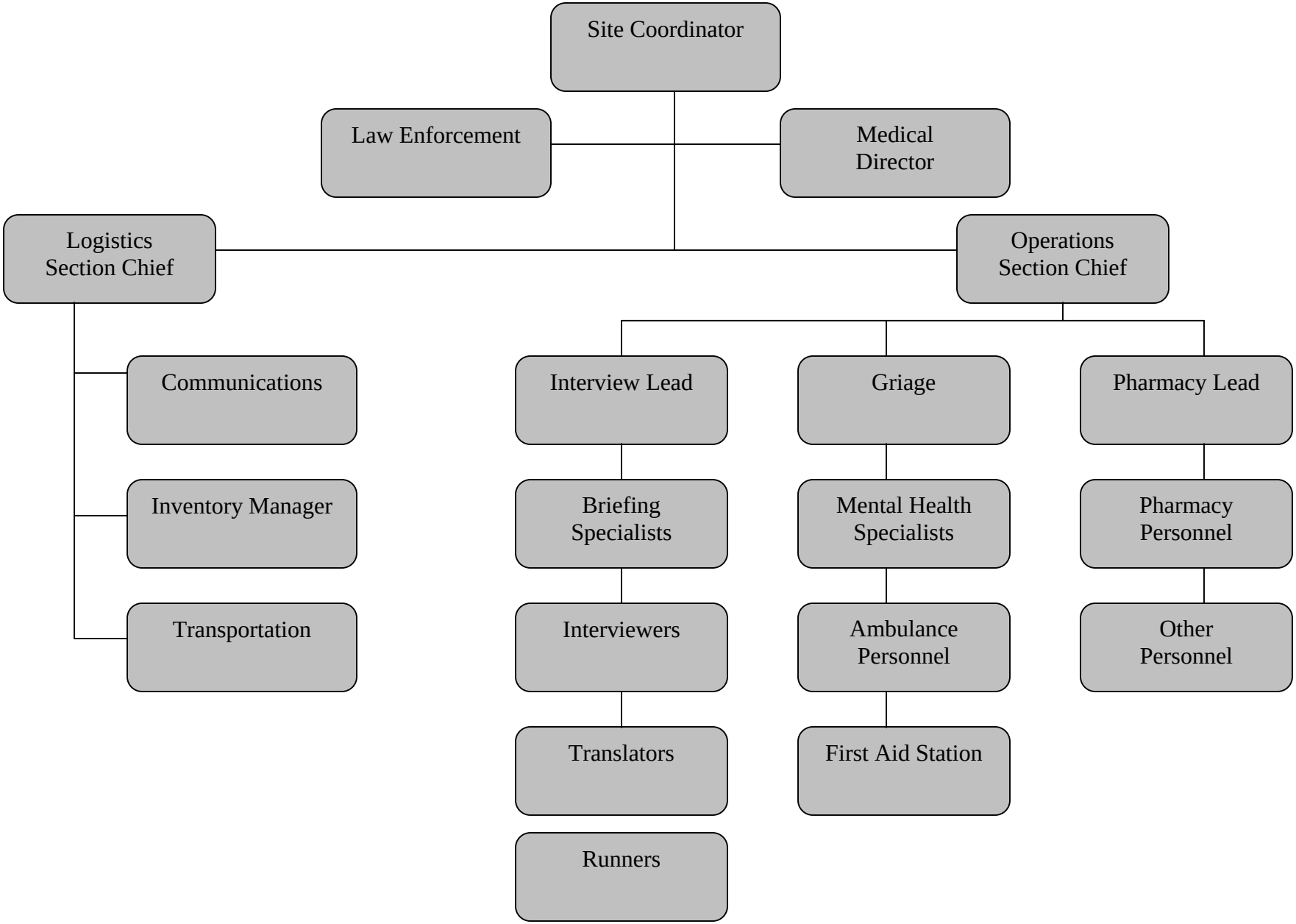
"GRIAGE" Station

Clinical personnel (RN, PM, EMT) will initially greet patients. Patients will be given the Medical Screening form and the disease fact sheet/FAQ and will be instructed to sit in the GRIAGE area to fill out the screening form. Griage personnel will also perform triage for ill/symptomatic patients. If there is an immediate medical emergency, the client will be transported via ambulance to an acute medical facility. Patients with non-immediate medical needs will be referred to the physician on site. Griage personnel will identify patients with special needs (deaf, blind, disabled, etc.) and refer to the special needs station for further interview and processing. Asymptomatic patients will be directed to the next station in dispensing operations.

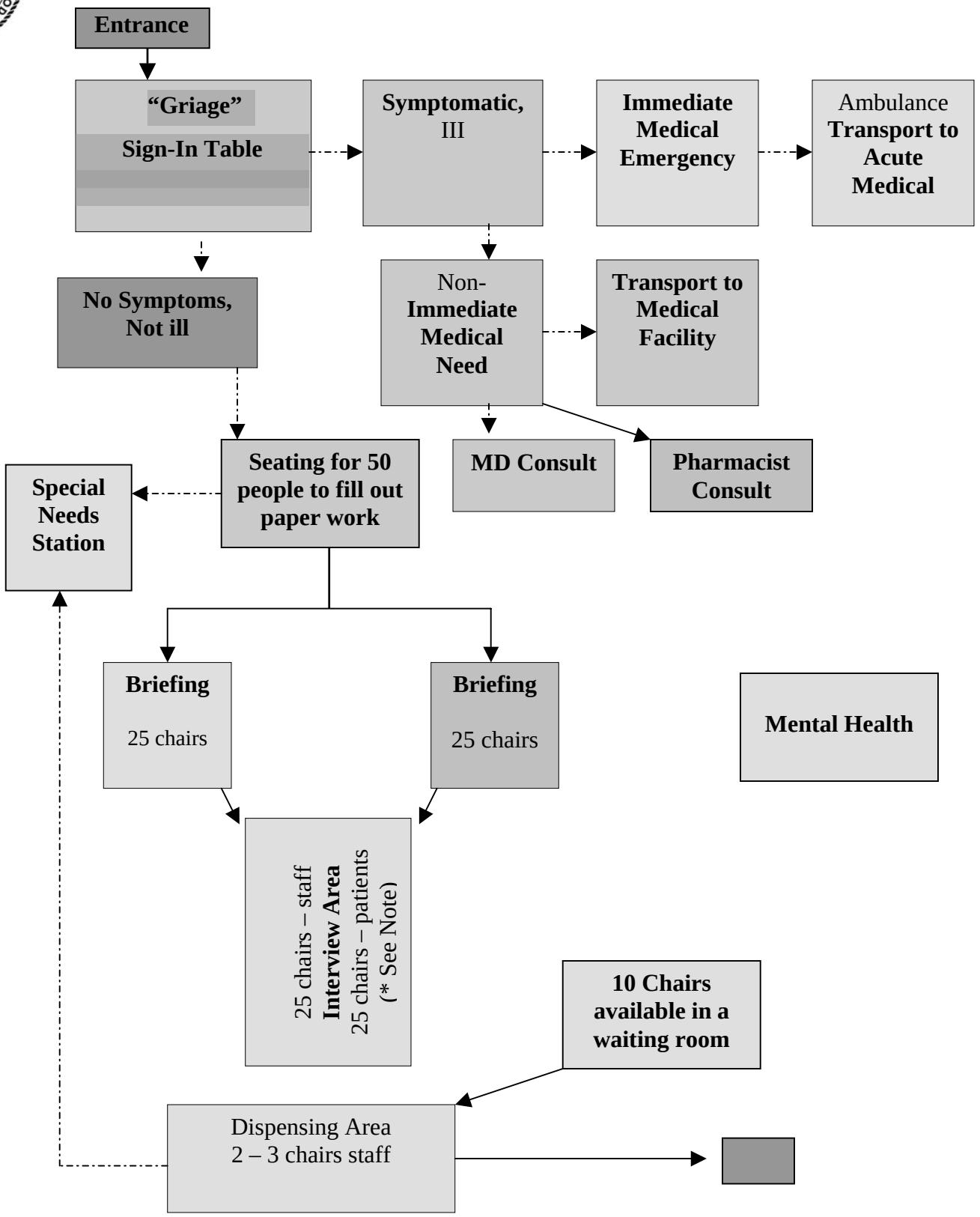
Briefing Station

When 25 people are ready, they will be ushered into one of two briefing areas. A Briefer will provide a consistent, uniform briefing on purpose of prophylaxis or treatment, disease process, current exposure, medication dispensing process, why different antibiotics may be used and mental health issues. The Briefer will then answer questions until an interview station is available.

Mass Prophylaxis Organizational Chart & Reporting Structure (Per SEMS)
Chart 3.1



MASS PROPHYLAXIS SITE SCHEMATIC
(PHYSICAL LAYOUT)
CHART 3.2



The average time per groups of 25 people to move through the entire process is 15 minutes.

* hourly volume can be adjusted up or down by altering this # of staff

Interview Station

The client will then proceed to the interview area. PHNs, RNs, Pharmacists and other clinical professionals will review each client's Medical Screening Form for completeness and accuracy and answer any questions. Patients will be assessed for mental health issues and referred to the mental health station if needed. Ill/symptomatic patients not already identified will be referred to physician on site or for transport to an acute medical facility. Special needs not already identified will be addressed.

Dispensing Station

When the interview is complete, the patients will proceed to the medication dispensing station. A pharmacist or pharmacy technician will review the Medical Screening Form and answer questions

- If the client answers appropriately to all screening questions, the pharmacist/tech will dispense the antibiotic, give verbal/written instruction for taking the medication, give information on how to obtain more medication and answer any final questions.
- If screening questions arise, a pharmacist will provide an in-depth interview, dispense medications per protocol and provide verbal/written instructions on taking the medication and procedure for obtaining additional medication. If applicable, the pharmacist will give the client a Primary Care Notification Form and instruct the client to call their primary care provider as soon as possible. The pharmacist will consult with and/or refer patients to the physician on site as needed.

Exit

After the patients receive their medication at the dispensing area, the Medical Screening Form will be collected and patients will exit the facility.

Staffing:

Personnel assets will be requested through the EOC or HHSA MOC and directed to the site. For example, the Chief of Public Health Nursing or designee will contact the Public Health Nursing Managers for regional personnel. The Public Health Nursing Managers will initiate their call back system for staff resources and direct them to the appropriate dispensing or treatment site. Personnel will be required to maintain on-site operations as described in the position checklist and participate in the deactivation stage. (Refer to Chart 3.3 for Personnel Chart).

Clinical Disaster Service Workers (CDSW) will respond to predesignated collection points for event specific registration and instructions for deployment to a dispensing site.

Job Descriptions:

The following is a brief description of the key personnel identified to staff a mass prophylaxis site. The position checklists further outline the activities and responsibilities for each position during on-site operations and deactivation. County personnel will be the initial staffing source

for mass prophylaxis sites. However, depending on the extent of the event, a variety of staffing sources may be considered. (Refer to Appendix E for Job Description Sheets).

Incident Commander

Provides overall supervision of mass clinic activities. Acts as the primary liaison with the EOC/DOC and is the primary media contact. Gives assignments and directs all those administering prophylactic medication and vaccines. Provides assistance to on duty staff at all stations as needed.

Operations/Logistics (EMS Duty Officer and BT PHN)

Provides lead role in planning, set-up and administration activities. Ensures smooth flow of patients throughout clinic stations. Ensures adequate supplies are maintained and communicates supply needs to IC. Ensures proper storage of medications and other clinic supplies. Arranges for water, food etc. for staff.

Security: (Local Law Enforcement)

Ensures orderly flow of traffic and parking at clinic site. Maintains orderly movement of patients through clinic site. Provides necessary control if persons become unruly. Assists operations/logistics team in maintaining security of medications and other supplies.

Greeting/Triage-GRIAGE (Clinical Personnel)

Greets and conducts initial orientation of patients upon their arrival. Provides basic information, distributes written materials and instructs patients to complete the Medical Screening form. Triages symptomatic/ill patients to MD on site or for immediate transport to an acute medical facility. Identifies patients with special needs (blind, deaf, disabled etc.) and refers them to special needs station for further processing. Directs asymptomatic patients to the next station for briefing.

Runners (County pool)

Assists Griage person with greeting patients along the waiting line. Provides assistance with distributing information sheets, Medical Screening forms, answering questions, and monitoring clinic flow. Reports symptomatic/ill and special needs patients to Griage person.

Briefer (County Clinical Personnel)

Provide on site briefing to patients regarding purpose of their visit, disease information, current exposure information, purpose of antibiotic prophylaxis, why different antibiotics may be given and mental health issues. After briefing, will answer questions. The briefer will then answer basic questions until an interview station is available.

Interviewers (Clinical personnel)

Review each patient's form for completeness and accuracy, answer questions, assess for mental health issues and refer to mental health station if appropriate. If not already identified, route

symptomatic/ ill patients to physician on site or for immediate transport to an acute medical facility. Address special needs not already identified. **Note:** ***One person from this group will work at the special needs station.***

Pharmacy Dispensing (Pharmacists and Pharmacy Technicians)

Reviews Medical Screening form, dispenses medication as appropriate, provides written and verbal instructions on taking medications and answers final questions. Provides an in-depth interview for patients answering yes to any questions on the Medical Screening form. Follows appropriate protocols for patients with contraindications. Consults with and/or refers patients to physician on site as needed.

Physician

Provides clinical assessment of patients who are ill/symptomatic, answers medical questions and consults with pharmacists as needed. Provides an in-depth interview for patients answering yes to any questions on the Medical Screening form. Assists IC with overall clinic management and media communication.

Mental Health Specialists (County Mental Health Staff)

Provide on site mental health counseling and referrals to patients as needed.

Personnel Chart
Clinical Distribution Site

NOTE: Numbers are based on plan to process 375 people per hour for a 24-hour period. 9000 patients will be processed at one location and 54,000 patients if six sites were opened. The average time per groups of 25 people to move through the entire process is 15 minutes. Approximately 60-65 staff are needed to run one clinic during a 12-hour shift. Lower/higher numbers or different levels of expertise may be used out of necessity based on availability of staff and the type of event.

Position	# of People	Task	Potential Sources
Incident Commander	1	Overall supervision, liaison with EOC, DOC, media	PHN Manager, PHN IV, /BT PHN
Operations/ Logistics	2	Clinic function, flow, performance/ set up, material and equipment acquisition	BT PHN, other PHNs, EMS Duty Officer
MD	1	Clinical Assessment, medical consultation, assist site coordinator.	County or non-County MD
Security	4 or more	Security/law enforcement	County Sheriff and local law enforcement
Greeting/Triage (Griage)	2-3	Greets, triage	PHN/RN/Paramedic
Interviewers	25	Interview, review paperwork, answer questions, refer to MD **(Designate Lead)**	PHNs, RNs, NPs, PAs, LVNs
Briefing	2	Brief patients on purpose, disease, treatment, etc.	Health Educators, RNs
Mental Health Specialist	1-2	Mental health services	County Mental Health Staff
Pharmacy Dispensing	10	Interviewing and medication distribution, consult with MD **(Designate Lead)**	Pharmacists, RNs
Pharmacy Technicians	2-3	Assist pharmacists with breakdown, repacking, labeling etc of SNS material, assist Inventory Manager with receipt and breakdown of incoming medications/supplies.	Pharmacy Technicians
Translators	**	Fluent in English and language of population	County pool or other
Runner	2-4	Assists Griage with handing out paperwork/greeting, assists at all stations as needed, assists Inventory Manager with receipt and breakdown of incoming medications/supplies.	County pool – clerical, CDIs, Other
Data Entry	2	Collect/enter data from medical screening form, assist patients at exit	County pool or other
First Aid/Special Needs	2-3	Address patient first aid and any special needs, refer to other stations as appropriate, consult with Griage.	PHNs, RNs
Inventory Manager	1	Monitor receipt and return of SNS material, enter data into SNS tracking system	County pool or other

** Translators as per local needs. Listed here as a reminder that language barriers need to be addressed.

Chart 3.3

Dispensing Site Position Checklist – Incident Commander
(Public Health Nurse Manager, BT Lead PHN)

Upon Activation:

- ❑ Receive briefing from local management and/or from State Joint Emergency Operation Center (JEOC). Ensure knowledge of full mission request. Communicate any concerns or problems prohibiting mission completion.
- ❑ Review Mass Stockpile & Prophylaxis Planning Guide.
- ❑ Determine staffing needs and acquire appropriate staff resources.
- ❑ Meet with your direct reports:
    - **Logistics Section Chief**
    - **Operations Section Chief**
    - **Medical Director**
    - **Law Enforcement**

  Establish chain of command and performance expectations.
  Ensure that they are personally prepared, self-sufficient and adequately equipped to perform their assignments.
- ❑ Prepare a briefing statement, to be given to staff members at scheduled briefing(s):
    - Mission as assigned by local management
    - Latest event information and environmental conditions
    - Identification of the affected local emergency management structure
    - Pertinent or unique cultural or local considerations
    - Shift considerations, and transition instructions to oncoming staff
    - Problem solving process and methods for establishing or changing priorities
    - Resource Allocation procedures
    - Communication process and chain of command (SEMS).
- ❑ In conjunction with Public Health Services Administration, determine hours of operation and assign someone to develop a shift roster as needed.

On-site Operations:

- ❑ Review Position Checklist
- ❑ Conduct staff briefing (s).
- ❑ Establish interface with local officials:
    - Establish call-back numbers to local management.
    - Notify local officials when you are ready to begin processing patients.
    - Report progress to local management as appropriate.
- ❑ Review work schedule and specific assignments for each group of staff.
- ❑ Ensure consistency in information provided to patients in all stations.
- ❑ Assist local government in briefing officials and media, as appropriate.
- ❑ Establish time schedule for operational briefings, and conduct as scheduled.
- ❑ Monitor patient flow through the process, and move staff where necessary to reduce or eliminate bottlenecks in the process.
- ❑ Prepare and review Demobilization Plan with your direct reports as end of mission becomes eminent.

Deactivation Phase:

- ❑ Ensure that all records and reports are turned in to the appropriate official(s).
- ❑ Conduct exit interviews with your direct reports and appropriate local officials.
- ❑ Ensure that an After Action Review occurs and is documented.
- ❑ Participate in After Action review meetings, as required.

Dispensing Site Position Checklist – Logistics Section Chief
(Management Experience)

Upon Activation:

- ❑ Receive briefing from Site Coordinator (your supervisor). Ensure knowledge of full mission request and plan of operations.
- ❑ Review Mass Prophylaxis Planning Guide.
- ❑ Meet with your direct reports:
    - **Communications (function)**
    - **Inventory Manager**
    - **Transportation (function)**
    - **Runners**
    - **Data Entry**
  - Establish chain of command and performance expectations.
  - Ensure that they are personally prepared, self-sufficient and adequately equipped to perform their assignments.
- ❑ Prepare a briefing statement, to be given to staff members at scheduled briefing(s):
  - Facility overview, including locations of stations, restrooms, break rooms, emergency exits, etc.
  - Communications protocol
  - Role of logistics in this operation: services you provide, problems you solve, etc.
- ❑ Ensure shipment of equipment/supplies and arrange for transport to treatment site.
- ❑ Ensure that ground transportation is ordered and available for all staff when team reaches destination.
- ❑ Establish communications protocols.

On-site Operations:

- ❑ Review Position Checklist
- ❑ Participate in staff briefing(s) as scheduled by the Site Coordinator.
- ❑ Maintain Unit Log.
- ❑ Set up all communications equipment (phones and radios) and establish communications protocols.
- ❑ Work with staff in each area to set up physical workstations.
- ❑ Arrange for procurement of additional equipment/supplies as needed and as authorized by Site Coordinator.
- ❑ Work with Operations Section Chief to make sure that the ordering, inventory, and re-supply of the pharmaceutical cache meets standards.
- ❑ Make arrangements for food and beverages for all staff members. Provide plenty of fluids at each work location.
- ❑ Anticipate staff needs and request additional staff as needed.
- ❑ Arrange for transportation of staff members to and from the treatment site.
- ❑ Provide logistical support as needed by each station.
- ❑ Participate in the Demobilization Planning process.

Deactivation Phase:

- ❑ Ensure that all records and reports are turned in to the Site Coordinator.
- ❑ Conduct exit interviews with your direct reports.
- ❑ Supervise the break down and repacking of all equipment/supplies at each station.
- ❑ Arrange to have all equipment/supplies returned to place of origin and state of readiness.
- ❑ Ensure facility is cleaned and returned to former operating condition.
- ❑ Identify issues for After Action Report.

Dispensing Site Position Checklist – Operations Section Chief
(Management Experience)

Upon Activation:

- ❑ Receive briefing from Site Coordinator (your supervisor). Ensure knowledge of mission and plan of operations.
- ❑ Review Mass Prophylaxis Planning Guide.
- ❑ Meet with your direct reports:
  - **Lead Interviewer**
  - **Griage**
  - **Lead Pharmacist**
  - Establish chain of command and performance expectations:
  - Ensure that they are personally prepared, self-sufficient and adequately equipped to perform their assignments.
- ❑ Prepare a briefing statement, to be given to staff members at scheduled briefing(s):
  - Operational overview
  - Stations / patient flow
- ❑ Confirm with Logistics Section Chief that all equipment and supplies are being shipped to the treatment site, and that areas are being set up.
- ❑ Develop on-site staff assignments and work schedule.

On-site Operations:

- ❑ Review Position Checklist
- ❑ Participate in overall staff briefing(s) as scheduled by Site Coordinator.
- ❑ Maintain Unit Log.
- ❑ Work with the Logistics Section Chief to set up briefing, interview, clinical and pharmacy areas. Make sure staff has all equipment and supplies needed to carry out their functions.
- ❑ Meet with Interview Lead and ensure that material presented is consistent with mass prophylaxis process and other information being distributed.
- ❑ Meet with Pharmacy Lead and review mass prophylaxis process flow chart ensuring that pharmacy is ready to process prescriptions.
- ❑ Brief all station supervisors on procedures for additional supplies, security problems, treatment issues or other problems.
- ❑ Follow the process as patients begin to filter through each station. Modify any process as needed.
- ❑ Ensure that proper documentation is maintained for all activities.
- ❑ Monitor patient flow and problem solve with Site Coordinator.

Deactivation Phase:

- ❑ Ensure that all records and reports are turned in to the Site Coordinator.
- ❑ Conduct exit interviews with your direct reports.
- ❑ Participate in the After Action process.

Dispensing Site Position Checklist – Medical Director
(Physician)

Upon Activation:

- ❑ Receive briefing from Site Coordinator (your supervisor). Ensure knowledge of full mission request and plan of operations.
- ❑ Review Mass Prophylaxis Planning Guide

On-site Operations:

- ❑ Review Position Checklist.
- ❑ Participate in overall staff briefings as scheduled by Site Coordinator.
- ❑ Provide clinical assessment of patients who are ill/symptomatic.
- ❑ Provide in depth interview for patients answering yes to any questions on the medical screening form and follow appropriate treatment protocols for patients with contraindications.
- ❑ Refer patients to acute medical facility or private doctor as needed.
- ❑ Make treatment decisions based on patient medical history.
- ❑ Answer medical questions and consult with pharmacists as needed.
- ❑ Assist Site Coordinator with overall clinical operations as needed.
- ❑ Assist Site Coordinator with overall media policy.

Deactivation Phase:

- ❑ Ensure all records and reports are turned in to the Site Coordinator.
- ❑ Document all media contacts.
- ❑ Identify issues for After Action Report.

Dispensing Site Position Checklist – Law Enforcement/Security
(Police Officer/Deputy Sheriff)

Upon Activation:

- ❑ Receive briefing from Site Coordinator (your supervisor) and Logistics Section Chief. Ensure knowledge of full mission request and plan of operations.

On-site Operations:

- ❑ Review Position Checklist.
- ❑ Attend overall staff briefing (s) as scheduled by Site Coordinator.
- ❑ Maintain Unit Log.
- ❑ Ensure that a resource accountability system (personnel and equipment) is established and maintained.
- ❑ Arrange for security of equipment and supplies as they arrive at the site.
- ❑ Supervise the set-up of crowd control system (cones, ropes, etc.)
- ❑ Participate in meetings and briefings to ensure that security and safety considerations are a part of the plan at all times.
- ❑ Post security staff as needed. At a minimum:
    - Entrance: admit authorized personnel and patients only; check for hand-stamps (indicating prior treatment; refer these individuals to the Site Coordinator, as they may be trying to acquire additional medications)
    - Exit: ensure no unauthorized entry
    - Pharmacy: Ensure right hand is stamped upon receipt of pharmaceuticals.
- ❑ Ensure security is provided for all personnel, equipment, vehicles and buildings.
- ❑ Meet with local law enforcement and coordinate issues/efforts.
- ❑ Coordinate staff badges/passes as necessary.
- ❑ Identify and make known to the Logistics Section Chief any security issues.
- ❑ Offer operational assistance and recommendations regarding evidence collection, processing, and security to local law enforcement.
- ❑ Notify the Safety Officer of any accidents.

Deactivation Phase:

- ❑ Ensure all records and reports are turned in to the Site Coordinator.
- ❑ Conduct exit interviews with your direct reports.
- ❑ Identify issues for the After Action Report.

Dispensing Site Position Checklist-Griage
(Clinical)

Upon Activation:

- ❑ Receive briefing from Operations Section Chief (your supervisor). Ensure knowledge of full mission request and plan of operations.
- ❑ Review Mass Prophylaxis Planning Guide.
- ❑ Meet with your direct reports:
    - **Mental Health Specialists**
    - **Ambulance Personnel**
    - **First Aid/Special Needs**
- ❑ Establish chain of command and performance expectations.
- ❑ Ensure they are personally prepared, self-sufficient and adequately equipped to perform their assignments.

On-site Operations:

- ❑ Review Position Checklist.
- ❑ Attend overall staff briefing(s) as scheduled by Site Coordinator.
- ❑ Ensure all materials needed are present and notify supervisor if any materials are needed.
- ❑ Coordinate set-up of Check-In area and direct staff to assist in set-up activities.
- ❑ Greet patients as they arrive, provide basic information and answer initial questions. Inform patients that all of their technical questions will be answered in the briefings and/or the interview phase.
- ❑ Give patients the Medical Screening form and the disease fact sheet/FAQ and instruct them to sit in holding area to fill out the screening form.
- ❑ Triage for ill/symptomatic patients.
- ❑ Refer patients with immediate medical emergencies for transport via ambulance to an acute medical facility.
- ❑ Refer patients with non-immediate medical needs to the physician on-site.
- ❑ Identify patients with special needs (i.e. deaf, blind, disabled etc.) and refer to special needs station.
- ❑ Monitor patient flow and problem solve with Operations Section Chief.

Deactivation Phase:

- ❑ Coordinate and supervise the tear down and re-packing of the Griage area.
- ❑ Ensure that all records and reports are turned in to Site Coordinator.
- ❑ Conduct exit interviews with your direct reports.
- ❑ Identify issues for After Action Report.

Dispensing Site Position Checklist – Lead Interview
(Clinical)

Upon Activation:

- ❑ Receive briefing from Operations Section Chief (your supervisor). Ensure knowledge of full mission request and plan of operations.
- ❑ Review Mass Prophylaxis Planning Guide.
- ❑ Meet with your direct reports.
    - **Interviewers**
    - **Translators**
    - **Briefers**
  - Establish chain of command and performance expectations.
  - Ensure they are personally prepared, self-sufficient and adequately equipped to perform their assignments.

On-site Operations:

- ❑ Review Position Checklist.
- ❑ Attend overall staff briefing(s) as scheduled by Site Coordinator.
- ❑ Maintain Unit Log.
- ❑ Ensure that all physical set up and supplies are available for the interview area.
- ❑ Meet with interview staff and review mass prophylaxis process flow charts ensuring that staff have and are clear on treatment protocols.
- ❑ Monitor patient flow and problem solve with Operations Section Chief.

Deactivation Phase:

- ❑ Coordinate and supervise the tear-down and re-packing of each clinical station
- ❑ Ensure all records and reports are turned in to Site Coordinator.
- ❑ Conduct exit interviews with your direct reports.
- ❑ Identify issues for the After Action Report.

Dispensing Site Position Checklist – Interviewer
(Clinical)

On-site Operations:

- ❑ Review your position checklist.
- ❑ Attend overall staff briefing(s) as scheduled by Site Coordinator.
- ❑ Receive assignment-specific briefing from the Lead Interviewer (your supervisor).
- ❑ Ensure that interview site is physically set up and ready for operations
- ❑ Ensure that all necessary flowcharts and forms are available
- ❑ Review each patient's medical screening form for completeness and accuracy.
- ❑ Answer questions and refer for medical consultation as appropriate.
- ❑ Assess for mental health issues and refer to mental health station if appropriate
- ❑ Ensure that all symptomatic/ill not previously identified patients are referred for medical consultation or follow-up as per protocol.
- ❑ Monitor patient flow and problem solve with Interview Lead.

Deactivation Phase:

- ❑ Assist with the tear-down and re-packing of the Interview Area.
- ❑ Ensure all records and reports are turned in to Site Coordinator.
- ❑ Identify issues for the After Action Report

Dispensing Site Position Checklist – Briefing Specialist
(Health Educator or Knowledge of health related topics)

On-site Operations:

- ❑ Review your position checklist.
- ❑ Attend overall staff briefing(s) as scheduled by Site Coordinator.
- ❑ Receive assignment-specific briefing from the Lead Interviewer (your supervisor).
- ❑ Set up the briefing area.
- ❑ Prepare and review briefing material.
- ❑ Confer with the Interview Unit Leader and establish clear, concise, and consistent briefing for patients.
- ❑ Procure and have enough copies on hand to provide the Disease Fact Sheet and Frequently Asked Questions to each patient.
- ❑ Provide on-site briefing to patients regarding purpose of their visit, disease information, current information on who may have been exposed, purpose of antibiotic prophylaxis and why different antibiotics may be given, mental issues and process from briefing point on.
- ❑ After briefing answer general questions. Explain that specific questions will be addressed during the interview process.
- ❑ Monitor patient flow and problem solve with Interview Lead.

Deactivation Phase:

- ❑ Assist with the tear-down and re-packing.
- ❑ Ensure all records and reports are turned in to Site Coordinator.
- ❑ Identify issues for the After Action Report

Dispensing Site Position Checklist – Mental Health Specialist
(Mental Health Clinician)

On-site Operations:

- ❑ Review your position checklist.
- ❑ Attend overall staff briefing(s) as scheduled by Site Coordinator.
- ❑ Receive assignment-specific briefing from the Griage Leader.
- ❑ Prepare the Mental Health Interview Area.
- ❑ Ensure that all patients transiting your area have had their needs met and are as comfortable as possible.
- ❑ Assess patient mental health needs and provide on-site counseling as appropriate.
- ❑ Circulate clinic area to identify patients in need of mental health services.
- ❑ Identify and refer any patient needing a mental health referral and/or follow-up.
- ❑ Monitor patient flow and problem solve with Griage Leader.

Deactivation Phase:

- ❑ Assist with the tear-down and re-packing of the Mental Health Interview Area.
- ❑ Ensure all records and reports are turned in to Site Coordinator.
- ❑ Identify issues for the After Action Report.

Dispensing Site Position Checklist – Lead Pharmacist
(Pharmacist, R.Ph)

On-site Operations:

- ❑ Review your position checklist.
- ❑ Attend overall staff briefing(s) as scheduled by Site Coordinator.
- ❑ Receive assignment-specific briefing from the Operations Section Chief (your supervisor).
- ❑ Confirm and determine numbers and types of pharmacy staff available by specialty.
- ❑ Meet with your direct reports:
    - **Pharmacy Dispeners (Pharmacists)**
    - **Other pharmacy personnel (Pharmacy Technicians)**
  - Brief all pharmacy staff on set up and operations.
  - Ensure that they are personally prepared, self sufficient and adequately equipped to perform their assignments.
- ❑ Ensure that all workstations and equipment is set up and operational.
- ❑ Ensure that all pharmaceutical and other supplies are available.
- ❑ Ensure that drug information sheets, flowcharts and forms are available including:
  - Treatment Protocol Flowchart
  - Flowchart for optimal preventative therapy
  - Standing orders for antibiotic prophylaxis
  - Alternative antibiotic list
  - Anti seizures medication metric worksheets
  - Notification to patients primary care provider
- ❑ Assign pharmacist(s) to provide counseling where needed.
- ❑ Ensure drug utilization reviews are conducted as necessary.
- ❑ Monitor patient flow through the process, and recommend movement of staff to the Incident Commander where necessary to reduce or eliminate bottlenecks in the process (i.e. recommend movement of staff to-and-from pharmacy, evaluation, and interview areas)

Deactivation Phase:

- ❑ Supervise the break down and repacking of all equipment/supplies.
- ❑ Ensure all records and reports are turned in to Site Coordinator.
- ❑ Conduct exit interviews with your direct reports.
- ❑ Identify issues for the After Action Report.

Dispensing Site Position Checklist – Pharmacy Dispensers
(Pharmacists)

On-site Operations:

- ❑ Review your position checklist.
- ❑ Attend overall staff briefing(s) as scheduled by Site Coordinator.
- ❑ Receive assignment specific briefing from Lead Pharmacist (your supervisor).
- ❑ Set up pharmacy dispensing site workstations.
- ❑ Check and set up all pharmaceutical supplies for dispensing.
- ❑ Set up pill counting machines (if necessary) and start stocking prescriptions based on protocols.
- ❑ Review medical screening form, answer questions and dispense medications following established protocols
- ❑ Provide written and verbal instructions on taking medications
- ❑ Consult with or refer patients to medical director as needed.
- ❑ If applicable, give primary care notification forms to patient and instruct them to notify their primary care provider the next day or as soon as possible.
- ❑ Ensure availability of and distribute drug interactions forms with each prescription.
- ❑ Apply an ink stamp to the right hand of each person that receives medication, and do not issue medication to someone who already has a hand stamp.
- ❑ Ensure that each patient is dispensed the correct drug and strength.

Deactivation Phase:

- ❑ Break down and repack all equipment/supplies.
- ❑ Ensure all records and reports are turned in to Site Coordinator.
- ❑ Identify issues for the After Action Report.

Dispensing Site Position Checklist-Pharmacy Technician

On-site Operations:

- ❑ Review your position checklist.
- ❑ Attend overall staff briefing and receive assignment specific briefing from Lead Pharmacists.
- ❑ Assist with set up of pharmacy workstation and ensure availability of pharmaceutical labeling supplies.
- ❑ Prepare stock of prescriptions as required.
- ❑ Assist pharmacists with other activities as needed.
- ❑ Assist Inventory Manager with receipt and breakdown of SNS material delivered to the mass prophylaxis site.
- ❑ Monitor patient flow and problem solve with Lead Pharmacist.

Deactivation Phase

- ❑ Assist with breakdown and repackaging of pharmaceutical supplies.
- ❑ Ensure that all records are turned in the Site Coordinator.
- ❑ Identify issues for the After Action Report.

Dispensing Site Position Checklist – Translator
(Language Specialist)

On-site Operations:

- ❑ Review your position checklist.
- ❑ Attend overall staff briefing(s) as scheduled by Site Coordinator.
- ❑ Receive assignment-specific briefing from Lead Interviewer (your supervisor).
- ❑ Work with Griage personnel at patient check in area to identify patients with language barriers requiring translators.
- ❑ Assist with intake forms completion and provide translation as necessary at each clinical site.

Deactivation Phase:

- ❑ Assist with break down of stations and repacking of all equipment/supplies.
- ❑ Ensure all records and reports are turned in to Site Coordinator.
- ❑ Identify issues for the After Action Report.

Dispensing Site Position Checklist – Runner
(Open)

On-site Operations:

- ❑ Review your position checklist.
- ❑ Attend overall staff briefing(s) as scheduled by Site Coordinator.
- ❑ Receive assignment-specific briefing from Logistics Section Chief (your supervisor)
- ❑ Assist Griage and Interviewers with set-up of stations.
- ❑ Work with Griage, Interviewers and patient check in area to monitor patient flow, answer basic questions and identify special needs.
- ❑ Report special needs or symptomatic patients to Griage leader.
- ❑ Provide assistance with distributing information sheets and Medical Screening forms to patients.
- ❑ Be available to run errands for all stations as needed.
- ❑ Assist patients at all stations as needed.

Deactivation Phase:

- ❑ Assist with breakdown of stations and repacking of all equipment/supplies.
- ❑ Ensure all records and reports are turned in to Site Coordinator.
- ❑ Identify issues for the After Action Report.

Dispensing Site Position Checklist- Data Entry
(County Pool)

On-site Operations:

- ❑ Review your position checklist.
- ❑ Attend overall staff briefing, and receive assignment specific briefing from the Logistics Section Chief.
- ❑ Assist with the set up of the Data Entry area and any other areas as requested.
- ❑ Receive paperwork from check out station.
- ❑ Enter data into computer as it arrives.
- ❑ Generate reports as requested from Logistics Section Chief.

Deactivation Phase

- ❑ Assist with the break down and repacking of the check out area and any other areas as requested.
- ❑ Identify issues for After Action Report.

Dispensing Site Position Check List – First Aid/Special Needs
(Clinical)

On-Site Operations:

- ❑ Review your position checklist
- ❑ Attend overall staff briefing(s) as scheduled by site coordinator.
- ❑ Receive assignment-specific briefing from your Griage Leader (supervisor).
- ❑ Ensure emergency equipment is complete, ready and in good working condition.
- ❑ Ensure back up equipment and supplies are available.
- ❑ Ensure all emergency medications are up to date.
- ❑ Assess symptomatic patients for possible isolation.
- ❑ Ensure all patients with minor conditions receive first aid as appropriate.
- ❑ Ensure all patients with special needs receive assistance as needed.
- ❑ Send immediate medical emergencies via ambulance to an acute medical facility.
- ❑ Ensure proper documentation of the patient's condition before transfer to medical facility.
- ❑ Monitor patient flow at your station and problem solve with Griage Leader.

Deactivation Phase:

- ❑ Assist with the-tear down and repacking of First Aid/ Special Needs area.
- ❑ Ensure that all records and reports are turned in to Station Leader.
- ❑ Identify issues for the After Action Report.

Dispensing Site Position Checklist-Inventory Manager
(County Pool)

On-site Operations:

- ❑ Review your position checklist.
- ❑ Attend overall staff briefing as scheduled by Site Coordinator and receive assignment specific briefing from Logistics Chief.
- ❑ Set up and manage inventory station.
- ❑ Receive and document all incoming medications and enter into inventory management system.
- ❑ Receive orders for additional medication from Logistics Section Chief.
- ❑ Communicate order to Inventory Manager at LRSS warehouse.
- ❑ Request assistance from runners and pharmacy technicians to receive and break down incoming medication and related equipment.
- ❑ Communicate any problems to Logistics Section Chief and assist in problem solving.

Deactivation Phase:

- ❑ Break down and repackage inventory management section.
- ❑ Document all medication being returned to LRSS warehouse by entering into inventory management system.
- ❑ Work with Logistics Section Chief to have medication picked up by LRSS transportation personnel.
- ❑ Identify issues for After Action Report.

Patient Tracking:

During a bioterrorism event or naturally occurring disease outbreak requiring mass prophylaxis or immunization, patients will be tracked using a scantron tracking system, if available. Information required for any record includes:

- Last name, first name, middle initial
- Date of birth
- Address, city, zip code
- Telephone number
- Name of drug or vaccine
- Date administered
- Route of administration
- Lot number and manufacturer
- Facility/mass prophylaxis site

To avoid problems with patient processing and flow, the patient information would ideally be entered at a location other than the Mass Prophylaxis site.

The information entered into the Scantron tracking database will be taken from the Medical Screening Form, which the patient will complete prior to receiving the medication. When the POD staff dispenses the medication, a peel off label from the bottle indicating drug/lot/amount will be placed on the form. The POD staff will complete the Dispensing Information Section and forward the forms to clerical personnel who will use the Scantron scanner to load the database.

POD staff will also be required to report adverse events through the Vaccine Adverse Events Reporting System (VAERS) AT 1-800-822-7967.

Security:

It is important to secure all entry and exit points at the mass prophylaxis sites. People who are not involved with the exposure incident may try to enter the site. County Sheriff and local law enforcement will be utilized to guard entry and exit points, ensure orderly flow of traffic / parking, and provide necessary control if persons become unruly. Law enforcement will also assist the operations and logistics team in maintaining security of medications and other supplies.

Clinical Distribution Site Activation Checklist

- ☐ Confirm Pharmaceuticals from one of the following sources (see details in previous section):
  - ☐ Local/County Sources
  - ☐ DHS/EMSA/DGS Vendor-Supplied Cache
  - ☐ California State Stockpile (if established)
  - ☐ Managed Inventory (MI) from CDC
  - ☐ Strategic National Stockpile (SNS) from CDC – 12 hour push package
- ☐ Staffing
  - ☐ Determine Needs – see Personnel Resource
  - ☐ Activate – See Activation Checklist
- ☐ Provide Public Information (PIO Interface with Locals), guidance or direction and risk communication.
- ☐ Plan and Conduct Staff Orientation
  - ☐ Event Briefing
  - ☐ Mission Assignments
  - ☐ Chain of Command
- ☐ Establish Point of Dispending (POD) Treatment Site operations (see Physical Requirements List, Site Schematic)
- ☐ Notify and Instruct Population to be Treated
- ☐ Activate the Process (see Patient Flow, TX Protocols, Considerations, and Documentation/Forms

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

CHAPTER VI
SECTION B

POINT OF DISPENSING (POD) PLAN OVERVIEW

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

Point of Dispensing (POD) Plan Overview

The United States federal government announced plans in August 2004 for a coordinated plan to better prepare the nation to respond to pandemic influenza. The *"Point of Dispensing Plan"* will be a core component of the response. Immunization is the primary strategy to reduce the impact of a pandemic but the time required currently to develop a vaccine and the limited U.S. influenza vaccine production capacity represent barriers to optimal prevention. Early in a pandemic, vaccine may not be available for the specific strain of influenza undergoing a genetic shift from bird to human-to-human transmission. Enhancing existing U.S. and global influenza surveillance networks can lead to earlier detection of a pandemic virus or one with pandemic potential. Virus identification and the generation of seed viruses for vaccine production is a critical first step for influenza vaccine development.

Early in a pandemic, especially before vaccine is available or during a period of limited supply, use of other interventions may have a significant effect. For example, antiviral drugs are effective as therapy against susceptible influenza virus strains when used early in infection and can also prevent infection (prophylaxis). In 2003, the antiviral drug oseltamivir was added to the Strategic National Stockpile (SNS). CDC and CDHS have published interim recommendations in November 2004. Public and private health care organizations must assure effective use of available drugs, whether from a national stockpile, state stockpiles or in private sector inventories.

Implementing infection control strategies to decrease the global and community spread of infection, while not changing the overall magnitude of a pandemic, may reduce the number of people infected early in the course of the outbreak, before vaccines are available for prevention. Travel advisories and precautions, screening persons arriving from affected areas, closing schools and restricting public gatherings, and quarantine of exposed persons (See Isolation and Quarantine section) may be important strategies for reducing transmission. The application of these interventions will be guided by the evolving epidemiologic pattern of the pandemic.

Planning by local health departments and by the local health care system and coordination between the two is critical to assure effective implementation of response activities and delivery of quality medical care in the context of increased demand for services. Other public health emergency programs such as the Health Resources and Services Administration (HRSA) and the CDC Public Health Preparedness and Response Cooperative Agreements are providing states with resources to strengthen their ability to respond to bioterrorism attacks, infectious diseases and natural disaster. For example, initiatives and funding being provided by HRSA will help states improve coordination of health care services and emergency response capacity and facilitate preparedness for influenza, smallpox, SARS, anthrax as well as other public health emergencies. In FY 04, HHS introduced a crosscutting critical benchmark for state pandemic influenza preparedness planning as part of the Department's awards to states to improve

hospitals' response to bioterrorism and other diseases. The goal of this planning activity is to assure implementation of an effective response including the delivery of quality medical care in the context of the anticipated increased demand for services in a pandemic (www.hhs.gov/asphep/FY04benchmarks.html). Completing pandemic preparedness and response plans and testing them in tabletop and field exercises are key next steps. The federal government in strengthening the nation public health infrastructure has spent more than $3.7 billion.

Targeted Vaccine Administration

The goal for targeted vaccination is to prevent or control an outbreak of pandemic influenza that has occurred in a specific population or geographical area at high risk for infection. It will identify, vaccinate, and monitor contacts of cases and household contacts of contacts, to prevent secondary cases, and vaccinate or re-vaccinate health care, first responder, transport, or other personnel who may need to be in contact with pandemic influenza cases.

Mass Vaccine Administration

Large-scale (or mass) vaccination will augment or replace targeted vaccination to control the spread of pandemic influenza and will be used when the number of cases is sufficiently large that targeted vaccination is not adequate to protect the community and/or when there is significant community concern or demand.

Second Wave Vaccine Administration

To ensure a protected community in the future, after influenza pandemic has been controlled, influenza vaccine will need to be available for re-vaccination as the community becomes susceptible. Vaccine would be made available through public health clinics and other public and private health care providers. HHSA will work with community partners, health plans, Council of Community Clinics, San Diego County Medical Society and others to make vaccine broadly available.

PANDEMIC INFLUENZA AND OTHER HIGHLY INFECTIOUS RESPIRATORY TRANSMITTED DISEASE RESPONSE PLAN

CHAPTER VI
SECTION C

TARGETED POINTS OF DISPENSING (POD) PLAN

Targeted Points of Dispensing (POD) Plan

Goal and Objectives of Targeted Points of Dispensing

The goal for targeted POD is to control the spread of disease during a pandemic influenza (PI) outbreak in a specific population or geographical area at high risk for infection. Prophylaxis efforts must be closely linked with epidemiologic surveillance, case investigation, and isolation and/or quarantine activities. Other sections of this plan provide more details on these activities.

The objectives are to work in conjunction with Community Epidemiology staff to:

- Identify and isolate cases to prevent further disease spread,
- Identify, vaccinate, and monitor contacts of cases and household contacts of contacts, to prevent secondary cases, and
- Vaccinate, re-vaccination, dispense antiviral drugs to healthcare, first responder, transport, or other personnel who may need to be in direct contact with PI cases.

This targeted prophylaxis strategy may be supplemented with mass (large-scale) prophylaxis in both affected and unaffected communities if the pandemic is transmitted to larger geographical areas and larger numbers of people.

Federal Release of Strategic National Stockpile

If available, federal officials may authorize the release of portions of the influenza vaccine or antiviral drug stock from the Strategic National Stockpile and implement all or portions of the CDC Pandemic Influenza Response Plan, with one or more of the following:

- Confirmation of the presence of a novel influenza virus, antigen, or nucleic material in clinical specimens by CDC or another laboratory qualified to evaluate specimens for the presence of the influenza virus,
- Credible reports of clinically compatible cases with pending laboratory confirmation, once an outbreak of a novel influenza virus case has been previously identified,
- Report of a large outbreak of a clinically compatible illness, as determined by CDC, with pending etiological confirmation,
- Confirmation of viable novel influenza virus in an environmental sample, package, distribution device, or other device associated with potential human exposure, or transmission.

Federal officials will notify other federal agencies prior to the release of the influenza vaccine.

Federal, State and Local Responsibilities for Targeted POD

The specific responsibilities of CDC, California Department of Health Services (CDHS), and County of San Diego Health and Human Services Agency (HHSA) for targeted POD are outlined in the **Organization and Management Responsibilities section.**

Management Personnel

The specific management personnel who have the overall supervisory responsibility and the responsibility for specific aspects of POD are listed in the **Command and Control section.**

Targeted POD Concept of Operations

Health and Human Services Agency (HHSA) staff, working closely with CDC and California Department of Health Services (CDHS) staff assigned to support operations in San Diego, will use targeted POD strategies to control the spread of disease during an influenza pandemic prior to mass prophylaxis. Targeted prophylaxis or therapy is the vaccination or dispensing of antiviral drugs for pandemic influenza cases and family or close contacts of contacts in a defined, specific population or geographical location or high risk for infection. Targeted prophylaxis will help to protect those at the greatest risk for contracting the disease as well as form a buffer of immune individuals to prevent the spread of disease. This strategy also efficiently uses public health resources to control an outbreak.

Prophylaxis of People Who Will Respond in a Public Health Emergency

In addition to instituting prophylaxis of people who may have been in contact with a pandemic influenza case, the early days of a targeted prophylaxis campaign will be used to vaccinate, re-vaccinate or dispense antiviral drugs to healthcare, public health, first responder, transport, or other personnel who may need to be in direct contact with pandemic influenza cases. Additional people will need prophylaxis to be able to serve in a variety of capacities where they may be in direct contact with influenza cases. These might include people who:

- Work in a POD site, isolation or quarantine facility, laboratory that handles pandemic influenza specimens, or hospital,
- Investigate cases and contacts and have in-person contact with them,
- Provide security in a variety of settings where cases or contacts may be located,
- Transport pandemic influenza cases,
- Transport hazardous waste from facilities where cases are contained,
- Handle laundry and linens from pandemic influenza cases,
- Serve food to cases,

All such personnel should be trained to utilize appropriate personal protective equipment if vaccine or antiviral drugs are not available.

Augmenting Targeted POD with Mass POD

When either community concern or the efficiency of targeted prophylaxis is disrupted due to large numbers of contacts or geographic diversity, mass prophylaxis may become a more efficient method of containment (see the **SNS and Mass Prophylaxis Section)**. However, the targeted prophylaxis containment strategy would still be continued, i.e., contacts, and contacts of contacts will be identified, referred and traced for follow-up until end of the incubation period.

The Public Health Officer for HHSA, in consultation with the HHSA Immunization Program Manager, Bioterrorism Coordinator, Chief of Community Epidemiology, SNS Coordinator, CDC, and CDHS will determine if or when wide area or mass prophylaxis with either vaccine or antiviral drugs should begin. Large-scale prophylaxis efforts might also be used in unaffected communities to protect against further spread of pandemic influenza and additional releases, and to build the public's confidence in its protection and ability to return to normal activities.

Contact Tracing and Prophylaxis

Contact tracing activities may continue throughout an outbreak to identify and immunize contacts, even if widespread community or mass prophylaxis is offered After review of contact priority lists and available resources, a decision may be made by CDHS authorities, in consultation with HHSA's Public Health Officer (PHO), to limit contact-related activities to the highest priority group(s) only. Household contacts may be identified, vaccinated or given antiviral therapy, and monitored if available. If vaccine or antiviral drugs are not available, the PHO may issue a quarantine order for contacts to contain the spread of disease. Prophylaxis of contacts may take place in a contact's home or in a separated area of a mass or targeted POD depending upon security, staffing issues or convenience.

Availability of Vaccine in an Outbreak

Due to the inability to identify when a pandemic influenza outbreak may occur, it is not known if vaccine and/or antiviral drugs will be available, and planning for prophylaxis may need to include alternative methods of protection. Isolation and/or quarantine, OSHA standard/airborne/contact isolation procedures, use of personal protective equipment, good respiratory hygiene, frequent hand washing and public education may be the only means available for protection from the disease. CDC has estimated that vaccine development for a specific novel strain of influenza may take 6-8 months after the initial outbreak.

PANDEMIC INFLUENZA AND OTHER HIGHLY INFECTIOUS RESPIRATORY TRANSMITTED DISEASE RESPONSE PLAN

Identification of Priority Groups for Prophylaxis

Targeted prophylaxis is intended to protect contacts to cases and contacts of these contacts, as well as the high-risk groups, in a particular order of priority. Additionally, once influenza pandemic is confirmed it is important to expand the number of personnel who are protected from the disease by vaccination or antiviral drugs to ensure sufficient staff to rapidly and safely control the outbreak.

Prioritization for Targeted Vaccination

Targeted vaccination is intended to protect contacts of confirmed cases and contacts of these contacts, as well as other high-risk groups, in the following order of priority. Additionally, once an influenza pandemic outbreak is confirmed it is important to expand the number of medical personnel receiving prophylaxis to ensure sufficient staff to rapidly and safely control the outbreak. (e.g., healthcare providers and public safety workers who may be needed to play a role in response efforts). As recommended by CDC and CDHS, the priority order for vaccination is:

1. Face-to-face close contacts (≤ 6.5 feet or 2 meters) or household contacts of a pandemic influenza case after the onset of the case's fever.
2. Persons exposed to the initial release of the virus (if the release was discovered during the first generation of cases, vaccination or antiviral drugs may still provide benefit).
3. Household members of contacts to pandemic influenza cases (to protect household contacts should case contacts develop disease while under fever surveillance at home). Only household members who are without contraindications to vaccine should be vaccinated as a contact to a contact or given antiviral drugs.
4. Persons involved in the direct medical care, public health investigation, or transportation of confirmed or suspected pandemic influenza patients.
5. Laboratory personnel involved in the collection and/or processing of clinical specimens from suspected or confirmed pandemic influenza patients.
6. Other persons who have a high likelihood of exposure to infectious materials (e.g., personnel responsible for hospital laundry, waste disposal, hazardous waste disposal, and disinfection).
7. Personnel involved in contact tracing and POD sites, quarantine/isolation sites, or enforcement, or law-enforcement interviews of suspected pandemic influenza patients.
8. Persons permitted to enter any facilities designated for the evaluation, treatment, or isolation of confirmed or suspected cases.
9. Persons present in a facility or conveyance with a pandemic influenza case if fine-particle aerosol transmission was likely during the time the case was present (e.g. case with active coughing).

Selection of Vaccination Sites and Vaccination Teams

HHSA, in collaboration with CDHS and CDC, will determine at the time of suspect, probable, and confirmed PI case(s) whether it is appropriate and safe to immunize or dispense antiviral drugs to contacts upon locating them (e.g., at home or work) or whether to direct them to attend a County designated POD. These POD sites will be managed and staffed by HHSA employees, unless additional staff is required. In that case the PHO may request additional personnel from the Clinical Disaster Worker/MRC program may be activated. The number and location of POD sites will be determined as specifics of an outbreak are known, and County of San Diego Public Health Centers will be the first clinics utilized. As needed, community partners, may be mobilized to assist in POD prophylaxis efforts.

Clinic Scheduling

HHSA, in collaboration with CDHS and CDC, will determine POD schedules to accommodate the numbers and locations of contacts and contacts of contacts. Experiences gained in pre-event vaccination efforts will be used to plan these clinics. If mass vaccination is required, additional vaccinated personnel and community partners will be mobilized through the EOC or HHSA MOC to assist (**see SNS and Mass Prophylaxis section**). HHSA will provide education, materials, coordination and consultation.

Essential POD Functions

HHSA staff is responsible for establishing, managing, and operating the Public Health POD sites. For some vaccination efforts collaborating partners may be responsible for conducting POD sites. (**See the SNS and Mass Prophylaxis section**). In all cases, whether HHSA or a partner organization conducts the sites, it is the responsibility of the organization sponsoring the POD site to provide the following essential POD functions delineated in CDC's guidance:

- POD security,
- Worker safety,
- Adequate educational materials, forms, and other supplies (the masters will be provided by CDHS, and HHSA will provide them, in turn, to collaborating partners),
- Stocking of medical supplies,
- Establishing patient flow,
- Record keeping ("hard copy"),
- Data collection and entry into an immunization registry,
- Educating and screening of potential vaccine recipients,
- Obtaining consent,
- Vaccine handling,

- Vaccination and its corresponding waste management,
- Completing the vaccine recipient's vaccination card, and
- Vaccine accountability and weekly reporting of vaccine usage/accountability.

The following functions are not part of the actual POD operations. The arrangements for these functions need to be arranged among HHSA, the collaborating partner conducting the POD and the employer of the volunteer:

- Acute medical reaction management for appropriate staff,
- Adverse events management for appropriate staff, and
- Reporting of known adverse events through the VAERS system.

Educational and Screening Materials

HHSA and local partners will not alter materials provided by CDHS or CDC. The packet of materials may be supplemented by HHSA developed material. CDHS will continue to distribute model information packets with reproduction masters to all counties, and HHSA will provide partners with information on how to stay updated with pre-screening and clinic packets. HHSA and partners are responsible for distributing additional information and screening packets to volunteers for vaccination with sufficient time before vaccination clinics for them to make their decision and to obtain confidential HIV, pregnancy testing or other disease screening if desired.

Vaccine Logistics and Security

See Vaccine Storage Plan and SNS & Mass Prophylaxis section.

Clinic Operations and Management

HHSA staff is responsible for establishing, managing, and operating the POD sites and is responsible for essential POD site functions. If large-scale prophylaxis is necessary, targeted prophylaxis and/or mass prophylaxis will follow San Diego County Metropolitan Medical Response System's Mass Prophylaxis Plan (**See SNS & Mass Prophylaxis Plan section)**. HHSA staff responsible for POD site management includes the Public Health Nursing Chief, PHN Managers, BT Public Health Nurse IV and BT PHNs.

POD and Clinic Manager Responsibilities

Initially HHSA will conduct any POD sites needed for targeted prophylaxis. If additional sites are needed, collaborating community partners may be used to conduct clinics. HHSA will be responsible for providing the initial education and CDC guidance materials needed by collaborating partners who may be providing prophylaxis. Unless further guidance from CDC indicates otherwise, each Public Health Clinic, agency or partner doing vaccinations will be responsible for the activities listed in the **POD and POD Manager Responsibilities section.** The

responsibilities of the POD coordinators at each participating site providing influenza vaccinations or antiviral drugs, whether at HHSA or in a collaborating partner's practice, are also listed in the same section.

Organization and Management Responsibilities for Targeted POD Sites

While this section focuses on targeted POD, in the case of a pandemic influenza event, vaccination and medication dispensing efforts will be closely coordinated with the other activities listed here. Therefore, responsibilities listed below include those coordinated with command and control, surveillance, case investigation, isolation and quarantine, and communications activities.

CDC-Specific Responsibilities

In the event of a San Diego County area confirmed or suspected pandemic influenza (PI) outbreak or an imminent threat of a PI case, CDC will immediately mobilize to do the following activities:

- Deliver or stand by for delivery of influenza vaccine and its packaged components,
- Confirm initial pandemic influenza infection (through their laboratory) and establish laboratory protocols for confirmation in surge-capacity laboratories,
- Coordinate with state and local health officials to establish communications and implement federal-state response plans,
- Immediately mobilize and deploy CDC personnel to assist local and state public health officials with epidemiologic investigations, surveillance, implementation of case isolation protocols, contact identification, vaccine administration, adverse events monitoring, and vaccine inventory monitoring,
- Develop vaccination strategies and prioritization,
- Distribute guidelines for surveillance, contact identification and tracing, vaccination, isolation strategies, specimen collection and transport, public/media communications, decontamination, and patient medical care guidelines,
- Assist with monitoring of vaccine utilization, and adverse events,
- Provide technical assistance to the national authority responsible for coordinating the overall federal efforts for managing the event,
- Provide recommendations on quarantine needs that supercede the capabilities of local and state authorities and statutes,
- Coordinate with state/local authorities for public and media communications,
- Track and report national surveillance information regarding outbreak, and
- Coordinate among states for contact tracing and monitoring.

State Specific Responsibilities

Responsibility for implementing and managing the influenza immunization program in California resides with the State of California, Department of Health Services (CDHS). In the event of a San Diego area confirmed or suspected pandemic influenza outbreak determined by the PHO, CDHS will immediately:

- Accept the vaccine if available from CDC,
- Distribute and transfer the vaccine to the County of San Diego Health and Human Services Agency (HHSA),
- Support operations within San Diego County,
- Coordinate all systems and materials that require statewide integration and consistency,
- Activate state emergency response plans public health emergencies.
- Mobilize state public health resources to coordinate with local personnel for case surveillance and isolation, contact tracing and monitoring, epidemiologic investigation, and vaccine administration and adverse events monitoring,
- Utilize state public health statutes and resources to implement and enforce isolation and quarantine within the state jurisdiction,
- Coordinate with federal and local authorities for public and media communications.

County of San Diego HHSA Responsibilities

In the event of a pandemic influenza case, Health and Human Services Agency (HHSA) will immediately mobilize to:

- Activate local emergency response plans for public health emergencies and Pandemic Influenza (see **Command and Control** section),
- Activate local leads to coordinate case surveillance, isolation and quarantine, contact tracing and monitoring, epidemiologic investigation, vaccine administration, and adverse events monitoring,
- Designate and activate POD sites for vaccine administration or antiviral distribution,

- Designate and activate site(s) for patient isolation and contact quarantine,
- Coordinate with state and federal law enforcement agencies conducting security or any criminal investigation, and
- Coordinate with state and federal authorities for public and media communications.

Responsibilities of POD Site Manager (Incident Commander)

The site coordinator will:

- Monitor patient flow and utilize extra staff to relieve any bottlenecks that may slow clinic flow,
- Ensure adequate supplies of vaccine, equipment and educational materials, and
- Assure that clinic staff utilizes the standard immunization clinic hazardous waste sharps disposal polypropylene containers and waste removal systems to dispose of used needles.

POD Site Flow

POD sites will have clearly marked entrance and exit points with adequate "waiting" space for queues of people seeking vaccination. Security staff may be posted at both locations to maintain order, depending on the volumes of vaccinees anticipated. Local POD sites should be prepared for a high level of public demand for vaccine. The traffic flow within the clinic will be controlled and follow a logical path from entry into the clinic to exit from the clinic **(See the Stockpile & Mass Prophylaxis Plan).**

Special Clinic Flow for PI Contacts

Persons who arrive at the POD with a referral form or vaccination "ticket," indicating that they are a contact to a diagnosed case of PI, will be given the highest priority and be escorted directly to a special registrar who will orient them and expedite the paperwork, medical assessment and a vaccination process separated from non-exposed persons. Security personnel and greeter-educators will be alerted to this possibility. Contact investigation may begin at this point.

Post-Vaccination Follow-up and Hotlines

Specific procedures and telephone hotlines will be established for the reporting and handling of vaccination reports of suspected adverse events. Vaccine safety monitoring, reporting, treatment and referral procedures are described in the POD site section.

Training and Education

California Department of Health Services (CDHS) has developed training programs to assist in the training for Public Health Emergency Response Team members in case investigation and contact tracing, laboratory diagnosis, targeted and mass prophylaxis, and surge capacity.

To adequately prepare for a PI event, the HHSA EMS/EP will use the planning period and the early pandemic period to provide appropriate training. The staff operating POD sites will receive appropriate orientation to the overall purpose, function, and flow of PODs, as well as specific verbal and written directions for their individual roles.

Data Management

HHSA will maintain its own database or immunization registry of persons provided prophylaxis by HHSA. Vaccination healthcare providers will report adverse events associated with vaccination as they occur by submitting a VEARS form to the San Diego County Immunization Program. The Immunization Program will complete the vaccine usage and accountability reports in the format designated by CDHS.

Communications

Targeted vaccination will likely draw media attention. The PHO will direct the County of San Diego Health and Human Services Agency, Office of Media and Public Affairs (OMPA) to coordinate communications. Targeted pharmaceutical specifics are included in the **Communications Section, Page 45.**

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

CHAPTER VI
SECTION D

VACCINE STORAGE PLAN

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

Vaccine Storage Plan

Introduction:

A suspected or confirmed act of terrorism or a naturally occurring pandemic may necessitate the initiation of mass immunizations or other prophylaxis operations utilizing the County of San Diego *Stockpile and Mass Prophylaxis Plan*. A key component of the plan requires the establishment of a distribution warehouse to receive and store the pharmaceutical resources and supplies from the SNS that would be needed to protect the county's 2.3 million population. Current storage information is confidential.

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

Isolation and Quarantine Plan

Introduction

This section of the *Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan* deals specifically with isolation and quarantine of suspected or actual cases of respiratory transmittal of unknown or known infectious diseases. It is important to note that while the plan focuses on an influenza outbreak of pandemic proportions, it is also intended to serve as the template for responding to large-scale outbreaks of other highly infectious respiratory diseases such as Severe Acute Respiratory Syndrome (SARS). Within this section reference is made to other sections of the larger comprehensive plan such as points of dispensing and command and control. For more detailed information on these topics, see those sections.

The ability of containment strategies to slow the spread of pandemic-type influenza may be limited by the short incubation period for influenza, the large portion of asymptomatic infections, and the non-specific nature of clinical illness from influenza infection. Nonetheless, during early stages of a pandemic, particularly if the novel virus is not transmitted efficiently, use of containment measures may help to slow the spread of pandemic-type influenza A virus to allow time for the development, production and use of a vaccine and antiviral drug.

The isolation and quarantine plan includes procedures to:

1. Determine when isolation or quarantine is required to control or prevent spread of pandemic-type influenza or other highly infectious respiratory diseases.

2. Identify which type of containment facility to use with specific groups.

3. Coordinate actions to quarantine or isolate individuals or groups in order to control the spread or contain the disease during a pandemic of influenza or other highly infectious respiratory disease.

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

Assumptions:

1. There may be a prior warning of a coming pandemic based on reliable reports from CDC and WHO characterized by severe morbidity and mortality and efficient person to person transmission
2. No vaccine or specific prophylactic medication may be available initially
3. It may take six months to produce an adequate supply of vaccine for the entire U.S. population
4. The pandemic waves will last about one month and peak at two weeks
5. The community must be prepared for multiple waves and reintroduction
6. Personal residence/home is the first and preferred choice for quarantine of contacts
7. Minors in quarantine must stay with an adult caretaker
8. This plan lists all roles that may be required for quarantine but all roles may not be activated based on severity and extent of the public health emergency.
9. Typical incubation of influenza is two days (range one to four days)
10. The infectious period (viral shedding) peaks on second day of symptoms
11. Fifty (50) percent of persons with influenza virus do not develop symptoms but still shed virus
12. The amount of virus shed correlates with height of an infectious person's temperature.
13. Quarantine will be for 18 days until the specific timeframe for incubation is determined.
14. Standard, contact and airborne precautions will be used for infection control until the specific infectivity is determined (only droplet and not airborne precautions may be necessary).

Definitions

The terms isolation and quarantine are separate and distinct terms with quite different meanings. The term "quarantine" is, however, used in common speech to include both. It is operationally essential that all Public Health staff involved in responding to a public health emergency, in particular those serving isolation or quarantine orders, correctly understands the definitions of these terms and exercises great care in their correct use. The following definitions are from the Centers for Disease Control and Prevention (CDC):

- **Isolation** refers to the separation of people who have a specific infectious disease from healthy people and the restriction of their movement to prevent the spread of that disease. Isolation is a standard procedure used in hospitals for patients with tuberculosis and certain other infectious diseases.

- **Quarantine** generally refers to the separation and restriction of movement of people who are not yet ill, but who have been exposed to an infectious agent and are therefore potentially infectious. Quarantine of exposed individuals is a public health strategy, like isolation, that is intended to prevent 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. The Public Health Officer determines if a threat to the public's health and safety may develop from non-compliance and issues orders, which may be enforced through the courts.

Routes of influenza transmission

Direct and indirect contact transmission

Direct transmission involves direct body-to-body surface contact. Indirect occurs with contact with contaminated objects such as hands or countertops.

Droplet transmission

Large contagious droplets are propelled a short distance (3-5 feet) by coughing or sneezing and comes into contact with another person's conjunctiva, mouth or nasal mucosa.

Airborne transmission

Small contagious droplets are propelled but remain suspended in the air and disseminate by air currents and can be inhaled by another person. Requires special air and ventilation.

Droplet transmission is thought to be the predominant form of pandemic influenza transmission. Studies have shown that influenza outbreaks occur more frequently from droplet transmission or contact with health care workers rather than by airborne transmission through the ventilation systems.

Pandemic influenza outbreaks have been controlled through the use of a combination of control measures, vaccine, antiviral drugs, and use of standard, contact and droplet precautions.

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

Purposes for the Isolation and Quarantine Plan

The purposes of the isolation and quarantine plan are to:

- Identify criteria when isolation or quarantine is required to control or prevent a pandemic influenza outbreak or bioterrorist event,
- Describe the various types of isolation and quarantine facilities and the conditions which warrant them,
- Describe requirements for staff workers in isolation and quarantine facilities, and
- Identify criteria for transport.

Key Public Health Staff Involved with Isolation and Quarantine

The following Health and Human Services Agency (HHSA) staff members are the key staff involved with isolation and quarantine activities in a pandemic influenza or bioterrorist event, and they can be reached by calling **Station M at (858) 565-5255**. See **Isolation and Quarantine (I & Q) – Attachment 1 – Staff Roles** for the roles and responsibilities of each of these positions.

- Public Health Officer
- Deputy Public Health Officer
- Epidemiology Chief
- Bioterrorism Coordinator
- Bioterrorism Public Health Nurses
- Emergency Medical Services Staff
- Immunization Program Coordinator

The County of San Diego Public Health Officer, or other authorized designee, coordinates with state and federal authorities for all activities for isolation and quarantine related to pandemic influenza events and care of these specific individuals or groups:

- Human to human transmissible Influenza A or any other transmissible highly infectious respiratory disease (confirmed/probable) cases and suspect cases
- Febrile contacts
- Asymptomatic contacts

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

Rationale for Isolation and Quarantine

Isolation and quarantine are the public health control strategies used to prevent the spread of human to human transmissible influenza A virus from confirmed, probable or suspected cases to unexposed individuals. Influenza A cases usually transmit infection by expelling droplets (e.g., coughing or sneezing) and infecting those that are close (those within 3-5 feet). Therefore, isolation of a possible case from the time of onset of fever may provide sufficient time to assure appropriate isolation measures are in place at the onset of their infectious period or once it has been determined. This isolation strategy, contact tracing, prophylaxis or treatment of close contacts to the case, quarantine of contacts, and airborne and contact infectious control precautions may sharply limit the spread of an influenza pandemic.

Quarantine in the context of a public health emergency is the restriction of activities or limitation of freedom of movement of those presumed to have been exposed to a disease in such a manner as to prevent contact with those not exposed. This may involve thousands of people. Any decision regarding large-scale quarantine will be made in consultation with state and federal authorities. Should quarantine be determined to be feasible and useful, a course of immediate action would be developed, in consultation with law enforcement. Federal assistance may be required in enforcement of quarantine measures and would be requested to support local efforts, if necessary.

Additional Disease Control Measures

In addition to the isolation and quarantine procedures identified in this section of the Pandemic Influenza plan, the Public Health Officer, or other authorized designee, will evaluate the need to implement additional early transmission control measures. These measures may include the suspension of large public gatherings until other outbreak prevention activities and control measures have been implemented.

The Public Health Officer may communicate specific instructions to the public about disease control measures; and sample isolation and quarantine order templates can be found in **I & Q Attachment 2 – Health Alert and Orders for Isolation and Quarantine.**

Summary of Categories of Facilities for Isolation and Quarantine

Isolation and quarantine facilities are categorized into two groups, summarized in the following chart. The Public Health Officer, or other authorized designee, will designate which type of housing will be used for selected individuals or groups during a public health emergency

involving a new, emerging infectious disease. In large-scale emergencies requiring Isolation & Quarantine, there will be multiple Type C and Type R facilities.

1. **Type C** for pandemic influenza cases and suspects with:

    - Compatible symptoms and laboratory confirmation of the specific pandemic strain of influenza (confirmed case)
    - Compatible symptoms following suspected/known exposure with pending laboratory confirmation (probable case)
    - Atypical clinical symptoms following suspected or known exposure (suspect case)
    - Contacts under surveillance that become febrile with oral temperatures > 101º F (38ºC) on two successive readings.
    - Individuals with other associated symptoms such as coughing or sneezing
    - Ill persons requiring specialized health care may be isolated in a hospital, but, depending on their medical needs, persons may also be isolated at home or in a designated health care facility or community-based facility.
    - For non-hospital isolation, home/personal residence isolation is preferred and will be utilized first unless a contraindication exists such as homelessness, non-compliance with isolation or at-risk persons in the home with inability to maintain separation.
    - Transportation to an isolation facility will be coordinated with the HHSA or EMS DOC and/or the EOC.

2. **Type R** for asymptomatic contacts:

    - Afebrile contacts; contacts must stay under fever surveillance for the number of days specified post-exposure.
    - Home/personal residence quarantine is preferred and will be utilized first unless a contraindication exists such as homelessness, non-compliance with quarantine or at-risk persons in the home with inability to maintain separation.

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

	Type C Facility	Type R Facility
Type of person to be confined during pandemic outbreak	• Confirmed, probably and suspected cases • Contacts with fever	• Contacts (household or incidental) with no symptoms
Level of facility	• **Depending on medical needs, persons are isolated in a hospital or a non-hospital facility (home or a community-based facility).** • ***Hospital Isolation***. - Ill persons requiring hospital-level care will be isolated in a hospital. - The hospital has medical care and full respiratory isolation (negative pressure area-portable air pressure equipment can be used). -If hospitals have no room, mutual aid will be called for. • ***Non-Hospital Isolation.*** - If hospitalization is not required, persons will be isolated at home. - For persons not requiring hospital care, but who do not have an appropriate home setting (i.e. travelers, homeless, those non-willing), an alternate community-based facility will be used.	• ***Home quarantine.*** - Quarantine at home with an environment where basic needs will be met and where protection of unexposed household members is feasible. – Is the preferred site and first choice unless contraindications exist. • ***Quarantine in designated facilities.*** - Contacts who do not have an appropriate home environment OR wish not to be quarantine at home will be quarantined in a specific facility designated for this purpose.
Prophylaxis requirements	• Required for entry to facility if vaccine is available • Prophylaxis may not be available. • Individuals working with these patients must use standard, contact and airborne infection control precautions.	• Prophylaxis may not be available. • Strict respiratory hygiene to include frequent hand washing and masks must be enforced.
Order for containment	Order of Isolation for the Control of Pandemic Influenza	Order of Quarantine and Fever Surveillance

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

General Guidelines for Isolation and Quarantine Facilities

Employees – Vaccine nor antivirals may not be available. However, employees working in Type C or R facilities should have first priority for vaccination against the specific pandemic strain of influenza, when available. Health care workers can use strict standard, contact, and airborne isolation procedures (disposable gown, gloves, eye protection, and fit tested N95 mask) and still care for pandemic-type influenza patients without being vaccinated.

Staffing - Hospitals and other facilities used for isolation and quarantine will initially arrange their own staffing. If the number and types of staff are insufficient to meet the needs of the number of people being contained, additional staff may be requested through the County Emergency Operations Center (EOC) or EMS DOC. The process for requesting mutual aid assistance is described in the **Command and Control** section.

Infection Control - Any hospital or other facility that identifies a suspect case of pandemic-type influenza should adhere to strict standard, contact, and airborne isolation precautions.

Details of Categories of Facilities for Isolation and Quarantine

The following pages provide more details on isolation and quarantine facilities.

TYPE C FACILITY (C is for contagious type of patient)

Purpose - The purpose of a Type C facility is to house infectious individuals (confirmed, probable, and suspected of influenza infection) and thus minimize the exposure of susceptible individuals to contagious individuals. If no specialized health care is required, an individual's home or personal residence is the preferred first location.

Isolation Consideration - Infectious individuals (confirmed, probable, and suspected cases) are isolated in a designated Type C Facility. Contacts who have or develop a fever during their surveillance period will also be housed in this type of facility while the diagnosis of pandemic-type influenza is being confirmed or ruled-out, in order to minimize the chance of exposure to susceptible persons. Febrile oral temperatures > 101º F (38ºC) on two successive readings will result in isolation.

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

Type C Facility Requirements (during pandemic outbreak)

Designation of Type C Non-Hospital, Non-Home Facility - A pre-determined facility has been designated the Type C facility for confirmed, probable, or suspected cases of pandemic-type influenza who do not need hospitalization and can not be confined to their home (**I & Q Attachment # 3 – Isolation and Quarantine Activation Facility Activation Protocol**). As these cases present at hospitals or health care facilities, these cases will be transported to the designated non-hospital Type C facility or sent home. Transportation will be arranged by the EOC or HHSA or EMS DOC.

Hospital-Transport - Those pandemic-type influenza cases requiring transportation to a hospital will be transported to a hospital and placed in a negative pressure isolation room under strict airborne and contact isolation.

Basic Requirements for Type C Facilities

- A structure with a non-shared air conditioning, heating, and ventilating system that exhausts 100% of air to the outside through HEPA (high efficiency particulate air) filter **OR** is located at least 100 yards from any other occupied building or area (CDC Guidelines). The facility should not have ventilation systems shared with any other facility and must have controlled access (i.e., fence around building or monitored entrances, security guards) to control entrance by non-contagious individuals.
- Adequate water, electricity, heating, cooling, and closed-window ventilation to maintain activities of daily living and basic level medical care if needed for health care workers/providers and patients.
- A communication system that allows for dependable communication within and outside of the facility, e.g., by telephone, intercom and computer.
- Hospitals must have the ability to provide the following level of medical care:
    - Supportive care with IV fluids, antibiotics, antivirals or immunizations.
    - Skin care
    - Oxygen monitoring (pulse ox) and oxygen (in-line or portable) (tertiary level)
    - Medical vital signs monitoring
    - Cardiac and respiratory resuscitation
    - Ventilator support (tertiary level)
    - Suctioning equipment (tertiary level)
    - Basic laboratory evaluations (blood chemistries, CBC-tertiary level)
    - Basic radiology (portable chest x-ray-tertiary level)

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

Isolation Room Area Requirements for Type C Facilities

If a hospital or non-hospital facility houses both people without influenza and confirmed, probable, or suspected cases of influenza, the cases will be admitted to the Type C facility and placed into a negative pressure isolation unit/floor/room. The isolation room area must meet the following CDC guideline criteria:

- Negative air pressure in relation to the corridor and surrounding areas with all exhaust externally vented away from air intakes or where people may pass. If possible, the air should be externally vented after passing through a filter with an efficiency of at least 95%, based on the DOP (dioctyo-phthalate) test method. The filters should be disposed of in an appropriate manner (discarded in biohazard bags and sterilized [CDC Guidelines]).
- Air exhaust should also be separated by > 25 feet from the air intake.
- A toilet, sink, and bath or shower must be available.
- This may include the use of portable isolation units in other wings of a facility, an emergency room and/or the outdoors in tents.

When negative pressure areas are at capacity in a hospital (patient occupancy at maximum levels), the Type C facility will begin transferring its non-influenza patients to other facilities using the QAnet to identify available beds (this system, used to communicate between hospitals and Emergency Medical Services, is described in the **Command and Control section** of this document). The patient rooms may then be converted into isolation rooms using portable negative pressure isolation units.

Staffing for Type C Facilities

Healthcare and public health staff mobilized to care for influenza cases may have priority when vaccine/antiviral prophylaxis is available. Use of PPE, and infection control measures for personal protection when caring for patients will be used.

List of Names of Individuals Who May Enter a Type C Facility

The Type C facility manager will establish the list in collaboration with the Public Health Officer and/or the authorized designee. It will include the smallest possible number of people required for patient care, disease investigation, and facility maintenance (physicians, nurses or aides, laboratory personnel, housekeeping, dietary, and maintenance personnel, etc.). This list will be kept by the nurse on duty and by other personnel responsible for monitoring the facility.

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

Access Monitoring System for a Type C Facility

The Type C facility staff will maintain a monitoring system to:

- Ensure that all personnel who enter the Type C facility have been recently prophylaxed with vaccine or antivirals if available and are on the list of individuals who may enter the facility, and
- Monitor and report their temperature and any symptoms every 12 hours until 14-18 days after vaccinated, completed their antiviral prophylaxis once it is available or date of last contact.
- Those personnel on the list to enter the facility that are not vaccinated or on prophylaxis drugs will also monitor and report their temperature and any symptoms every 12 hours and use personal protective equipment (PPE) while in the facility until 14 days after they have been vaccinated, placed on antiviral therapy when it becomes available or from date of last contact.

This access monitoring system will include a confidential log of all persons who enter and leave, including staff, and will include each person's vaccination, antiviral treatment status, temperature and any symptoms reported.

Type C Facility Personnel Requirements and Precautions

Staff working in a Type C facility will follow these guidelines:

- Until 14-18 days after immunization, once vaccine is available, or completion of antiviral therapy, all personnel working in the Type C facility will check their temperature every 12 hours. At the beginning of each shift, they are to report their temperatures or any illness to the person assigned to monitor employees' health. On off days, they are required to be in telephone contact each morning to report their temperatures. Once the waiting period is over, personnel are not required to routinely check their temperatures. They are still required to report any illness.

- Use Contact and Airborne Precautions (disposable gowns and gloves to enter the contaminated area, disposal of used gowns and gloves before leaving the area, and fit–tested N95 masks or higher, eye protection) for patient care.

- Instruct all personnel involved in patient care of the necessary precautions:

    - Educate personnel in the meaning of standard, contact and airborne precautions, and how to implement each one.

- Report immediately any symptoms they develop to the persons coordinating employee illness surveillance.
- Dispose of all non-sharp waste in biohazard bags,
- Place all laundry and linens in biohazard bags, and if not laundering on the premises, follow the instructions for transporting contaminated laundry.
- Use disposable items whenever possible.

Food Services

Arrangements will be made to have food prepared on the premises and delivered in disposable containers, if possible. Otherwise, all serving ware, plates, cups, and utensils will be sanitized in a standard dishwasher.

Decontamination of Type C Facility

Once the facility is no longer used for influenza patient isolation or quarantine, all areas of the facility will be decontaminated before reuse. Routine infection control cleaning methods for healthcare facilities is sufficient.

TYPE R FACILITY (For monitoring of asymptomatic contacts)

Purpose for Type R Facilities

The purpose of the Type R Facility is to quarantine and keep exposed individuals out of the general population and under fever surveillance for 14-18 days. The preferred Type R site is the contact's personal residence. However, an alternate facility may be used for those who are homeless, a visitor to the county, non-compliant with the quarantine order or has an at-risk individual in the residence with inability for separation.

Quarantine Consideration for Type R Facilities

Asymptomatic (non-infectious) contacts are quarantined in Type R facilities.

Procedures for Type R Facilities

If asymptomatic contacts under fever surveillance develop 2 successive fevers > 101º F (38º C), they must notify designated Community Epidemiology personnel and remain at a Type R facility until transportation to a Type C facility for further evaluation can be arranged.

Type R Facility Requirements

Designation of Type R Facility - A Type R Facility may be the person's own home (preferred and first choice). For this situation, all occupants previously exposed, whether related or not, are quarantined. If a person cannot be quarantined at home (e.g., a homeless person, tourist, non-compliant with quarantine order), the Public Health Officer, or authorized designee, will utilize a designated Type R facility.

Basic Requirements for Type R Facilities - Acceptable Type R Facilities must have sleeping accommodations, heating systems, running water, and toilets.

Quarantine Requirements for Type R Facilities – The contacts must monitor their temperatures every 12 hours. They must maintain daily telephone or direct contact with personnel designated by Epidemiology or other designated Public Health or HHSA staff. If resources permit, closer monitoring such as daily visits by Public Health Nurses (PHNs) or Communicable Disease Investigators (CDIs) will be done.

Staffing for Type R Facilities – HHSA staff or DOC or EMS DOC will assure daily contact with individuals under quarantine and coordinate daily visits, if necessary, to ensure compliance with the Quarantine Order. Should the number of cases exceed the capacity of the designated HHSA staff, Medical Resource Corps (MRC) volunteers will be activated to assist with the monitoring of individuals in Type R facilities.

Isolation And Quarantine Orders

Public Health Officer's Role with Orders - California law requires the Public Health Officer to issue instructions to a patient and members of the patient's household concerning isolation, define the area of isolation, and state measures to prevent the spread of disease. Upon written order of the Public Health Officer, a Public Health employee will serve cases with the appropriate isolation or quarantine order by reading and explaining the order to the patient and providing the patient with a copy of the order. Additionally, the patient must be apprised of consequences that may result from failure to comply with a legally executed order of the Public Health Officer. They are requested to sign they received it.

Communicable Disease Investigators' Roles - In the County of San Diego, Communicable Disease Investigators (CDI), who are designated to conduct investigations on behalf of the Public Health Officer, have authority for issuance of legal orders related to the control of communicable diseases. This includes service of isolation and quarantine or other legal orders of the Public

Health Officer. CDIs, who are already trained in the legal order process, should serve isolation and quarantine orders whenever possible

Other Public Health Employees' Role - During a public health emergency, the Public Health Officer may utilize other HHSA employees (public health nurses, other health professionals, or other HHSA designated personnel). In addition, if circumstances dictate, representatives of the Public Health Officer will serve orders of isolation and quarantine with the help of law enforcement, and these personnel may be requested through the County Emergency Operations Center (**see the Command and Control section).**

Immunization of Personnel Serving Orders - All persons serving isolation orders on confirmed, probable or suspected pandemic influenza cases will ideally have been previously immunized or given antiviral prophylaxis. Since vaccine availability is unlikely initially, the staff will use appropriate personal protective equipment and strict standard, contact and airborne isolation precautions with an emphasis on hand washing and respiratory hygiene.

Types of Orders – **I & Q-Attachment 2 – Health Alert and Orders for Isolation and Quarantine** contains examples of template isolation and quarantine orders that the Public Health Officer may use in response to a public health emergency. Each order specifies the conditions of the action ordered, violations and penalties. Every patient served with an order must receive a copy of the order with the violations and penalties printed on the reverse side of the order. The following is a summary of the three types of isolation orders:

- **Order of Isolation for the Control of an Infectious Disease -** This is an order to isolate a person in a hospital, other institution or home (Type C Facilities), as designated by the Public Health Officer. This order is used to isolate confirmed, probable or suspected cases. It specifies the limits of the area of isolation.

- **Order of Quarantine in a Private Residence for the Control of an Infectious Disease** This order is for quarantine of asymptomatic contacts in their private residence with fever surveillance. According to California Code of Regulation, Title 17, section 2520 requires the Public Health Officer to determine contacts subject to quarantine, determine the place of quarantine and issue instructions. The quarantined individual should:

  - Monitor their oral temperature twice daily.
  - Report temperature reading and any symptoms daily as instructed.
  - Allow visits from Public Health personnel to assess symptoms and assess compliance.

- **Order of Quarantine in an Alternative Type R Facility for the Control of Infectious Disease -** This is an order for quarantine of asymptomatic contacts in a Type R Facility other than a private residence. This order should be used if logistical problems, presence of high-risk household contacts with inability to separate, or non-compliance with quarantine orders prevent monitoring of contacts in a private residence.

Procedures for Isolation And Quarantine of Individuals

Procedures to follow when establishing isolation and quarantine of specific groups during an emergency can be found in **I & Q Attachment # 4 - Procedures for Isolation and Quarantine of Individuals.** The procedures found in that attachment include:

- Procedures for Isolating Known or Presumed Infectious Individuals (confirmed, probable, and suspected cases) in a Type C Facility
- Procedures for Isolation of Persons Who Are Confirmed, Probable, or Suspect Cases in Type R Facility Prior to Transport to Type C Facility
- Procedure for Isolating Febrile Contacts to Type C Facilities
- Procedures for Monitoring and/or Quarantining Non-Infectious Contacts (exposed individuals) in a Type R Facility
- Procedures for Quarantine of Non-Infectious Contacts an alternative Type R Facility

Release of Patient from Type C Facility

The Public Health Officer or the Public Health Officer's authorized designee must issue the final approval for the patient in order to leave a Type C facility.

Release of Confirmed, Probable, and Suspect Cases Isolated in Type C Facility - If a pandemic influenza strain diagnosis is confirmed, cases may be released from a facility when the people are no longer considered infectious. If an alternative diagnosis is confirmed, the patient may be released from the Type C facility.

Release of Febrile Contacts Isolated in Type C Facility – Febrile contacts isolated in a Type C facility may be released to home if the fever is diagnosed as being caused by some other etiology.

Transportation Requirements

Teams and Personnel - Facilities may select and pre-arrange transport teams as part of the facilities' plans to transport a patient to another more appropriate facility. First responder

providers (fire, police, and ambulance) and other transportation agencies may also pre-select personnel as part of an infectious disease emergency response team. Transport personnel selected, as part of an infectious disease emergency response team should be given priority for prophylaxis prior to transporting people if vaccine or antivirals are available. The driver and attendant should also wear PPE (disposable gown, eye protection, vinyl gloves, cap and a fit-tested N-95 mask). Ambulances used to transport other patient cases after transportation of a pandemic influenza case should be decontaminated using routine agency methods. They should use standard, contact, and airborne precautions.

Vehicles (Ambulances, Gurney Vans, Wheel Chair Vans and Critical Care Transport Vehicles, Passenger Vans, Buses) – The mode of transportation should be commensurate with the patients' needs. Prior to utilizing the vehicle, unnecessary items should be removed to avoid contamination and to facilitate decontamination. The vehicle must be equipped with a two-way radio or cellular telephone.

Equipment - Each transport vehicle must be equipped with all necessary PPE items to permit adherence to appropriate isolation or quarantine precautions (N95 or higher masks, disposable latex and/or vinyl gloves, disposable gowns, eye protection and a supply of impervious biohazard plastic bags).

Transport Procedures - Transport personnel will cover the patient in a linen sheet to prevent contamination of objects in the area and patient comfort, and the nose and mouth will be covered with a disposable surgical mask. Personnel placing the patient in the vehicle will remove their protective clothing and place it in biohazard plastic bags as soon as the patient is placed in the ambulance and the doors are closed. Transport personnel will wear PPE during transport.

Post-Transport Procedures - The driver and attendants may remove and place all protective clothing (gowns, gloves, masks, etc.) in biohazard bags and replace them with clean protective clothing (gowns, gloves, masks, etc). The bagged materials will be sterilized with other medical waste collected from the facility.

Enforcement Assistance

Requests for Assistance - The Public Health Officer may request assistance of Law Enforcement, Fire Department, and EMS personnel by contacting the Operations Section Chief at the Operational Area EOC/DOC, as outlined in the **Command and Control section** of this plan.

Law Enforcement Assistance - The Public Health Officer or authorized designee may request law enforcement personnel through EOC/DOC to enforce isolation and quarantine orders in the following ways:

- Escort/transport contagious individuals to isolation areas/facilities,
- Protect the County of San Diego Health and Human Services Agency staff and other officials,
- Provide crowd and traffic control (e.g., picketing at isolation and quarantine facilities), as necessary to protect health and safety,
- Provide security at isolation/quarantine sites if needed, and
- Assist in enforcement of curfews implemented for disease control purposes, as requested.

Emergency Medical Services (EMS) or Fire Department Assistance - Fire Department and EMS personnel may be needed to assist with the implementation of quarantine/isolation orders in the following ways:

- Escort/transport individuals to isolation areas/facilities,
- Provide emergency medical assistance.

Legal Authorities For Isolation Or Quarantine

The legal authorities for isolation or quarantine are identified in **Isolation and Quarantine Attachment 5– Legal Authorities for Isolation and Quarantine.**

Following the release from isolation or quarantine of the last case (confirmed, probable, or suspect), Type C and Type R facilities will be decontaminated using routine healthcare cleaning procedures and regular daily activities may be resumed. Media Specialists for the Office of Media and Public Affairs will communicate with the public through the media to assure the community that these facilities have been decontaminated and pose no risk to the public's health.

PANDEMIC INFLUENZA AND OTHER HIGHLY INFECTIOUS RESPIRATORY TRANSMITTED DISEASE RESPONSE PLAN

Isolation and Quarantine – Attachment 1 – Staff Roles

Staff Roles for Isolation and Quarantine

Key HHSA staff members involved with isolation and quarantine activities in a pandemic influenza event will have the following general roles:

- Public Health Officer
  - Issues isolation and quarantine orders to protect the public's health
  - Maintains communication with state and federal authorities regarding suspected, probable, or confirmed pandemic influenza case(s)
  - Issues warnings to the general public, including prevention practices
  - Deputizes other Public Health Services staff to carry out Public Health Officer functions, as needed

- Deputy Public Health Officer
  - Assumes Public Health Officer role in her absence
  - Assists with Public Health Officer's duties

- Epidemiology Staff
  - Receive data
  - Track possible, suspect and confirmed cases
  - Help coordinate daily contact with individuals under isolation and quarantine
  - Help serve isolation and quarantine orders
  - Help coordinate daily visits, if necessary to ensure compliance with Isolation and Quarantine Orders
  - Assist with monitoring individuals in Type R Facilities
  - Collect specimen samples if needed
  - Help coordinate isolation and quarantine efforts with providers of health care for patients

- Public Health Nurses, including Bioterrorism PHNs
  - Serve isolation and quarantine orders
  - Help staff designated isolation and quarantine facilities
  - Help assist coordination of serving of orders and monitoring of those in Isolation and Quarantine
  - Help with coordination of support for those in Isolation or Quarantine
  - Assist in arranging transportation
  - Make daily contact/visits to ensure compliance with Isolation and Quarantine Orders
  - Take specimens from patients

- Transport samples to County lab
- Vaccinate
- Dispense antivirals

- Emergency Medical Services/Emergency Preparedness Staff
  - Provide logistics for portable isolation units
  - Procure resources (equipment, medical staff, transportation, facilities, and law enforcement)
  - Assist with vaccination administration, point of dispensing set-up, or other duties as assigned
  - Staff EOC or HHSA OR EMS DOCs
  - Assist IC with coordination
  - Assist with logistical support for those quarantined or isolated in Type C and Type R facilities

- Immunization Program Staff and Bioterrorism Public Health Nurses
  - Vaccinate
  - Set up clinics
  - Coordinate mass prophylaxis (vaccination, antivirals, antibiotics)
  - Maintain roster of vaccinated individuals
  - Maintain vaccine storage

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

I & Q - Attachment 2

Order Templates for Isolation and Quarantine

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

Order Of Isolation For The Control Of Pandemic Influenza or Other Highly Infectious Respiratory Transmitted Disease

COUNTY OF SAN DIEGO – HEALTH AND HUMAN SERVICES AGENCY
PUBLIC HEALTH SERVICES

It appearing to the undersigned that the person named below is reasonably suspected of having a new, highly infectious strain of influenza or other highly contagious respiratory transmitted disease in a communicable stage, it is hereby ordered that this person be isolated in the place designated by the Public Health Officer, and that premises of this institution are hereby designated as the limits of the area of isolation. This order is under the authority and by virtue of the provisions of Division 105, Part 1, Chapter 2, Sections 120130 and 120135, and Chapter 3, Sections 120195, 120215, 120275, 120200, 120290 and 120295 of the California Health and Safety Code. This order shall be in force for _____ days from the date of service or until afebrile, as shown below, unless otherwise ordered in writing by the Public Health Officer.

It is ordered that this person shall not leave the designated area of isolation, nor enter into, or be in or upon, any public or private place or property outside the area of isolation specified in this order, nor have contact with persons not also infected who are outside of the area of isolation **WITHOUT THE WRITTEN PERMISSION OR WRITTEN ORDER OF THE PUBLIC HEALTH OFFICER.**

It is further requested (if applicable) that the authorities of the institution herein designated as the area of isolation shall receive and hold this person under this order until released by the Public Health Officer.

Name: _____

Address: _____

Legal Guardian (if a minor): _____

Place of Isolation: _____

FOR THE CONTROL OF PANDEMIC INFLUENZA VIRUS STRAIN OR OTHER HIGHLY INFECTIOUS RESPIRATORY TRANSMITTED DISEASE

Ordered this date: _____

At the: _____ Case #:_____

PUBLIC HEALTH OFFICER, COUNTY OF SAN DIEGO

By_____

Title_____

This order served in person:

By_____

Health and Human Services Agency Employee

Date _____

Patient entered facility_____ 20___

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

Order Of Isolation For The Control Of Pandemic Influenza or Other Highly Infectious Respiratory Transmitted Disease

VIOLATIONS: Division 105, Part 1, Chapter 4, Section 120299 of the California Health and Safety Code reads as follows: "Any person who, after notice, violates, or who, upon the demand of any Public Health Officer, refuses or neglects to conform to, any rule, order, or regulation prescribed by the department respecting a quarantine or disinfection of persons, animals, things, or places, is guilty of a misdemeanor."

Division 105, Part 1, Chapter 4, Section 120290 of the California Health and Safety Code reads as follows: "Except as provided in Section 120291 or in the case of the removal of an afflicted person in a manner the least dangerous to the public health, any person afflicted with any contagious, infectious, or communicable disease who willfully exposes himself or herself to another person, and any person who willfully exposes another person afflicted with the disease to someone else, is guilty of a misdemeanor."

PENALTIES: Division 105, Part 1, Chapter 4, Section 120295 of the California Health and Safety Code reads as follows: "Any person who violates Section 120130 or any section in Chapter 3 (commencing with Section 120175, but excluding Section 120195), is guilty of a misdemeanor, punishable by a fine of not less than fifty dollars ($50) nor more than one thousand dollars ($1,000), or by imprisonment for a term of not more than 90 days, or by both. He or she is guilty of a separate offense for each day that the violation continued."

Section 19 of the California Penal Code reads as follows: "Except in cases where a different punishment is prescribed by any law of this state, every offense declared to be a misdemeanor is punishable by imprisonment in the county jail not exceeding six months, or by fine not exceeding one thousand dollars ($1,000), or by both."

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

Order Of Quarantine In A Private Residence For The Control Of A New, Highly Infectious Pandemic Influenza Virus Strain or Other Highly Infectious Respiratory Transmitted Disease

COUNTY OF SAN DIEGO, HEALTH AND HUMAN SERVICES AGENCY
PUBLIC HEALTH SERVICES

TO: _____ Case# _____

It appearing to the undersigned that you are a person reasonably believed to have been exposed to a case of a new, highly infectious strain of the influenza virus or other highly infectious respiratory transmitted disease in a communicable stage, under the authority and by virtue of the provisions of Division 105, Part 1, Chapter 2, Sections 120130 and 120135, and Chapter 3, Sections 120175 and 120220 of the California Health and Safety Code, it is hereby ordered that you be quarantined at your place of residence at the address shown above, until such time as the Public Health Officer determines that you are not communicable. This order shall be in force for _____ days from the date of service shown below, unless otherwise terminated by the Public Health Officer. You are hereby ordered to take the following precautions to prevent the potential spread of this influenza virus to others:

1. You shall monitor your bodily temperature at least twice daily and report those temperatures by telephone, or by other means directed, to the designated representative of the Public Health Officer.

2. You shall permit the designated representative of the Public Health Officer access to the residence shown above at any time for the purpose of verifying compliance with this order.

3. You shall notify the designated representative of the Public Health Officer if at any time you develop two successive fevers equal to or greater than 101 degrees Fahrenheit or 38 degrees Celsius.

4. You shall comply with all orders and direction of the Public Health Officer until such time as this order is terminated.

It is further ordered that you shall at all times avoid close contact with all persons (3-5 feet) and wear a surgical mask.

No other persons may enter the premises of quarantine except:

Members of Household	Relationship

Visitor	Relationship	Days	Hours	Purpose
Visitor	Relationship	Days	Hours	Purpose

Persons entering these premises, except as specified above will be prosecuted when detected. Failure to keep the premises of quarantine free of unauthorized persons will result in the premises being declared unfit for quarantine.

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

PUBLIC HEALTH OFFICER, COUNTY OF SAN DIEGO

By _____

Title_____

This order served in person:

By_____ Health and Human Services Agency Employee

Date _____

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

Order Of Quarantine In A Private Residence For The Control Of A New, Highly Infectious Strain of Influenza Virus or Other Highly Infectious Respiratory Transmitted Disease

VIOLATIONS: Division 105, Part 1, Chapter 4, Section 120275 of the California Health and Safety Code reads as follows: "Any person who, after notice, violates, or who, upon the demand of any Public Health Officer, refuses or neglects to conform to, any rule, order, or regulation prescribed by the department respecting a quarantine or disinfection of persons, animals, things, or places, is guilty of a misdemeanor."

PENALTIES: Division 105, Part 1, Chapter 4, Section 120295 of the California Health and Safety Code reads as follows: "Any person who violates Section 120130 or any section in Chapter 3 (commencing with Section 120175, but excluding Section 120195), is guilty of a misdemeanor, punishable by a fine of not less than fifty dollars ($50) nor more than one thousand dollars ($1,000), or by imprisonment for a term of not more than 90 days, or by both. He or she is guilty of a separate offense for each day that the violation continued."

Section 19 of the California Penal Code reads as follows: "Except in cases where a different punishment is prescribed by any law of this state, every offense declared to be a misdemeanor is punishable by imprisonment in the county jail not exceeding six months, or by fine not exceeding one thousand dollars ($1,000), or by both."

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

Order Of Quarantine In An Alternative Residential Facility For The Control Of Pandemic Influenza or Other Highly Infectious Respiratory Transmitted Disease

COUNTY OF SAN DIEGO – HEALTH AND HUMAN SERVICES AGENCY
PUBLIC HEALTH SERVICES

TO: _____ Case #: _____
_____
_____

It appearing to the undersigned that you are a person reasonably believed to have been exposed to a case of a new, highly infectious strain of influenza virus or other highly infectious respiratory transmitted disease in a communicable stage, under the authority and by virtue of the provisions of Division 105, Part 1, Chapter 2, Sections 120130 and 120135, and Chapter 3, Sections 120175 and 120220 of the California Health and Safety Code, it is hereby ordered that you be quarantined at the facility shown below, and that the premises of this facility are hereby designated as the limits of the area of quarantine, until such time as the Public Health Officer determines that you are not communicable. This order shall be in force for _____ days from the date of service shown below, unless otherwise terminated by the Public Health Officer.

It is further ordered that you shall not leave the designated area of quarantine, nor enter into, or be in or upon, any public or private place or property outside the area of quarantine specified in this order, nor have contact with persons not infected with the virus who are outside the area of quarantine **WITHOUT THE WRITTEN PERMISSION OR WRITTEN ORDER OF THE PUBLIC HEALTH OFFICER.**

You are further directed to comply with all other orders of the Public Health Officer until such time as this order is terminated.

Place of quarantine: _____

FOR CONTROL OF A NEW, HIGHLY INFECTIOUS STRAIN OF INFLUENZA VIRUS OR OTHER HIGHLY INFECTIOUS RESPIRATORY TRANSMITTED DISEASE

Ordered this date: _____

PUBLIC HEALTH OFFICER, COUNTY OF SAN DIEGO

By _____ Title_____

This order served in person:

By_____ Health and Human Services Agency Employee

Date _____

Patient entered facility_____ 20___

Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

Order Of Quarantine In An Alternative Residential Facility For The Control Of Pandemic Influenza or Other Highly Infectious Respiratory Transmitted Disease

VIOLATIONS: Division 105, Part 1, Chapter 4, Section 120275 of the California Health and Safety Code reads as follows: "Any person who, after notice, violates, or who, upon the demand of any Public Health Officer, refuses or neglects to conform to, any rule, order, or regulation prescribed by the department respecting a quarantine or disinfection of persons, animals, things, or places, is guilty of a misdemeanor."

PENALTIES: Division 105, Part 1, Chapter 4, Section 120295 of the California Health and Safety Code reads as follows: "Any person who violates Section 120130 or any section in Chapter 3 (commencing with Section 120175, but excluding Section 120195), is guilty of a misdemeanor, punishable by a fine of not less than fifty dollars ($50) nor more than one thousand dollars ($1,000), or by imprisonment for a term of not more than 90 days, or by both. He or she is guilty of a separate offense for each day that the violation continued."

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Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

Proof of Personal Service

I, the undersigned say: I am over 18 years of age, and a resident of the County of San Diego, in which county the with-in mentioned delivery occurred, and not a party of the action herein.

My business address is _____, _____, California

I served the ORDER(S) OF THE PUBLIC HEALTH OFFICER upon the below named persons, by delivering to and leaving with the person named, in the County of San Diego, State of California, at the time and place set forth opposite the named indicated, said document:

_____	_____
Name of the person Served	Date, Time & Place of Service

I declare under penalty of perjury, under the laws of the State of California that the foregoing is true and correct.

Executed on_____, 20_____, at _____, California.

_____
Signature

I & Q - Attachment 3

ISOLATION & QUARANTINE FACILITY ACTIVATION PROTOCOL

I &Q: Attachment 3 - Isolation & Quarantine Facility Activation Protocol

INTRODUCTION

The Standardized Emergency Management System (SEMS) employs a logical management structure, defined responsibilities; clear reporting channels and a common nomenclature to help unify public health and other emergency responders during a public health emergency involving activation of an isolation and/or quarantine facility.

Each position listed in this section has a specific mission and organizational function. Only those positions needed will be activated dependent upon the size and severity of the public health emergency. However, more than one position may be assigned to an individual. One person may perform multiple tasks until additional support is obtained. Individual job action sheets assist in defining that position's role. These positions represent a responsibility chain of command.

Table I lists the Legal Authorities for Isolation and Quarantine for the State of California. As of April 4, 2003, Severe Acute Respiratory Syndrome (SARS) is listed as a reportable disease. Quarantine may be implemented for contacts of newly emerging diseases that can be easily transmitted human to human with high mortality and no specific tests to diagnose the disease nor specific therapy or prophylaxis available. To utilize this isolation and quarantine facility activation protocol several assumptions have been made about the public health emergency and are listed on Table II. Triggers that would activate a quarantine order are noted in Table III.

The details about a local designated quarantine facility and its management are confidential for security purposes.

I &Q: Attachment 3 - Isolation & Quarantine Facility Activation Protocol

TABLE I

Legal Authorities for Isolation and Quarantine

The legal authorities for isolation or quarantine are as follows:

- CHSC § 101030, requires Public Health Officers to enforce orders and regulations pertaining to quarantines
- CHSC § 120130, allows the State DHS to adopt and enforce regulations requiring isolation or quarantine and allows the Public Health Officer to require isolation or quarantine when necessary to protect the public health
- CHSC § 120135, allows the State DHS to establish places of quarantine or isolation
- CHSC § 120195, requires Public Health Officers to enforce all orders, rules and regulations concerning quarantine or isolation as directed by the State DHS
- CHSC § 120215 requires Public Health Officers to ensure adequate isolation of cases and appropriate quarantine of contacts and premises. Directs Public Health Officers to follow all rules, regulations and orders of the State DHS with respect to isolation or quarantine
- CHSC § 120200, directs every Public Health Officer to establish and maintain places of quarantine or isolation that are subject to special directions of the State DHS
- CCR, Title 17, § 2515, defines isolation
- CCR, Title 17, § 2516, defines strict isolation and requires the Public Health Officer to give instructions to the patient and members of the household, define the area of isolation and state measures for prevention of the spread of disease
- CCR, Title 17, § 2520, requires the Public Health Officer to determine contacts subject to quarantine, determine the place of quarantine and issue instructions
- PHS Act, Section 311, 42 U.S.C. § 243(a), Federal assistance may be provided to state and local authorities in enforcing their quarantine and other health regulations
- PHS Act, Section 311, 42 CFR. § 70.2 and 21 CFR. § 1240.30, while intrastate control of communicable diseases generally may be the purview of state and local officials, CDC's domestic quarantine regulations authorize federal intervention "in the event of inadequate local control."

I &Q: Attachment 3 - Isolation & Quarantine Facility Activation Protocol

TABLE II

Assumptions:

1. There may be a prior warning of a coming pandemic based on a reliable report from C.D.C. and W.H.O. characterized by severe morbidity and mortality with easy person-to-person transmission.

2. No vaccine or specific prophylactic medication may be available.

3. It may take six months to produce an adequate supply of vaccine for the entire U.S. population.

4. In San Diego County and the City of San Diego, approximately 2.8 million people could receive two doses of vaccine from this supply.

5. The pandemic waves will last about one month and peak at two weeks.

6. Community must be prepared for multiple waves and reintroduction of the disease.

7. The personal residence and/or home are first and preferred choice for isolation and quarantine.

8. Minors must be quarantined with an adult caretaker.

9. This protocol lists all roles that may be required for facility activation but not all roles may be activated based on severity of the public health emergency.

10. Typical incubation period of influenza is two days (range one to four days).

11. The infectious period (viral shedding) peaks on second day of symptoms

12. Fifty (50) percent of persons with influenza virus do not develop symptoms but still shed virus

13. The amount of virus shed correlates with height of an infectious person's temperature

I &Q: Attachment 3 - Isolation & Quarantine Facility Activation Protocol

TABLE III

QUARANTINE ORDER

Does a Threat to Human Health Exist?

Triggers for a quarantine order:

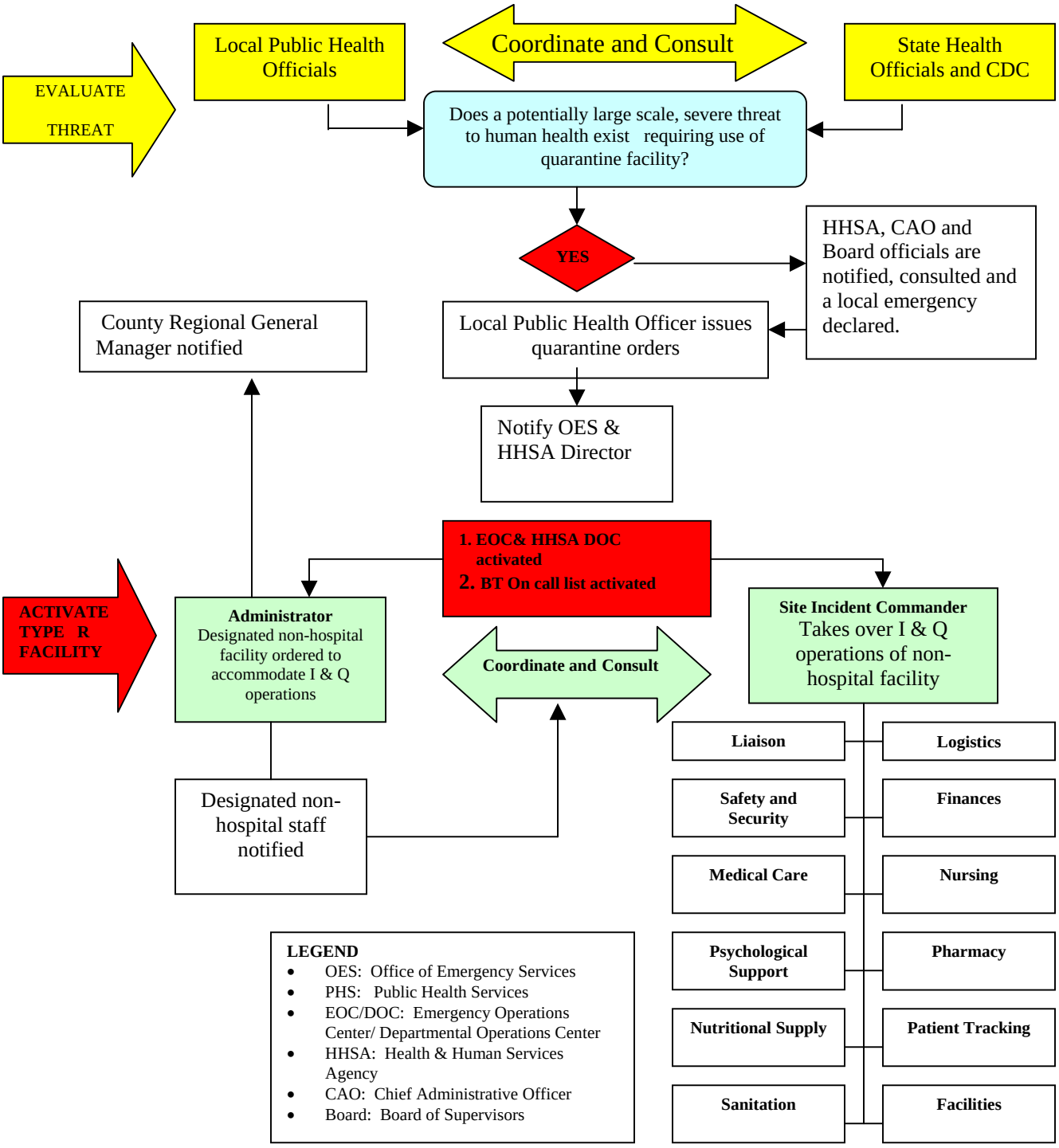
1. Positive laboratory results of a highly infectious disease with high mortality.

2. Clinical or epidemiological indications of a significant health threat.

3. Prior warning of a coming pandemic based on a reliable report from C.D.C. and W.H.O. characterized by severe morbidity and mortality with easy person-to-person transmission.

I &Q: Attachment 3 - Isolation & Quarantine Facility Activation Protocol

ACTIVATION FLOWCHART FOR QUARANTINE FACILITY



Isolation and Quarantine – Attachment #4 - Procedures for Isolation and Quarantine of Individuals

Procedures for Isolation and Quarantine of Individuals

The following sections describe the procedures to follow when establishing isolation and quarantine of specific types of individuals during a public health emergency due to pandemic-level outbreak. The specific orders for the following categories are included in **Orders of Isolation and Quarantine.**

Procedures for Isolating Known or Presumed Infectious Individuals (confirmed, probable, and suspected Pandemic Influenza or other highly infectious respiratory transmitted disease cases) in a Type C Facility

1. The Public Health Officer's authorized designee serves the patient with an appropriate Order of Isolation.
2. Prepare Type C facility(ies) for occupation by pandemic-type influenza or other new, highly infectious respiratory transmitted disease confirmed, probable, or suspected cases.
3. Ideally, only vaccinated individuals will be selected to staff and/or enter a Type C Facility. However, vaccine most likely will not be available initially so personal protective equipment (PPE) will be utilized for airborne and contact isolation.
4. The following individuals associated with Type C facilities will preferably have prior vaccine when vaccine is available.

    a. Personnel who will transport cases to Type C Facilities,
    b. Personnel who are authorized to enter the facility (medical staff, support personnel, selected visitors, etc.),
    c. Personnel who will handle laundry and waste associated with the facility, and
    d. Personnel who are providing security coverage at the Type C facility.
    e. Confirmed cases should have first priority for separate rooms with negative airflow.

Procedures for Isolation of Persons Who Are Confirmed, Probable, or Suspect Cases in Non-Type C Facility Prior to Transport to Type C Facility

1. The Public Health Officer's authorized designee serves the patient with an appropriate Order of Isolation.
2. Select route for transportation of patient through the Non-Type C facility to an isolation room. Criteria for selecting the route include: directness to room, ease of decontamination if required, and isolation from other people. If an elevator is needed, it should be a non-public elevator.
3. Transport the patient within Non-Type C facility to an isolation room while awaiting ambulance transport to the Type C Facility. At a minimum facility staff should:

a. Cover the patient with a disposable sheet and have the patient wear a surgical mask when being taken to the isolation room.
b. Use standard, airborne and contact isolation precautions for patient care.
c. Dispose of all protective clothing (including sheet covering patient) in plastic biohazard bags before removing from the room.

4. Follow standard, airborne and contact isolation precautions while patient is isolated in facility to prevent nosocomial transmission to other patients.
5. Arrange through Emergency Medical Services on-call staff to have patient transported to Type C Facility.

Procedure for Isolating Febrile Contacts

1. The Public Health Officer's authorized designee serves the patient with an appropriate Order of Isolation.
2. Prepare Type C Facility for isolation of febrile contacts.
3. Arrange for transportation of febrile contacts to a Type C Facility. Ensure that all persons admitted to or entering the facility use appropriate PPE.
4. Establish close monitoring for symptom development.

Procedures for Monitoring and/or Quarantining Not Yet Infectious Contacts (exposed individuals) in a Type R Facility

1. Immunize contacts when vaccine is available, including household members.
2. The Public Health Officer's authorized designee will facilitate arrangements for household contacts to stay outside of the home or to avoid direct contact with the vaccinated individuals in the home, during the period of surveillance.
3. The Public Health Officer's authorized designee places the contact(s) under fever surveillance (monitor temperature through use of oral thermometer) for 18 days from the date of last contact or after the incubation period when it has been defined, through service of an appropriate Order of Quarantine and Fever Surveillance.
4. This order requires the contact to monitor and record his/her temperature twice daily during the surveillance and to report via telephone once daily to designated Public Health personnel. If resources are available, the Public Health Officer or authorized designee may implement more active, closer supervision. This may include visiting asymptomatic close contacts one or more times a day.
5. The Public Health Officer or the Public Health Officer's authorized designee will release from surveillance contacts who do not develop fever during the surveillance period 18 days

following the last contact with a confirmed Pandemic Influenza case or after the incubation period when it has been determined.

6. If a contacts have an oral temperature > 101º F (38º C) on two successive readings, they must immediately notify health department personnel and remain in their home until transported to a Type C Facility, if their home is not an option for isolation.

Procedures for Quarantine of Non-Infectious Contacts in an Alternative Type R Facility

If an alternative Type R Facility is selected to house and monitor asymptomatic contacts during their surveillance period because of logistical or other problems, Public Health staff will adhere to the following guidelines:

1. The Public Health Officer or the authorized designee serves the patient with an appropriate Order of Quarantine in Alternative Residential Facility.
2. Prepare the Type R Facility for use by asymptomatic contacts to pandemic influenza or other highly infectious respiratory transmitted disease cases.
3. When vaccine is available, vaccinate all personnel entering the facility. Personnel must use appropriate PPE.
4. Contacts will remain in the facility during the surveillance period (up to 18 days).
5. Contacts will monitor their temperatures as outlined above. Designated staff will record temperatures in an individual record for each asymptomatic contact.
6. If 2 successive fevers > 101º F (38 C) occur; transport the contact to a C Facility for further evaluation.

PANDEMIC INFLUENZA AND OTHER HIGHLY INFECTIOUS RESPIRATORY TRANSMITTED DISEASE RESPONSE PLAN

CHAPTER VII
SECTION B

DECONTAMINATION PLAN

PANDEMIC INFLUENZA AND OTHER HIGHLY INFECTIOUS RESPIRATORY TRANSMITTED DISEASE RESPONSE PLAN

Decontamination Plan

Introduction

This section provides general guidance on environmental infection control and decontamination in any setting where care is given to patients suspected of a new, emerging respiratory transmitted disease specifically pandemic influenza. The basis for decontamination is related to an understanding of the virus itself, mode of transmission, and specific methods of disinfection / inactivation.

Transmission

The typical incubation period of influenza is two days (range one to four days). Viral shedding, and the period during which a person may be infectious to others, generally peaks on the second day of symptoms, but may begin the day before symptoms start, and typically lasts five to seven days in adults. Young children and immuno-compromised persons may shed virus and be infectious for three weeks or longer. The amount of virus shed and the length of time of viral shedding may be prolonged during initial infection with a new influenza subtype.

Clinical symptoms of influenza can range from mild upper respiratory track illness with no elevation in temperature to illness characterized by high fever, cold symptoms and cough. Young children may present with sepsis-like syndrome (high fevers, low blood pressure and rapid heart rate) or febrile seizures, and one-third may have diarrhea. Thus, the symptoms of influenza are often non-specific and wide-ranging, making influenza difficult to differentiate from other causes of respiratory illness based on the clinical presentation alone.

The ability of one person to infect another relates, in part, to the amount of virus shed by the infected person during their acute infection. Studies in healthy persons have shown that the amount of virus shed correlates with the height of an infected person's temperature. However, approximately 50 percent of persons infected with influenza do not develop symptoms, but still may shed virus.

Routes of influenza transmission

Direct and indirect contact transmission

Direct transmission involves direct body-to-body surface contact. Indirect transmission occurs via contact with contaminated intermediate objects such as contaminated hands or inanimate objects such as needles or countertops.

Influenza viruses are known to survive on non-porous surfaces such as steel and plastic for up to 24-48 hours and on cloth, paper and tissues for up to 8-12 hours.

Viable virus can be transferred from non-porous surfaces to hands for 24 hours and from tissue to hands for 15 minutes.

Droplet transmission

Droplet transmission occurs when contagious droplets produced by the infected host are propelled a short distance through coughing or sneezing and can come into contact with another person's conjunctiva, mouth or nasal mucosa. Since these droplets generally are large (greater than 10 micrograms) and do not stay suspended in the air, this mode of transmission is not affected by special air handling or control of room pressures.

Droplet nuclei (airborne) transmission

This entails the production of infectious droplet nuclei, generally 5 micrograms or less in diameter. In contrast with larger droplets, these droplets can remain suspended in the air and be disseminated by air currents in a room or through a facility to be inhaled by a susceptible host. Preventing the spread of droplet nuclei requires the use of special air handling and ventilation procedures.

Droplet transmission is thought to be the predominant form of spread in a setting with an appropriate number of air exchanges and standard ventilation. In the absence of appropriate ventilation and air exchanges, airborne transmission may play a greater role, such as in a crowded space where air exchange is limited. Observations in hospitals and nursing homes indicate that influenza outbreaks in these settings are more likely explained by droplet transmission or by contact with health care workers rather than by airborne transmission through the ventilation systems. Outbreaks of inter-pandemic influenza in these settings can be controlled through the use of a combination of control measures, including influenza vaccine, antiviral medications, and the use of standard and droplet precautions. Further, such outbreaks have been controlled without the use of negative pressure rooms and isolation precautions specific for airborne diseases.

The pandemic influenza A virus is transmitted routinely person-to-person by air droplet. Infection control and prevention measures are based primarily on droplet precautions.

Pandemic Influenza Transmission Prevention Strategies

Strategies to achieve this goal must take into consideration the modes of transmission of influenza, the short incubation period, the non-specific clinical presentation, the likelihood of asymptomatically infected persons who may be involved in transmitting infection, and past experience in the use of containment measures during influenza pandemics. Because of the uncertainly of the benefits of containment measures for pandemic influenza, the effectiveness and compliance with such measures and the resources necessary to initiate and enforce compliance should be continually evaluated.

PANDEMIC INFLUENZA AND OTHER HIGHLY INFECTIOUS RESPIRATORY TRANSMITTED DISEASE RESPONSE PLAN

The two main strategies for prevention of transmission involve 1) decreasing contact between infected and uninfected persons; and 2) decreasing the probability that contact will result in infection if contact occurs (see Table). Interventions to achieve these objectives can be implemented in healthcare settings and in the community.

Table 1: Possible influenza transmission prevention strategies for healthcare settings and the community.

	Healthcare setting	**Community**
Decrease potential for contact	• Private room or cohorting with other influenza patients • Negative pressure room, if feasible • Designate specific wards or hospitals for admission of case patients • Minimize transportation of patient outside of room • Limit the number of healthcare workers caring for influenza patients • Limit number of visitors to influenza patients • Environmental decontamination for influenza following existing guidelines	• Provide advisories or limit travel to areas where a novel influenza strain is causing disease • Screen travelers for febrile and respiratory illness on exit from an area where a novel influenza strain is causing disease or on entrance to the U.S. • Cancel large group gatherings • Close schools • Encourage telecommuting • Limit availability of public transportation • Avoid unnecessary visits to hospitals • Discourage hand shaking • Identify cases early through public education and self-assessment for symptoms, including fever, leading to early isolation at home or in healthcare settings • Early quarantine of contacts of suspected cases
Decrease potential for infection if contact occurs	• Antiviral chemoprophylaxis for health care workers • Vaccination of health care workers • Hand hygiene • Respiratory hygiene/cough etiquette • Standard and droplet precautions including use of gowns, gloves and masks by healthcare workers or visitors to influenza patients	• Hand hygiene • Respiratory hygiene/cough etiquette • Wear masks in public • Antiviral chemoprophylaxis or vaccination if available

Recommended Influenza Isolation Precautions in Health Care Settings

- The patient should be placed in a private room or a room with other influenza-infected patients.

- Although airborne spread is not believed to play a major role in influenza transmission, if feasible early in a pandemic, the patient should be placed in a negative air pressure room or placed together with other patients with suspected or proven influenza in an area of the hospital with an independent air supply and exhaust system.

- Health care personnel should wear a surgical mask when entering the room of a patient with known or suspected influenza.

- Health care personnel should use standard plus droplet and contact precautions, including hand washing, use of gloves, and gown and eye protection if they are apt to come into contact with body fluids or contaminated surfaces.

Infection control measures to limit droplet as well as contact spread may be helpful. There is less data to support the clinical importance of isolation procedures (such as negative pressure rooms) to limit airborne transmission in the setting of normal air exchange. Further, the number of such rooms is limited and likely would be insufficient to handle the number of hospitalized patients expected in a pandemic. However, early in a pandemic when few cases have been identified, this strategy may be helpful in limiting spread to other patients, health care workers, or hospital visitors. Extrapolating from the available data, frequent hand washing or other hand hygiene practices, increasing ventilation, and possibly use of masks and gloves may prevent some transmission in household where infections have occurred.

Personal Protective Equipment (PPE)

- Disposable PPE should be properly discarded, and non-disposable PPE should be cleaned and disinfected as specified in state government, industry, or USDA outbreak-response guidelines. Hand hygiene measures should be performed after removal of PPE.
- All discarded disposable PPE must be disposed of in a biohazardous waste container.
- All personnel should adhere to hand hygiene practices, per current recommendations.

Methods for Disinfection/Decontamination

There are no disinfectant products registered by the U.S. Environmental Protection Agency (EPA) specifically for the inactivation of influenza virus on surfaces, nor have any products been evaluated for this purpose using this specific virus in potency testing. It has been established, however, that the influenza virus is readily inactivated by a variety of active ingredients found in EPA-registered chemical germicides that provide **low- or intermediate-level** disinfection during general use. The table in **Attachment 1 - Chemical Inactivation of Influenza Virus on**

Surfaces lists active chemicals and concentrations recommended for use. For additional information on other chemical disinfectants, see **Attachment 2 - Summary of Practical Disinfectants**. Note that the use of **high-level** disinfectants or liquid chemical sterilants on large environmental surfaces (e.g., tabletops, floors, and walls) is not indicated under any circumstances. All sterilization methods currently cleared by FDA for medical instruments and devices will also inactivate this virus.

Decontamination of Laundry - Textiles and Bedding

Textiles and fabrics (e.g., protective clothing, bed linens, clothing) from patients and their immediate contacts should be handled with minimum agitation. Whenever possible, disposable textiles and fabrics should be used. Contaminated disposable textiles and fabrics shall be placed into biohazardous waste (double bagged) containers. If reusable linens, bedding, and protective clothing have to be used, they can be laundered, using routine laundering guidelines for healthcare facilities.

Decontamination of Patient Care Equipment

Disposable equipment should be used whenever possible. Place disposable patient-care equipment in biohazardous waste containers for handling and disposal as biohazardous waste.

When use of disposable equipment is not possible, follow these guidelines in decontaminating reusable equipment.

- Place reusable patient care equipment in an appropriately labeled container, seal it, and transport it to central service area for processing. In central processing, it should be cleaned with an Environmental Protection Agency (EPA)-approved virucidal detergent, then decontaminated (sterilized) using one of the methods recommended by the equipment manufacturer.
- Use manufacturer recommendations for decontamination and cleaning of reusable PPE (i.e., N95 respirators or Air Purifying Respirators with HEPA cartridges). This is best implemented by providing decontamination and cleaning stations for respiratory Personal Protection Equipment in the areas where decontamination efforts are being implemented.

PANDEMIC INFLUENZA AND OTHER HIGHLY INFECTIOUS RESPIRATORY TRANSMITTED DISEASE RESPONSE PLAN

Management of Biohazardous Waste

Due to the increased measures for infection control, hospital infection control staff may choose to handle/designate all waste, both biohazardous waste and non-biohazardous waste (solid waste, trash, garbage), as biohazardous and sterilize it before disposal.

In outbreak situations where vaccine is not available, workers doing this work must use PPE until vaccine or antiviral prophylaxis is made available.

Regulations Guiding Management of Hazardous Waste - Hospitals in San Diego County are routinely inspected for compliance with requirements for the proper storage, handling, and disposal of biohazardous waste. The requirements for the proper storage, handling and disposal of biohazardous waste are provided in:

- Title 22, California Code of Regulations, Social Security, Division 4. Environmental Health, Chapter 21. Minimum Standards for Permitting Medical Waste Facilities,
- Medical Waste Management Act California Health and Safety Code Sections 117600 – 118360, and County of San Diego Ordinance SEC. 68.1201 at.el.

Offsite Treatment/Disinfection of Biohazardous Waste – Most hospitals in San Diego County do not autoclave biohazardous waste onsite; rather, they use a registered hazardous waste hauler. All waste generated from a hospital (disinfected biohazardous waste, trash, and garbage) must be placed in secured or locked dumpster. Hospital staff should provide assurance to landfill operators that treated wastes would not pose significant risk of influenza exposure to either the landfill workers or to the general public. There is no scientific basis for refusing landfill disposal of these treated wastes.

Anatomical and Pathological Biohazardous Wastes – These wastes are regulated medical wastes, requiring the same handling and storage requirements as biohazardous wastes. Therefore, these wastes will require transport to an offsite location for disposal. Remains are excluded from waste categories. Remains can be safely managed in mortuary settings using the current practices of barrier protection, Standard Airborne Precautions, and other appropriate safety procedures during embalming or otherwise preparing the body for cremation (e.g., safe handling and disposal of embalming chemicals, proper ventilation, environmental surface clean-up and disinfection).

Air Space Decontamination in Rooms and Vehicles

There is no evidence to support air space decontamination of rooms, facilities, or vehicles; therefore, fumigation is not indicated for environmental control of -influenza virus.

Environmental Surfaces

Environmental surfaces that are touched frequently by hand can be cleaned with a disinfectant containing an active ingredient found in:

- **Attachment 1 - Chemical Inactivation of Influenza Virus on Surfaces,** or
- **Attachment 2 - Summary of Practical Disinfectants**.

There is no indication to use extraordinary procedures to clean and disinfect the interior surfaces of ambulances, homes or other spaces occupied by influenza patients. Routine approaches for cleaning and disinfection are adequate in these areas. More specific information on surface cleaning can be found in **Attachment 4 – Surface Decontamination.**

Decontamination of Ambulances

Decontaminate all ambulances after transporting a pandemic influenza patient before re-use to transport non-pandemic influenza patients, using guidelines in **Attachment 5 – Ambulance Decontamination**.

Decontamination of Private Homes and Vehicles

Procedures for decontamination of private homes and vehicles will be similar to those for hospitals and ambulances. However, because hospitals and ambulances are better designed for decontamination and infection control, there are some differences. Guidelines listed in **Attachment 6 – Private Home and Vehicle Decontamination** should be given to people who housed or transported pandemic influenza patients in private homes or vehicles.

PANDEMIC INFLUENZA AND OTHER HIGHLY INFECTIOUS RESPIRATORY TRANSMITTED DISEASE RESPONSE PLAN

Decontamination Attachment 1 - Chemical Inactivation of Influenza Virus on Surfaces

Chemical Inactivation of Influenza Virus on Surfaces: Inactivation After 10 Minutes Contact Time at Room Temperature

Note: *The survivability of Influenza virus on environmental surfaces is for 8-48 hours.*

Chemicals Used on Environmental Surfaces for Low- or Intermediate-Level Disinfection	
Chemical Disinfectant	Minimum Concentration to Achieve Inactivation
Ethyl alcohol	40%
Isopropyl alcohol	30%
Benzalkonium chloride	100 ppm
Sodium hypochlorite (note: most household bleach contains 5.25% (52500 ppm) concentration of sodium hypochlorite.	200 ppm
Ortho-phenylphenol	0.12%
Iodophor	75 ppm

ppm: Parts per million

Concentrations of the chemicals listed above are lower than those commonly used in healthcare applications. It is therefore expected that manufacturer-recommended use-concentrations of EPA-registered germicides will be adequate for routine disinfection of cleaned environmental surfaces for management of Pandemic Influenza care areas. The nature and extent of surface contamination will dictate the level of disinfection (i.e., low-level or intermediate-level) needed to make the surface safe to handle or use.

Decontamination Attachment 2 - Summary of Practical Disinfectants

Disinfectants		Important Characteristics											
Type	**Category**	**Effective Shelf Life** >1 week Protected from light and air	**Corrosive**	**Flammable**	**Explosion Potential**	**Residue**	**Inactivated by Organic Matter**	**Compatible for Optics** Usually compatible, but consider interferences from residues & effects on associated materials such as mounting.	**Compatible for Electronics**	**Skin Irritant**	**Eye Irritant**	**Respiratory Irritant**	**Toxic** By skin or mouth, or both. Refer to manufacturer's literature and/or *The Merck Index*
LIQUID	Quat. Ammonium Cpds	+					+	+		+	+		+
	Phenolic Cpds	+	+			+				+	+		+
	Chlorine		+			+	+			+	+	+	+
	Iodophor	+	+			+	+			+	+		+
	Alcohol, Ethyl	+		+							+		+
	Alcohol Isoprophyl	+		+							+		+
	Formaldehyde	+				+				+	+		+
	Glutaraldehyde	+				+		+		+	+		+
GAS	Ethylene Oxide	N/A		+ Neither flammable nor explosive in 90% CO2,or fluorinated hydrocarbon, the usual form.	+ Neither flammable nor explosive in 90% CO2,or fluorinated hydrocarbon, the usual form.			+	+	+	+	+	+
	Parafor-maldehyde	N/A		+ At concentrations of 7%-73% by volume in air, solid-exposure to open flame.	+ At concentrations of 7%-73% by volume in air, solid-exposure to open flame.			+	+	+	+	+	+

PANDEMIC INFLUENZA AND OTHER HIGHLY INFECTIOUS RESPIRATORY TRANSMITTED DISEASE RESPONSE PLAN

Decontamination Attachment 3 –County of San Diego Ordinance Medical/ Bio-Hazardous Waste

Excerpts from County of San Diego Ordinance Medical/ Bio-Hazardous Waste

SEC. 68.1201. PURPOSE.

It is the intent of the Board of Supervisors that the Director of the Department of Environmental Health shall implement the Medical Waste Management Act, Division 104, Part 14 of the California Health and Safety Code.

SEC. 68.1202. SMALL QUANTITY GENERATORS.

(a) It shall be unlawful for any generator of medical waste, other than a trauma scene waste management practitioner, that generates less than 200 pounds per month of medical waste to store or dispose of such wastes without an annual permit therefore from the Director of the Department of Environmental Health.

(b) Any person desiring a permit required by this chapter shall make application therefore as prescribed in Chapter 9, Section 68.906 of this division.

(Amended by Ord. No. 9293 (N.S.), effective 1-12-01)

SEC. 68.1203. LARGE QUANTITY GENERATORS.

(a) It shall be unlawful for any generator of medical waste, other than a trauma scene waste management practitioner, that generates more than 200 pounds per month of medical waste to store or dispose of such wastes without an annual permit therefore from the Director of the Department of Environmental Health.

(b) Any person desiring a permit required by this chapter shall make application therefore as prescribed in Chapter 9, Section 68.906 of this division.

(Amended by Ord. No. 7646 (N.S.), effective 8-4-89; amended by Ord. No. 8477 (N.S.), adopted 11-8-94, operative 1-1-95; amended by Ord. No. 9293 (N.S.), effective 1-12-01)

SEC. 68.1204. FEE.

Every person required to have a permit or license required by this division shall, at the time of making application or renewal, pay the annual fee prescribed for such a permit or license. Such annual permit fees shall be specified in Section 65.107 of the County Code of Regulatory Ordinances.

(Amended by Ord. No. 7646 (N.S.), effective 8-4-89; amended by Ord. No. 9293 (N.S.), effective 1-12-01)

SEC. 68.1205. SHARPS CONTAINER LABELING.

Sharps containers must be labeled with either "biohazard" or "infectious waste" on the outside of the container. Sharps containers must also be labeled so that the generator's name, address and phone number are legible and easily visible on the outside of the container.

(Amended by Ord. No. 7646 (N.S.), effective 8-4-89; amended by Ord. No. 9293 (N.S.), effective 1-12-01)

SEC. 68.1206. RED BAG LABELEING.

Red Bags shall be red in color and conspicuously labeled with the international biohazard symbol and the word "Biohazard". The bag shall be labeled so that the generator's name, address, and phone number is legible and easily visible on the outside of the bag.

(Amended by Ord. No. 7646 (N.S.), effective 8-4-89; amended by Ord. No. 8477 (N.S.), adopted 11-8-94, operative 1-1-95; amended by Ord. No. 9293 (N.S.), effective 1-12-01)

SEC. 68.1207. MEDICAL SOLID WASTE.

Medical solid waste shall include, but not be limited to, waste such as empty specimen containers, bandages, dressings containing non-liquid blood, surgical gloves, decontaminated biohazardous waste, and other materials which are not biohazardous.

(Amended by Ord. No. 7646 (N.S.), effective 8-4-89; amended by Ord. No. 9293 (N.S.), effective 1-12-01)

SEC. 68.1208. CRIMINAL PENALTY.

Violation of any of the provisions of this chapter shall be a misdemeanor punishable by imprisonment in the County jail not exceeding one year, or a fine not exceeding ten thousand dollars ($10,000), or both.

(Amended by Ord. No. 9293 (N.S.), effective 1-12-01)

SEC. 68.1209. CIVIL PENALTY.

Any person who violates any of the provisions of this chapter shall be liable for a civil penalty not to exceed fifteen thousand dollars ($15,000) for each such violation.

(Amended by Ord. No. 9293 (N.S.), effective 1-12-01)

SEC. 68.1210. ADDITIONAL REMEDIES.

The civil and criminal provisions of this chapter are remedies in addition to any existing remedy authorized by law and are not to be construed as conflicting with or in dereliction of, any provisions of this chapter or of this code or of law. Said provisions are to be construed as independent and non-exclusive and in no way conditioned upon each other.

(Amended by Ord. No. 9293 (N.S.), effective 1-12-01)

SEC. 68.1211. MEDICAL SOLID WASTE SECURITY.

Any person who is a generator, or an employee of a generator of medical solid wastes, shall store such wastes prior to disposal in an area secured as to deny access to unauthorized persons, animals, wind, rain, insects and rodents. If such wastes are placed in a trash receptacle or compactor which is accessible at any time to unauthorized persons, such receptacle or compactor shall be locked to prevent access to the contents thereof to anyone other than authorized persons or refuse collection personnel.

PANDEMIC INFLUENZA AND OTHER HIGHLY INFECTIOUS RESPIRATORY TRANSMITTED DISEASE RESPONSE PLAN

Decontamination Attachment 3 –County of San Diego Ordinance Medical/ Bio-Hazardous Waste

(Amended by Ord. No. 8477 (N.S.), adopted 11-8-94, operative 1-1-95; amended by Ord. No. 9293 (N.S.), effective 1-12-01)

PANDEMIC INFLUENZA AND OTHER HIGHLY INFECTIOUS RESPIRATORY TRANSMITTED DISEASE RESPONSE PLAN

Decontamination Attachment 4 – Surface Decontamination Guidelines

Surface Decontamination Guidelines

Daily Cleaning Where a Pandemic Influenza Patient Is Housed

- Disinfect high contact surfaces, and horizontal surfaces in patient's room daily using a properly diluted, disinfectant compound.
- Thoroughly wet all surfaces with the solution and let dry for at least 10 minutes or allow to air dry.
- Clean floors using a single-bucket procedure of wet decontamination.
- Empty the contents of the bucket into the toilet.
- Use disposable mop heads and cleaning cloths if available and dispose of as for biohazardous waste.

Terminal Cleaning after a Pandemic Influenza Patient Leaves

- Terminally clean rooms that were used to house Pandemic Influenza cases once they are no longer used to house such cases.
- Always clean from high to low with the floors being the last. Decontaminate all horizontal surfaces, furniture, fixtures, and walls, as outlined above.
- If the room is under negative pressure and/or is HEPA filtered and there are at least 6-12 air changes per hour (ACH), allow the room to air for at least 12 hours (depending on the number of ACH) before admitting a non-infected patient to the room.
- Clean and disinfect mattress covers by using EPA-registered disinfectants that are compatible with the materials to prevent the development of tears, cracks, or holes in the covers. Replace mattress and pillow covers if they become torn or otherwise in need of repair. If using a mattress cover completely made of fabric, change these covers and launder between patient use. Launder pillow covers and washable pillows in the hot-water cycle between patients or when they become contaminated with body substances.
- All mattresses, mattress covers, pillows, curtains, clothing, and other removable cloth items should be double bagged, removed from the nursing unit in covered carts (chutes should not be used), sterilized, and then laundered.

PANDEMIC INFLUENZA AND OTHER HIGHLY INFECTIOUS RESPIRATORY TRANSMITTED DISEASE RESPONSE PLAN

Decontamination Attachment 5 – Ambulance Decontamination

Ambulance Decontamination Guidelines

Decontaminate all ambulances after transporting a Pandemic Influenza patient, using routine disinfectant guidelines.

- To minimize droplet contamination inside the ambulance provide the patient with a surgical or procedural mask, "mask the patent."

- Place all disposable items in double bagged, red biohazardous waste bags. Make arrangements with the receiving hospitals to assist with collection and disposal of these items.

- Do wet-decontamination if contamination is suspected, of the entire passenger compartment and all door handles as outlined below.

  - Spray the entire interior of the ambulance heavily (until the solution runs off) with an approved disinfectant solution (see **Decontamination Attachment 1 - Chemical Inactivation of Vaccinia Virus on Surfaces)**.
  - Wear appropriate personal protective equipment (gown, gloves, cape, and masks) while performing this step.
  - Spray the outside door handles or other surfaces of direct contact in the same manner.
  - Allow the solution to stand on all surfaces for at least 10 minutes.
  - Wipe wetted surfaces (all surfaces inside the ambulance and all outside door handles) with clean cloths, disposable wipes, or mops with disposable mop heads.

- Place cloths or disposable wipes, mop heads, and protective clothing worn by the personnel doing the decontamination into a red biohazardous waste bag. Arrangements can be made with the receiving hospital for proper disposal of wastes.

PANDEMIC INFLUENZA AND OTHER HIGHLY INFECTIOUS RESPIRATORY DISEASE RESPONSE PLAN

Decontamination Attachment 6 – Private Home and Vehicle Decontamination.

Private Home and Vehicle Decontamination Guidelines

General Recommendations

- To minimize droplet contamination inside homes and vehicles provide the patient with a surgical or procedural mask, "mask the patent."

- Select a general disinfectant that is consistent with those listed in **Decontamination Attachment 1 - Chemical Inactivation of Pandemic Influenza Virus on Surfaces** that are available in the home.

- Use personal protective equipment applicable to those items the general public has available in their homes.

- When conducting decontamination activities, use gloves (latex rubber, such as those used for washing dishes), long pants, and long sleeved shirt.

- If possible, allow rooms in a home used to house and vehicles used to transport patients to sit unoccupied for 24 hours. This time will allow for some natural inactivation of contamination.

Home Decontamination- Procedures

If pandemic influenza cases are housed in private homes, follow these instructions for waste disposal and cleaning during the time the cases are in the house or after they leave.

- Bag all trash or other disposable items that came into contact with the pandemic influenza patient and tightly seal the bag before discarding.

- While a pandemic influenza case is in the home, wash the person's clothes, bed linens, towels and washcloths frequently. Do not use the sick person's items prior to their being laundered.

- Thoroughly clean surfaces, handrails, fixtures, and walls with a disinfectant. The common areas bathroom, kitchen and sick person bedroom should be cleaned daily with a disinfectant while the person is in the home. Clean the same areas after the patient is no longer in the home. Place used cleaning cloths in the washing machine and launder immediately.

- Launder bedding, linens, clothing, curtains, or other cloth material that came into contact with the pandemic influenza patient in hot water cycle at the highest temperature possible with detergent, followed by hot air drying. The use of chlorine bleach during hot-water

washing can provide additional measure for safety. If no other wash cycles other than cold water are available, use detergents and laundry additives that are specifically formulated for cold-water washing, then dry using a hot air cycle for the dryer. Handle contaminated textiles and fabrics with minimum agitation to avoid contamination of air, surfaces, and persons.

Decontamination of Private Vehicles

If pandemic influenza cases are transported in private vehicles, follow these instructions for private vehicle decontamination.

- If possible, allow the vehicle to sit un-occupied for at least 24 hours after patient transport. This will allow for natural inactivation of some contamination.

- Bag all trash or other disposable items that came into contact with the pandemic influenza patient, and tightly seal the bag. Before discarding the bag, spray the outside of the bag with a suitable disinfectant (Lysol, Amphyl) or household bleach diluted 1:10.

- Spray the interior, nonporous surfaces heavily with a suitable disinfectant solution. Allow the solution to remain on the surfaces for at least 20 minutes before being removed. Thoroughly wipe down all surfaces in the vehicle.

- Thoroughly clean all outside door handles with a suitable disinfectant. Allow the solution to remain on the door handles for at least 20 minutes before being wiped off.

- Place used cleaning cloths in the washing machine and launder immediately with hot water and any commercial laundry detergent and dry in hot air.

PANDEMIC INFLUENZA AND OTHER HIGHLY INFECTIOUS RESPIRATORY TRANSMITTED DISEASE RESPONSE PLAN

Decontamination Attachment 7 – Requirements for Biohazardous Waste

General Requirements for Storage, Handling and Disposal of Biohazardous Waste

Container Labeling

All biohazardous containers (red bags and sharps) used for biohazardous waste must be properly labeled:

- Label sharps containers with the words "sharps waste" or with the international biohazard symbol and the word "BIOHAZARD".
- Label red biohazard bags conspicuously with the words "Biohazardous Waste" or with the international biohazard symbol and the word "BIOHAZARD."
- Additionally all containers must be labeled with the facility name, address, and phone number, when in use. This labeling requirement should be done before use of the bag.

Secondary Containment for Red Biohazardous Waste Bags

All red bags shall be placed into rigid, leak-proof containers that have tight-fitting covers, and be kept clean and in good repair, labeled with the words "Biohazardous Waste" or with the international biohazard symbol and the word "BIOHAZARD" on the lid and on the sides. Rigid containers used to store or transport biohazardous waste should be routinely washed and/or decontaminated with an approved chemical disinfectant (e.g., 1-10 bleach to water solution).

Handling and Transport within the Hospital

- Double bagging, using two biohazardous waste bags, is an option. If chosen, the procedure should require the use of two bags at the point of generation, as opposed to double bagging after the bag is in use.
- Carefully seal bags to prevent expulsion of air.
- Carts or rigid, leak-proof containers should be used to transport red bags and sharps containers to a locked biohazardous waste holding area. Red bags and sharps containers should not be hand-carried throughout the hospital.

Biohazardous Waste Storage/Holding Area

Biohazardous waste generated throughout the hospital should be consolidated into a common storage area, pending onsite treatment or collection by a state-registered biohazardous hauler. This storage area shall meet the following requirements:

- The storage /holding area shall be secured in a manner that prevents access by unauthorized persons prior to disposal.

PANDEMIC INFLUENZA AND OTHER HIGHLY INFECTIOUS RESPIRATORY TRANSMITTED DISEASE RESPONSE PLAN

Decontamination Attachment 7 – Requirements for Biohazardous Waste

- Post warning signs for biohazardous waste storage areas in English and Spanish, legible during daylight at 25 feet.

  - **" CAUTION--BIOHAZARDOUS WASTE STORAGE AREA--UNAUTHORIZED PERSONS KEEP OUT"**
  - **"CUIDADO--ZONA DE RESIDUOS BIOLOGICOS PELIGROSOS--PROHIBIDA LA ENTRADA A PERSONAS NO AUTORIZADAS."**

- Biohazardous medical waste should not be stored on-site in excess of the permissible storage period (generally not greater than 7 days for most hospitals or large quantity generators). Every effort should be made to treat/disinfect waste as soon as possible.

PANDEMIC INFLUENZA AND OTHER HIGHLY INFECTIOUS RESPIRATORY TRANSMITTED DISEASE RESPONSE PLAN

Medical Examiner's Office (MEO) Section

Background

The San Diego County Medical Examiner's Office, under California Government Code Section 27491, and other sections, has the jurisdiction and obligation to investigate sudden and unexpected deaths, and other deaths, including those that might be of concern to the public's health.

Purpose

The Medical Examiner's Office (MEO) has reviewed this section of the Pandemic Influenza (PI) Response Plan to outline the MEO's preparation for the handling of communicable disease deaths.

Preparation

The Medical Examiner's Office will review the following documents and revise current MEO policies and procedures if appropriate:

- Annex F of the *Unified San Diego County Emergency Services Organization Operational Area Emergency Plan,*
- Internal departmental policies and procedures for the handling of suspected communicable disease deaths,
- Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan
- Guidelines published in the National Association of Medical Examiners (NAME) Medical Examiner/Coroner's Guide for Contaminated Deceased Body Management (see **Attachment 1 – Guide for Contaminated Deceased Body Management.**).

Employee Prophylaxis

The Medical Examiner's Office will offer PI vaccination or antiviral drugs, when available, to Investigators, Deputy Medical Examiners, and Forensic Autopsy Assistants.

Personal Protective Equipment

Personal protective equipment (PPE) will be used as described by the Centers for Disease Control as being acceptable protection. This includes, but is not limited to the following:

- Disposable latex or vinyl gloves,
- Disposable protective gowns,
- N-95 masks or higher,
- Protective eyewear.

PANDEMIC INFLUENZA AND OTHER HIGHLY INFECTIOUS RESPIRATORY TRANSMITTED DISEASE RESPONSE PLAN

Pandemic Stage

During the pandemic period, influenza cases may result in death. As with all other deaths under the Medical Examiner's jurisdiction, each case will be considered and handled individually. If it is determined that the remains will be transported to the Medical Examiner's Office (MEO) facility, pertinent guidelines for body handling will be followed, as described in:

- Annex F of the *Unified San Diego County Emergency Services Organization Operational Area Emergency Plan,*
- Internal departmental policies and procedures for the handling of suspected communicable disease deaths,
- Guidelines published in the National Association of Medical Examiners (NAME) Medical Examiner/Coroner's Guide for Contaminated Deceased Body Management (see **Attachment 1 – Guide for Contaminated Deceased Body Management.**).

Personal Protective Equipment

Personal protective equipment (PPE) will be used for Medical Examiner's Investigators and/or Deputy Medical Examiners, and body transport crew that might have contact with an infected body, as diagnosed in a medical facility, before transportation to the MEO facility (see **Attachment 1 – Guide for Contaminated Deceased Body Management.)**.

Autopsy

If the diagnosis of PI (Avian-H5N1) has been made and confirmed before death, the MEO might not perform an autopsy. The MEO will make the determination as to whether an autopsy is necessary on a case-by case basis.

Transportation of Remains

For a case diagnosed with PI, the body will be placed in an "impervious plastic bag, or disaster pouch".

Examination/Storage of Remains

If an autopsy or specimen collection becomes necessary, the CDC, National Center for Infectious Disease, Division of Healthcare Quality Control (404) 639-6413, or Pathology Activity (404) 639-3133 will be contacted for specific directions and recommendations. In general, personnel who have been vaccinated or given antiviral drugs for prophylaxis or wearing standard personal protective equipment (PPE) will carry out the examination. Recommended PPE includes full-body covering and N-95 fit-tested mask, especially if non-vaccinated or prophylaxed personnel participate in the procedure. These staff will be re-vaccinated per CDC guidelines.

All clothing items from the autopsy room will be placed into laundry bags labeled "biohazard" and laundered by usual professional medical clothing laundering company. After any examination, the body will be placed in the "double bag" arrangement as described above.

Biological specimens will be collected and handled according to the *CDC Guidelines.*

Release/Disposal of Remains

Remains will be released, per applicable law.

Decontamination of Facilities

Once the public health emergency has been resolved, and no further PI deaths have been identified, decontamination of the Medical Examiner Office (MEO) facilities will be conducted according to applicable local guidelines in the **Decontamination Section** of this plan.

Surveillance

After the last known case of PI has recovered or expired, the MEO will continue surveillance of bodies for signs of PI infection for three months and notify the County Public Health Officer or designee if any are identified.

The Medical Examiner/Coroner's Guide For Contaminated Deceased Body Management

Prepared by
The National Association of Medical Examiners and
The Centers for Disease Control and Prevention

Draft for Review and Comment

October 15, 2003

Preface

In the past few years, a number of publications and other resources have appeared concerning the management of mass fatality incidents. Some are geared toward the general management of incidents while others cover more specific topics such as decontamination procedures. Still others cover selected agents including chemical, biological, or radiological ones. Few publications have been written specifically for medical examiners and coroners.

The Medical Examiner and Coroner's Guide for Contaminated Deceased Body Management is written specifically for the medical examiner or coroner who will be in charge of the death investigations when fatalities result from terrorism or other hostile and aggressive acts. In some such cases, agents may be used that will require mitigation of environmental hazards and decontamination of human bodies. To that end, this *Guide* provides information and suggestions that may be useful in understanding the principles involved in decontamination procedures, recognizing that it may not be the medical examiner or coroner staff who actually conducts decontamination procedures.

The suggestions in this guide may differ slightly from those in other publications. However, those who have contributed to this guide believe that the recommendations are practical, workable, have a scientific basis, and do not differ much in substance when compared with other relevant publications.

The contents of this Guide represent the consensus opinions and thinking of those who prepared it and do not necessarily represent the opinions or viewpoints of the agencies or organizations with which the authors are affiliated. The contents of this Guide may be reproduced for practical use but the Guide may not be sold and it may not be cited for advertisement purposes. Reference to specific commercial products is for informational purposes only and does not constitute endorsement of the product or company which produces the product.

The recommendations contained in this Guide are not mandated nor are they required by federal, state, or local law. Rather, the recommendations are intended to assist medical examiners and coroners for the purposes of planning and providing a set of reasonable practice guidelines for incident response.

Acknowledgements

The authors of this Guide wish to thank the authors, contributors, and organizations who have produced other publications and materials upon which this Guide is heavily based. The bulk of this Guide was derived from information provided in the following resources:

- *Guidelines for Mass fatality Management During Terrorist Incidents Involving Chemical Agents*. Produced by the U.S. Army Soldier and Biological Chemical Command (SBCCOM). November, 2001. Available at: http://hld.sbcom.army.mil/downloads/reports
- *Medical Examiner/Coroner Guide for Mass Fatality Management of Chemically Contaminated Remains.* Prepared by the Department of Justice, Office of Justice Programs, Office of State and Local Domestic Preparedness, and the Department of Defense, US Army Soldier and Biological Chemical Command, Improved Response Program. Available at: http://hld.sbcom.army.mil/downloads/reports
- *Model Procedure for Medical Examiner/Coroner on the Handling of a Body/Human Remains that are Potentially Radiologically Contaminated.* Prepared by the Transportation Emergency Preparedness Program. Available via link from http://hld.sbcom.army.mil
- Department of Defense (DOD) Armed Forces Epidemiological Board (AFEB) Memorandum. *Disposition of Contaminated Remains-2003-06*. 14 January 2003.
- Department of Defense. *Joint Procedures for Decontamination and Disposition of Human Remains in Operation Desert Storm*. April 25, 1991.
- CDC. *Radioactive Contamination Guidance for DMORT Teams* (Draft). July 2003.
- Fowler D, Nolte KB. Biologic and Chemical terrorism: Surveillance and Response. In, *Handbook of Forensic Pathology (Chapter 35).* College of American Pathologists, Northfield, Illinois. 2003.

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- Mike Bell, MD, CDC/NCID

Introduction

In the event of a terrorist attack or unintentional event involving biological, chemical or radiological (BCR) modes with fatalities, the medical examiner/coroner (ME/C) will certainly be involved in the investigation and certification of death but may not be directly involved in decontamination or other pre-morgue procedures. However, the ME/C should at least be familiar with decontamination procedures because they may impact on evidence collection and/or the temporal sequence of death investigation conducted by the ME/C.

This Guide was developed to provide information for ME/Cs and is based on a review of established procedures, scientific literature, and current thinking about fatality incidents in which decontamination procedures may be required. It is virtually impossible for pre-planning or guidelines to address all possible scenarios and contingencies. This Guide provides a core set of suggestions that may need to be modified or supplemented as dictated by the specific circumstances of a given incident.

Definitions

- *Agent.* The chemical, biological, or radiological entity(ies) used in a terrorist attack or involved in an untoward unintentional event causing death.
- *Decontamination.* The process of removing or chemically degrading an agent on the body surface to a level that poses little or no risk to others in proximity to that surface (1).
- *Hot Zone*. The area contaminated by the agent (2) and/or immediately surrounding such an area and extending far enough to prevent the agent from being released to personnel outside the zone. This zone is also referred to as exclusion zone, red zone, or restricted zone (US DOT, 2000 North American Emergency Response Guidebook). Access is limited and controlled.
- *Warm Zone*. The area surrounding the Hot Zone which may include areas used for decontamination, in which hazards are expected to be controlled and/or mitigated. Access is limited and controlled.
- *Cold Zone*. Any area outside of the Hot and Warm Zones in which bodily or other processing is carried out but hazards have been controlled or abated, eliminating or significantly reducing risks to workers. Access to the Cold Zone is also controlled and limited to authorized personnel.

The ME/C will, at a minimum, need to communicate with those working in the Hot Zone and Warm Zone to ensure that evidence and information of importance to the ME/C is preserved and documented. It is recommended that at least two ME/C personnel be trained in the donning of various types of personal protective equipment (see below) in case entry into the Hot or Warm Zone is required. Medical examiners and coroners will, almost certainly be involved in the Cold Zone where postmortem examinations are likely to be performed.

Potential Agents

The Centers for Disease Control and Prevention has developed a list of critical chemical and biologic agents that may be used by terrorists (3).

Chemical agents

- **Nerve agents:** Tabun, Sarin, Somon, GF, and VX
- **Blood agents:** Hydrogen cyanide and cyanogens chloride
- **Blister agents:** Lewisite, nitrogen and sulfur mustards, and phosgene oxime
- **Heavy metals:** Arsenic, lead, mercury
- **Volatile toxins:** Benzene, chloroform, trihalomethanes
- **Pulmonary agents**: Phosgene, chlorine, vinyl chloride
- **Incapacitating agents**: BZ (3-quinuclidinyl benzilate), pesticides, dioxins, furans, PCBs
- **Explosives**: Ammonium nitrate combined with fuel oil
- **Flammable gases and liquids**: Gasoline, propane
- **Poisonous industrial gases, liquids, solids**: Cyanides, nitriles
- **Corrosive industrial acids and bases**: Nitric acid, sulfuric acid

Biologic Agents:

- **Category A (High-level risk**): Smallpox, anthrax, plague, botulism, tularemia, Filoviruses such as Ebola and Marburg causing hemorrhagic fevers, and Arenaviruses such as Lassa and Junin causing hemorrhagic fevers
- **Category B:** Q Fever, brucellosis, glanders, alphaviruses causing encephalitis, ricin toxin, epsilon toxin from *Clostridim perfringes*, *Staphylococcus* enterotoxin B, *Salmonella* species, *Shigella dysenteria*, *E Coli* O157:H7, *Vibrio cholerae*, and *Cryptosporidium parvum*
- **Category C:** NipahVirus, Hantavruses, Tickborne hemorrhagic fever and encephalitis viruses, Yellow Fever virus, multidrug-resistant TB.

Although chemical agents may be more likely than biological agents to require decontamination procedures, some biologic agents also may require such procedures. Biologic agents that involve spores (such as anthrax), external lesions (such as smallpox), or infected secretions are some examples. Radiologic agents may also be used in terrorist attacks. The most important in terms of decontamination is the so-called “dirty bomb” in which radioactive residue may exist on bodily surfaces and clothing and may be amenable to removal using decontamination procedures (4).

Incident Command

Most likely, the incident will be managed using the Incident Command System (ICS) with a structured hierarchy of leaders who report to a single Incident Commander (2). This structure, and the specific personnel in each responsible leadership position, need to be clearly defined before response is initiated. In advance of any event, the ME/C should contact local emergency response agencies to determine who would probably serve as the

Incident Commander in the case of an incident, to identify persons who would need to be contacted during response, and to determine how the ME/C will fit into the ICS response. It will probably be the Incident Commander who, in conjunction with needed consultants, will determine the level of protective gear and other precautions required, and who will enter and have access to the Hot Zone and other zones.

Personal Protective Equipment

Initially, until the need for lesser protection is established, it must be assumed that the highest caliber of personal protective gear needs to be worn in the Hot Zone. This should include:

- A full body suit that is resistant to radiation and chemicals
- Self-contained breathing units, then, as indicated by identification of specific suspect agents and degree of exposure in the Warm and Cold Zones, cartridge respirators with HEPA and/or charcoal filtration or lesser forms of respiratory protection as indicated (based on circumstances and the agent involved). Such phasing would be determined by the Incident Commander in consultation with appropriate experts.

In any case, even with low risk, the minimum protective equipment should include

- A full body suit that can be removed at the site
- Gloves, appropriate respirators (masks), and face shields or eye cover as dictated by the suspected agent

After decontamination is accomplished (see below), routine personal protective equipment should suffice for most agents (assuming that decontamination has been effective).

Level A PPE utilizes a self-contained breathing apparatus, a fully encapsulating chemical resistant suit, and inner chemical/biological resistant hand covers and boots or shoes.

Level B PPE utilizes a single or 2-piece chemical suit that need not be fully encapsulating, and also employs a self contained breathing apparatus. This gear is similar to standard fire-fighting gear.

Level C PPE utilizes a full-face air-purifying canister-equipped respirator, full body chemical-resistant suit, inner and outer chemical resistant gloves, and resistant boots/shoes.

Level D PPE utilizes simple overgarments, preferably water-resistant, to provide a physical barrier to cover the skin and clothing.

It is imperative that personnel entering contaminated areas be fully trained in the proper use of personal protective equipment, and such personnel will usually consist of fully qualified HazMat technicians. Additionally, it may be helpful for at least two people from the ME/C's office to be trained in the donning and use of Level A, B, and C PPE to

enable ME/C personnel to enter the Hot or Warm Zone, as needed for their purposes. These persons would alternate, as needed. In most cases where ME/C personnel would be needed, Level B or Level C PPE will suffice. Level C will be adequate in most cases where decontamination or autopsy procedures are performed.

Level A and B PPE can be hot to wear and sight can be restricted. The air supply may last less than an hour. For these reasons, aside from any ME/C personnel, multiple teams of workers trained in the use of PPE need to be available (and a "suited up" backup team needs to be ready) to replace workers whose air supply is exhausted, or who are prone to being overcome by heat, or who may need emergency care due to injury or unforeseen complications (2). A "buddy system" of workers should be used.

Level C respirator cartridges last about three hours before replacement is needed. Of the various Levels of PPE, Level C is the least expensive to purchase and easiest to maintain, learn how to use, and don (2).

Communication

All operational sites should include direct communication lines that are not subject to unwanted monitoring and the failures typical of radio and cell phone systems (5). Use of the latter two is acceptable but should not be relied upon without direct communication lines also in place. This may require the running of telephone or other hard wire or cable types.

Initial Scene Assessment

Its is recommended that the initial assessment team at the scene include a:

- Trained HazMat Technician
- Medical Examiner/Coroner or investigator
- Law Enforcement evidence technician

The FBI has HazMat technicians who may respond to the scene, but they may not be immediately available. Usually, the fire department which serves the scene area— along with its associated HazMat team— will have (or can obtain) the necessary equipment, technology, and personnel to assess the scene for chemical and radiological hazards. Such equipment usually consists of:

- Geiger counter or similar field devices capable of detecting gamma and beta radiation at levels as low as 1 millirem/hour
- Chemical detection units that can sample air
- Chemical detection units into which chemical detection tickets (which can be touched to potentially contaminated surfaces) can be placed for chemical analysis – much like the detection units used at airports for detection of explosive residues.

HazMat team members may not be familiar with the needs and usual practices of the ME/C. Discussion of HazMat and ME/C needs should occur at the incident site before scene processing so that HazMat operations do not interfere with the needs of the medical

examiner or coroner, and to ensure that HazMat personnel may be able to collect evidence on behalf of the ME/C, if needed, especially if ME/C personnel lack appropriate PPE and Hazmat training.

It is unlikely that a biological toxin or agent will first be detected at a scene where there are multiple deceased. Events involving biologicals will probably be detected based on the sequence and timing of events, common "syndromes," tests performed on victims who become ill and have time to seek medical care, and autopsy findings. There is currently no "quick and dirty" way to quickly screen for a broad scope of biological agents or toxins at the scene, although such methods are being developed.

Sensitivity/Specificity. Modern equipment is sensitive enough to detect most predictable chemical and radiological hazards. The methods, sensitivity, and specificity for detection of biological agents at scenes have not been established.

Critical levels. There are established and published criteria for various chemicals and other agents and the parts per million or millirems that impose risks over an 8-hour exposure. This information should be used when assessing whether special decontamination procedures will be needed and whether processed bodies have been rendered "safe." Exposure limits are available in Department of Defense Regulation 6055.9-STD. The characteristics and risks of biological agents have been recently published in a Guide Book for Medical Examiners and Coroners (6), and are also available on the SBCCOM website.

Evidence. In the event that a BCR agent is used, there will probably be enough evidence at the scene, in historical and circumstantial information, on clothing, and on or within the body (biologic organisms or toxins) that decontamination procedures will not significantly interfere with the collection of evidence needed by the ME/C to determine the cause, manner, and circumstances of death. However, if there is a need for the medical examiner/coroner to collect evidence at the scene (such as swabs of residue on the skin), such evidence should be placed in glass containers—especially if a chemical agent is suspected—because some chemical agents can interact with plastic. If glass containers are used, they should be packaged in a secondary container (such as a metal tube) that will prevent breakage of the glass and allow for decontamination of the container. Evidence labels and all tags used for bodies, bags, and personal effects must be of a type that will not deteriorate or become illegible when subject to soap, water, bleach, or other chemicals. Embossed metal tags (or bracelets for bodies) may be required.

> *Key Point: Work with the HazMat team to secure needed equipment and personnel to detect the type of hazard(s) that may exist at the scene, to determine whether decontamination procedures will be needed and, if needed, which type of procedures will be required.*

In the Hot Zone

Some general procedures for the Hot Zone area include the following:

- If ME/C personnel cannot enter the Hot Zone, HazMat personnel could prepare videotape of the scene area so death investigators can review it at another site.
- The area needs to be documented and photographed (or imaged) and mapped with GPS or other system before manipulation or movement so relative positions of bodies, parts and objects can be re-created
- Waterproof and chemical-resistant numbering tags or bracelets need to be placed on bodies, parts, and containers
- Loose items need to be collected and tagged so they are not lost during transport
- Loose clothing and other non-human items can be collected in labeled, sealed containers such as paint cans which are not easily broken, are easily cleaned, and which will contain and preserve "volatile" substances.
- An open wire mesh body litter can be used to bring bodies and other parts or items to an accessible point(s) at the edge of the Hot Zone so they may be prepared for transport to the Dismount or Decontamination area (see below)

In the Hot Zone, the use of durable equipment should be minimized in favor of disposable alternatives. Information should be collected in a manner that avoids the use of paper documents at the work site and does not require person to person contact. Equipment and supplies in the Hot Zone should include:

- Appropriate personal protective equipment, donned in a clean and secure area with controlled access
- Tags to label bodies, other items, and containers
- Communication devices to relay documentary information without the use of paper documents at the incident site
- GPS instruments to record the location of bodies and other items
- Digital cameras that, preferably, can transmit images to a nearby operations center
- Transport vehicles to transfer bodies and workers, if needed, to the edge of the Hot Zone or beyond

The Dismount Area

The Dismount Area is where bodies (and clothing) are taken when removed from the Hot Zone or Hot Zone Margin for temporary holding or storage until decontamination procedures can occur (7). The Dismount area should be:

- Located upwind from the incident site and close to decontamination area
- Out of common view (e.g., behind temporary barriers)
- Accessible via land transport vehicle, if possible
- Equipped with lifts to assist with body movement
- Cool, if possible, but not necessarily refrigerated unless lengthy delays are expected prior to decontamination
- Covered (tent-like roof)
- Protected against scavengers, vermin, and insects

Hot Zone Margin and Dismount Area
A decision will need to be made whether the Hot Zone Margin and Dismount Area (see above) will be at one location or in different locations. The decision will be made on the basis of the suspected agent and to some extent, geography and the setting.

At the Hot Zone Margin or Dismount Area, the following need to be available:

- Body bags (one for each body), humans remains pouches (if bodies are fragmented), and sealable containers such as paint cans for clothing and other smaller items
- Tags to label bodies, other items, and containers
- Transport vehicles to transfer bodies (and workers as needed) and items to the Dismount Area or decontamination area.

Clothing should be removed, containerized, and labeled at the site serving as the Dismount Area. Jewelry and watches securely fixed to the body may be left in place. Bodies should be placed in labeled body bags. Body bags should not contain vinyl which is subject to degradation by certain chemical agents.

Wallets and other identifying paperwork in the clothing should remain with the clothing for processing at the decontamination site. It may be useful to process apparently identifiable bodies as one group and those that cannot be readily identified as another.

Numbering System

A useful and simple numbering system is to label items with the initials of the recovery person followed by a number, with each new body or part being numbered sequentially (RLH-1, RLH-2, etc). **The numbers on the tags on bodies, body bags, and the clothing clearly associated with that body or body part should all be the same**. This system avoids having to coordinate numbers with other personnel, so long as it is assured that no two recovery personnel have the same initials. If clothing is to be kept and not discarded after initial processing, it should be decontaminated before being transferred from the decontamination area.

Basics of Decontamination

Decontamination consists of rinsing, washing, or immersing the body (or clothing or other items) to remove adherent substances and provide some bactericidal action. Basically, decontamination either removes, neutralizes, or degrades the offending agent. In almost all instances, a 1% to 2% bleach (hypochlorite) solution is more than adequate to remove, hydrolyze, or neutralize the offending agent.

Decontamination of clothing and other items should be considered after forensic investigation requirements have been met. If decontamination of such items poses additional risks to personnel, it may be best to seal items in containers—after adequate documentation and forensic analysis—for disposal.

Decontamination may be accomplished by:

- Manually washing and rinsing (probably best)
- Spraying with a soft spray that minimizes spatter and aerosolization
- Submersing the body or items in a tank, pit, or trench (the "soak" method)

Spraying alone does not guarantee decontamination, especially if remains are heavily soiled with greasy, organic, or proteinaceous materials such as blood clots. Mechanical cleaning such as brushing with soap solution is essential prior to applying bleach or other decontamination agents. The time required for the soak method to be effective may be prohibitively long, and manual scrubbing would still be needed. Thus, the best method is probably one which includes manual washing and scrubbing with detergents followed by cleaning with bleach/hypochlorite.

Household bleach solutions usually contain 5% hypochlorite. This strength of bleach may pose respiratory risks and poses other risks for living persons. For most decontamination procedures involving dead bodies, 5% household bleach diluted 1 part bleach to 3 parts water will be adequate.

The decontamination solution should be allowed to remain in contact with the body or object for a minimum of 5 minutes. The body or object should then be rinsed thoroughly with water.

.After a decontaminated body is placed in a container such as a body bag, the outside of the container should be decontaminated by washing or spraying. Duct tape may be used to seal the zipper area, if needed to prevent leakage.

If bodies need to be physically scrubbed, soft sponges or brushes should be used. Nylon products should be avoided because bleach solution will damage them.

If bodies are to be submersed, a tank or constructed pit (lined with a bleach-resistant material) large enough to fully submerse a body will be needed. Other items that may be required are:

- Ropes (non-nylon) to assist with raising and lowering of the body into the tank or pit
- A platform or basket on which to place the body while it is being submersed. This platform or basket needs to be of neutral or negative buoyancy so submersion of the body is facilitated
- Weights to assist in submersion of the body and to keep the body submersed
- If bodies are soft or decomposed, a small-gauge mesh container into which the body may be placed for submersion to avoid disarticulation, dismemberment, or sloughing and loss of soft tissue
- Chlorine monitor to ensure that spray, tank or pit fluid maintains a chlorine level equivalent to a 1-2% bleach solution.

In most instances, clothing will have been previously removed from bodies at the Hot Zone Margin or Dismount Area (after necessary documentation, tagging, and

photographing). The clothing will then need to be decontaminated separately from the body, unless a decision is made to destroy clothing without decontamination.. Separate decontamination procedures for clothing accomplishes several things:

- The unclothed body will be easier to decontaminate
- Initial manipulation of the clothing (which will probably have the highest extent of contamination because it covered the body) is done nearer to the Hot Zone which is already contaminated
- The packaged clothing will be easier to process and decontaminate under controlled circumstances
- The clothing and bodies may be sent to separate facilities for processing and documentation
- Personal effects may be more readily examined for identification purposes

Mild detergent/soap should be used to clean remains prior to decontamination- especially when chemical agents are involved-- because the soap may help dissolve or remove oily residues.

Basically, decontamination involves washing of bodies, clothing, and the exterior of their containers with bleach solution—nominally 1 to 2%—although lower concentrations will probably be as effective against most agents. A major component of decontamination is the washing and removal of agent-containing residue, independent of the actions of the bleach. The body is rinsed with water after the bleach solution has been in contact with the body for at least 5 minutes, and preferably 15 minutes.

0.5% hypochlorite is the concentration of bleach appropriate for cleaning floors and equipment. If <u>living</u> persons need to be decontaminated, initial cleaning should be done with soap and water. If bleach solution is then used on a living person, its concentration should not exceed 0.05% hypochlorite.

The physical movement of bodies through the decontamination area may be accomplished in a variety of ways, including the use of back boards, mesh litters, plywood on saw horses, commercial roller systems like those used to move boxes, or any practical method that allows serial movement of the body and exposure of all body surfaces. In some locations, it may be possible to use a longitudinal, water-filled culvert or ditch though which the body may pass while the water/soap/bleach solution is progressively diluted with water along the way to accomplish the rinse. However, maintaining proper concentrations may be difficult.

It is imperative that decontamination procedures be performed by those with appropriate training and protective equipment. Usually, this will involve HazMat technicians trained in decontamination procedures.

The Decontamination Site

The decontamination site is where decontamination procedures are carried out. The site selected for decontamination should, if possible, have the following characteristics:

- A safe distance from the Dismount Area, and upwind from it, if possible
- Far enough from the incident site that the Dismount Area may be placed between the Hot Zone margin and decontamination site
- Ready access to fresh water supply or water transport vehicles
- Reasonably accessible via ground transport
- Large enough and flat enough to accommodate large tents or tent-like roofs
- Have a sloped area of 1:12 minimum slope to allow for water runoff
- Have ground cover or artificial cover or turf that can serve as a sump to absorb water and control its runoff, and to avoid soiling of bodies with dirt and other ground debris
- Enable the placement of ditches, drains, ponds or pools to control and direct water runoff
- Be close to electrical or fuel supplies (if generated power needs to be provided)

Minimum equipment and supplies at the decontamination site include:

- Bleach and fresh water (water from natural sources such as streams, rivers, and lakes may be used)
- Soft sponges and brushes made of non-nylon materials
- Pumps, hoses, and other devices capable of pumping bleach solution at the rate of normal water pressure (20 to 90 psi), and pumps capable of collecting runoff at a rate greater than or equal to water inflow rate
- Drums to mix solutions and hold collected runoff (if tank trucks are not available on site to collect runoff as it occurs)
- Spray units to spray bodies with bleach solution if submersion is not required
- Tanks or pits large enough to submerse a body or clothing in bleach solution
- Personal protective equipment as dictated by the suspected agent(s)
- Clean body bags (2 for each body)
- Clean, sealable containers to hold clothing
- Tags for marking bodies and clothing with identification numbers
- Decontamination showers (soap and water for personnel after removal of protective equipment) and areas for workers
- Receptacles for discarded body bags, protective wear, and other items that can be transported and incinerated or otherwise disposed of as hazardous waste
- Chlorine monitor to ensure adequate bleach/chlorine concentration
- Clean and climate-controlled operations center with restroom facilities, showers, and changing area. This are should be separated from areas where disinfectants are sprayed and should be well-ventilated to ensure that unprotected personnel are not exposed to respiratory or other hazards.
- Chemical detection unit (or Geiger Counter) to verify that decontamination was effective
- A station at which transport vehicle cargo areas may be decontaminated

The use of tanks and soaking may pose problems. There are possible splash risks and cross contamination. Further, maintaining the needed concentration of hypochlorite may be difficult.

Following decontamination, bodies and clothing are rinsed with water and should be double-bagged. The exterior of each bag should be decontaminated on all surfaces.

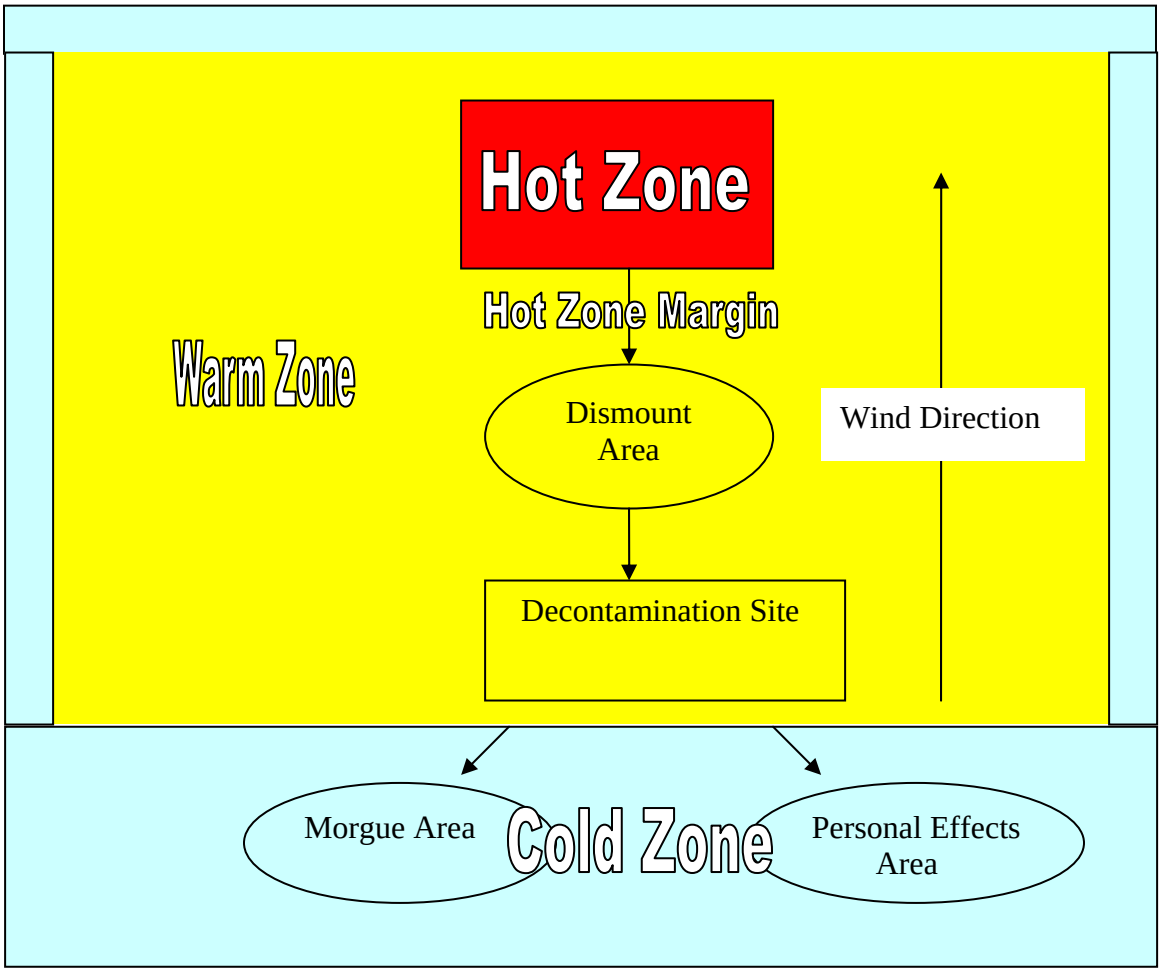
Summary of General Processing Flow

When decontamination is required, various processing areas need to be defined and strategically located. In addition to the Hot Zone, the following areas need to be established:

- Hot Zone Margin
- Warm Zone to include Dismount and Decontamination Site
- Dismount Area (where bodies are taken from the incident site in preparation for decontamination)
- Decontamination Site (where bodies and clothing are actually decontaminated)
- Cold Zone Ares to include morgue and personal effects areas
- Morgue area (where bodies are taken for examination after decontamination)
- Personal Effects/Clothing Area (where clothing is taken for processing after decontamination. This may or may not be the same area as the morgue.)

Waste handling, including effluent from washing stations, and waste incineration or waste packaging for removal to off-site incineration also need to be considered when planning site operations and layout.

Schematically, the workflow may be depicted as:



The distance between, and the specific locations of these areas depends on many factors including, but not limited to:

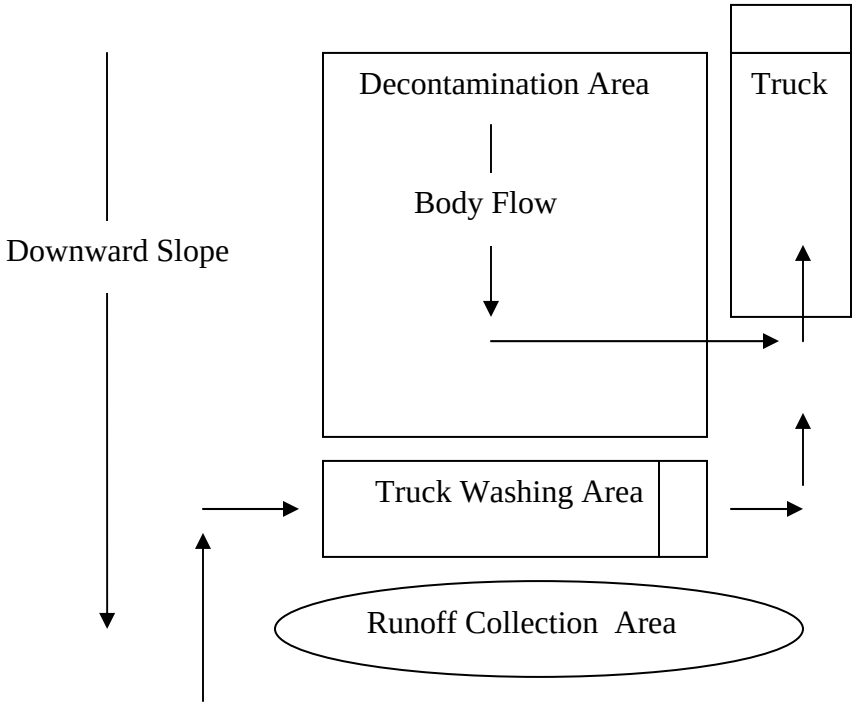
- Terrain
- Available facilities, supplies, fuel, power, and water
- Access
- Wind direction (Dismount area should be upwind from the incident site, and the decontamination area should be upwind from the dismount area).

Transport to Dismount/Decontamination Areas

Bodies and other containerized items should be transported using land vehicles, when possible. The route between the Hot Zone and Dismount Area should be made inaccessible to all except those driving transport vehicles and any workers who must supply support services to the vehicles or drivers. To facilitate decontamination of transport vehicles, open, flat-bed trucks with low side walls and rear gate should be used. The truck bed cargo area should be decontaminated after each delivery of bodies, at a point between the decontamination area and the area where water runoff is collected (see diagram, below).

The following schematic shows a workable spatial relationship between the:

- decontamination area
- area where the body storage truck may be placed
- truck decontamination area
- runoff collection area



Drivers should wear disposable protective suites and appropriate PPE, as dictated by the circumstances, and remain in their vehicles at all times except when preparing to leave duty and undergo decontamination. Those loading bodies onto transport vehicles at the incident site (or unloading bodies at the dismount area) should not leave their work sites until they are transported to the decontamination area at the end of their work shift or at other times, as needed, for gear changes or personal needs.

If air transport is required between the incident site and dismount/decontamination area, the type of aircraft will depend on available landing areas and their proximity . If helicopters are used, bodies may be transported on a suspended platform (or basket), but the helicopter should remain high enough above the platform (and ground) to minimize or eliminate wind (and spreading of the agent) from the rotors. Also, a body or item transported by air from the Hot Zone should be containerized and the outer container decontaminated before transport.

Railroad transport may be used if nearby. The location of the dismount area and decontamination site should be near the tracks if rail transport is utilized. Railroad has the

advantage that refrigerated cars may be readily available and serve both purposes of transport and storage. Work areas may even be established in railroad cars.

From the Decontamination Area to the Morgue and Personal Effects Areas

Procedures for the transport of decontaminated and containerized bodies and clothing are the same. If the morgue and personal effects processing location will be at the same facility, these items may be transported together in the same vehicle. If the bodies will be transported to one location and the personal effects and clothing to another, parallel systems can be established with one vehicle for clothing and personal effects and another for bodies.

At the decontamination site, a refrigerated truck may be used to store decontaminated, containerized bodies (and clothing). This truck can remain on site until the morgue area has been readied to receive and process bodies. At that time, the truck may be relocated to the morgue area property (or nearby area) where the truck can remain as an "in" cooler to store bodies as they subsequently arrive at the morgue area. A second refrigerated truck can be placed near the morgue area to store bodies after they have been processed at the morgue and undergone examination. A third refrigerated truck can be placed at the decontamination area to replace the original, if needed. Such a decision will be based on the anticipated number of bodies and their recovery and processing rate. If the number of bodies is small, or the recovery rate is expected to be slow, bodies may be transported from the decontamination area to the morgue area individually or a few at a time in smaller vehicles suitable for such purposes. Each time a vehicle returns from the morgue area to the decontamination site, the cargo area should be decontaminated before new bodies are placed in the cargo area.

Storage of Bodies Pre- and Post-Examination

Even if a permanent autopsy facility is available with adequate storage for bodies, it may be helpful to use refrigerated trucks to store bodies prior to bodily examination and after bodily examination (separate trucks). This will minimize risk of contamination of the permanent facility and will also provide a place to store bodies that will continue to arrive due to routine case load. The interior and exterior of the trucks may be monitored to assess the effectiveness of decontamination procedures and to identify unsuspected contamination hazards.

The Morgue-Autopsy Area

Whether or not the morgue area is a temporary or permanent facility, at the morgue area, a station should exist at which the following can be accomplished for each body prior to its being taken into the autopsy area for examination:

- Placement on a gurney or autopsy cart
- Washing of exterior container with bleach solution

- Removal and discard of the container into a biowaste receptacle for subsequent incineration or other required disposition
- Washing of body with dilute bleach solution if the external aspect of the body appears to have been re-soiled during transport
- Tagging of the body with identification number (if not already tagged)
- Discharge of the runoff into a sanitary sewer (this should be safe if decontamination procedures were effective, plus, non-solid biowaste at autopsy is discharged into the same sanitary sewer system)
- Immediate transport of the body into the autopsy/examination area for examination without further storage in the morgue facility.

In some instances, it may be desirable to divide remains into two groups—those that will need specific examination at the morgue and those that will not— and store them separately to facilitate operations. In other instances, it may be feasible to conduct all needed aspects of bodily examination at or near the decontamination area. Doing so will minimize the need for separate morgue operations. Whether this can be accomplished will depend on the scope and nature of the incident.

Other than cyanide, the risk of off-gassing to autopsy and morgue personnel is low or negligible if decontamination procedures have been properly carried out. For most respiratory and other chemical agents, what is left in the deceased body will not endanger morgue personnel.

In general, autopsies should be done on all cases if the case load and agent do not preclude doing so. In some cases such as smallpox, autopsy may need to be limited to index cases or cases in which the findings or possible cause of death seems atypical in comparison to other cases in the incident. Minimal examination should consist of thorough external examination with written and photographic documentation, and the collection and processing of appropriate specimens and evidence.

Post-Examination Processing

After examination, the body should be placed in a body bag. The sealed bag should then be placed in a second bag, the outer surface of which should be cleaned with 0.5% bleach solution (The 1:10 solution normally used for routine disinfection). The double-containerized bodies may then be taken directly to, and stored in the refrigerated truck placed on site for body storage prior to release, or treated as below.

If air transport will be required, the double-bagged body should be placed in a Zigler case and Zigler Casket and the lids affixed using a continuous bead of silicon sealant and screws. If cremation is required, the double-bagged body may be placed in a sealed zinc coffin and a surrounding wood casket; both will burn at cremation temperatures.

In general, embalming should not be performed. It poses unnecessary risk to workers and can retard the decomposition process, which may facilitate the elimination of infectious agents of concern. Further, embalming can cause agents that were formerly on the inside

of the body to resurface on the exterior of the body or associated surfaces. Some embalming chemicals may adversely react with bleach, posing hazards to workers.

It may not be feasible for each body to be tested to ensure effective decontamination before it is released. It may be more practical to monitor levels of chemicals or radiation in the general area where bodies are stored prior to release, and immediately outside the storage area(s). Measuring of biologic agents, of course, is not feasible at present.

The medical examiner/coroner should do what he/she can to return remains for disposition at the family's direction. However, if decontamination has not brought hazards to a safe level, it may be necessary to retain the body or, under some circumstances, request voluntary cremation or impose mandatory cremation after appropriate involvement of public health and safety officials. Virtually all chemical or biological agents are effectively mitigated at cremation temperatures above 1000 degrees F.

In general, the basic procedure at most stages of processing are:

- Preliminary examination
- Decontamination
- Detailed examination
- Packaging or containerizing
- Decontamination of package or container exterior surfaces

Implanted Devices

Bodies will need to be screened at some point to identify and remove implanted devices such as pacemakers. Whether screening is done with metal detectors or x-rays will depend on available equipment. Whether devices are removed at the scene or elsewhere will depend on the circumstances of the incident and available morgue facilities. Removed devices need to be decontaminated and packaged in containers that have their exteriors decontaminated. Such items should be forwarded to the funeral director so that return to the family or responsible party (such as the physician who implanted the device or the device manufacturer) may occur.

Removal and Disposition of Hazardous Materials

The main items that will need to be disposed of include:

- Used body bags
- Collected runoff at decontamination area
- Used personal protective equipment
- Used cleaning utensils

It should be feasible to place used body bags and used protective equipment and cleaning materials in approved receptacles that can be transported by authorized and licensed hazardous waste management companies. Incineration in approved incinerators is a reasonable method of disposal, although the plastic elements of body bags may produce

toxic by-products into the air that will need to be controlled and appropriately managed. Incineration is reported to be capable of aerosolizing anthrax spores and, where anthrax spores are involved, an approved afterburner may be required to avoid aerosolization.

Runoff from the decontamination area needs to be collected by authorized and licensed hazardous waste management agencies and disposed of using methods and locations that are compliant with state law, EPA regulations, and department of transportation regulations regarding the vehicles used for transport.

According to the EPA, in general, Good Samaritan statutes protect responders from liability if runoff of contaminated material occurs uncontrolled while rescue of living victims is occurring. Once imminent threats to human health and life are addressed, responders need to take all reasonable effort to contain contamination and avoid or mitigate environmental consequences. After imminent threats are mitigated, gross misconduct or negligence does create a liability for responders from both governmental and private sector viewpoints. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) addresses these issues. A Federal On-Scene Coordinator (FOSC) can determine which environmental regulations are applicable, relevant, or appropriate. Local and state officials should utilize a FOSC as needed, available through EPA (8).

Further discussion of specific methods and sites for disposal are beyond the scope of this Guide.

Other Considerations

Radiologic. Immediate deaths from a nuclear weapon will probably result from blast injury. However, fallout can cause acute radiation syndrome after many hours or days. Radioactive fallout decays very rapidly—to about 10% of original levels in 8 hours and 1% after 2 days.

“Dirty bombs” contain radioactive material that would contaminate surfaces but should be amenable to washing and decontamination. People who die quickly following an explosion with radioactive material would not be expected to harbor significant radiation internally.

Radiation levels should be measured on the ground because detection by air can miss hot spots. Bodies and clothing should be washed using the usual procedures and the containers should be marked as radioactive. After decontamination, bodies and clothing should be checked with a meter to ensure that decontamination was successful. More than one treatment may be required. If, after multiple treatments, a body gives a reading of more than 1 millirem per hour after decontamination, it may be due to embedded shrapnel which may need to be removed prior to subsequent procedures or burial. Any body with a reading of more than 1 millrem per hour should be stored at least 10 meters from workers and held until a health physicist and medical examiner can determine the best way to proceed.

Radioactivity warning tags should be applied to remains or items that are radioactive. A radioactivity report may need to be attached to, and accompany the remains.

New Methods. Newer methods of decontamination, such as the use of microwaving or x-raying, are being investigated. However, there is insufficient information and technology readily available to address such methods in this publication.

Temporary interment. If, for some reason, bodies cannot be transported from the incident site in a timely manner and there is no suitable place to store bodies, the bodies may be bagged and temporarily interred on site until transport can be accomplished.

Special agents. Cholera, TB, plague, smallpox, yellow fever, viral hemorrhagic fevers, and diphtheria may bring into play special quarantine or detention procedures mandated by public health authorities. If such bodies are brought into the United States from elsewhere, the Code of Federal regulations requires either: embalming and placement in a sealed casket; cremation; or a permit issued by the Centers for Disease Control and Prevention.

Cremation recommended in smallpox cases. Because smallpox virus can survive in buried bodies in lesions, cremation is recommended in such cases.

Recommendation for no autopsy. In cases of smallpox, viral hemorrhagic fevers, and anthrax, it has been recommended that an autopsy not be performed unless needed to establish the diagnosis in an index case. There is not uniform agreement on that recommendation. Especially for viral hemorrhagic fevers, experts at the CDC should be consulted before an autopsy is performed, and autopsy should be avoided in most cases.

Recommendation for NO embalming. Although embalming does provide some advantages-- allowing bodies to be kept without refrigeration up to three weeks, for example-- in general, embalming is not required. Embalming should not be performed on remains that contain residual hypochlorite due to the potential for generation of dangerous gases when mixed with embalming fluid.

Anthrax spores. Anthrax requires oxygen to sporulate. Spores do not form inside of a closed corpse. The major risk occurs if body fluids are exposed to air. Thus, autopsy is not recommended. Autopsy tools used in an anthrax case should be autoclaved or incinerated.

Body bags and containment material. BioSeal ™ containment material is reportedly effective for containment of all known hazardous substances, vapors, fluids, gases, and powders. It may be used as needed to enclose bodies or other items such as clothing. Type II and Type IIA body bags are made of special material to contain hazardous substances and prevent leakage. These types of bags should be used, when indicated.

Marking of containers and coffins. Once examination is complete and bodies are identified and containerized, the exterior of the container or coffin should be marked indelibly to indicate case number, decedent name, social security number, and date of birth.

Policy of not reopening. Once bodies are finally containerized for final disposition, the containers should not be reopened to view the body or further prepare the body for burial or funeral service purposes. When possible, facial photographs of the deceased should be provided to funeral directors to affirm to the next of kin that the correct body has been provided. When this is not possible, other distinct identifying information should be provided.

Coffin preparation. During final casketing, formaldehyde, sawdust, and/or tow may be placed around the body bag inside of the impermeable casket if possible interactions with hypochlorite have been eliminated.

Other disinfectants. Other potentially useful disinfectants exists but can be dangerous and pose respiratory risks. They should be used only in controlled settings with adequate ventilation and protective equipment.

Organ Donation. Being the victim of a BCR event does not necessarily preclude the availability of organs or tissues for transplantation purposes. Decisions will need to be made depending on the type of agent and in consultation with appropriate experts.

Animal remains. Contaminated remains of small animals may be containerized in metal containers or drums. Processing of such remains will need to be coordinated after consultation with the FBI, Health Department, and veterinary consultants.

Informing families. Family members should be provided with prompt information that includes description of what remains and effects the family will likely receive and how long it may take. Advance explanation for anticipated delays should also be provided.

Useful Web Sites:
DMORT. For information on DMORT and its procedures.
www.dmort.org

DOJ OVC. For information on family assistance
www.ojp.usdoj.gov/ovc

SBCCOM . Much information on methods, equipment, and agents
http://hld.sbccom.army.mil

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Pandemic Influenza and Other Highly Infectious Respiratory Transmitted Disease Response Plan

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7. **The National Immunization Program (NIP), CDC** (http://www.cdc.gov/nip)
   The NIP is a part of the Centers for Disease Control and Prevention, located in Atlanta, Georgia. As a disease-prevention program, NIP provides leadership for the planning, coordination, and conduct of immunization activities nationwide.

8. **Influenza Branch, National Center for Infectious Diseases, CDC**
   The Influenza Branch provides leadership for the prevention and control of influenza in the U.S. and worldwide. Major activities include coordinating surveillance and conducting research. The Influenza Prevention and Control

home page (http://www.cdc.gov/ncidod/diseases/flu/fluvirus.htm) contains information on influenza vaccine, antiviral agents, and surveillance.

9. The Influenza Branch operates one of the four World Health Organization (WHO) Collaborative Centers for Reference and Research on Influenza and is the main reference laboratory for characterizing influenza viruses in the U.S. and North America. It also:
10. Characterizes influenza viruses circulating in the U.S. and worldwide, using molecular and serological techniques to detect new strains and the emergence of viruses with pandemic potential.

11. Coordinates U.S. influenza surveillance and publishes a weekly influenza surveillance update (http://www.cdc.gov/ncidod/diseases/flu/weekly.htm) from October through May.

12. **Center for Biologics Evaluation and Research (CBER), FDA**
(http://www.fda.gov/cber/index.htm)
The mission of CBER is to protect and enhance the public health through regulation of biological products including blood, vaccines, therapeutics, and related drugs and devices according to statutory authority. The regulation of these products is founded on science and law to ensure their purity, potency, safety, efficacy, and availability. CBER plays a critical role in the manufacture and licensing of influenza vaccine.

13. **National Institutes of Health (NIH), National Institute of Allergy and Infectious Diseases (NIAID)**
(http://www.niaid.nih.gov/)
The National Institute of Allergy and Infectious Diseases (NIAID), part of the NIH, conducts and supports research aimed at finding better ways to treat and prevent influenza infections. This site includes NIAID fact sheets, brochures and news releases on influenza, as well as links to influenza information maintained by other federal agencies.

14. **Animal and Plant Health Inspection Service, Veterinary Services, U.S. Department of Agriculture**
(http://www.aphis.usda.gov/)
The U.S. Department of Agriculture, Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS) protects the health, quality, and marketability of our nation's livestock and poultry resources. Within VS, the

Emergency Programs staff coordinates efforts to prepare for and respond to outbreaks of exotic animal diseases, including highly pathogenic avian influenza. Surveillance for influenza A viruses in avian species in the U.S. are reported each year by the USDA, APHIS, VS, National Veterinary Services Laboratories in the Proceedings of the U.S. Animal Health Association Annual Meeting (http://www.usaha.org/reports/poult97.html).

15. **The USDA Agricultural Research Service (ARS)**
(http://www.ars.usda.gov/)
16. The ARS conducts research to develop and transfer solutions to agricultural problems of high national priority and provides information access and dissemination. The ARS' Southeast Poultry Research Laboratory publishes information on avian influenza research and contacts for further information.

17. **The Department of Defense Global Emerging Infections Surveillance and Response System**
(http://www.geis.ha.osd.mil/main2.html).
(DOD-GEIS) was created in response to Presidential Decision Directive NSTC-7. In the directive, former President Clinton recognized the threat posed by emerging infectious diseases to the health of our global community and to our national security. Responsibilities and actions to improve our nation's ability to identify and respond to the threat are assigned to many organizations and agencies, including the DOD.

18. **The World Health Organization**
The World Health Organization's Influenza Programme (http://www.who.org) (http://who.int/emc/diseases/flu/) was created in 1946 as an international centre to collect and distribute information, coordinate laboratory work on influenza, and train laboratory workers. After 50 years, WHO's global surveillance of influenza now maintains 110 National Influenza Centres in 83 countries and four WHO Collaborating Centres for Virus Reference and Research in Atlanta, USA; London, UK; Melbourne, Australia; and Tokyo, Japan.

19. **Association for Professionals in Infection Control and Epidemiology:**
www.apic.org

20. **ASTHO Pandemic Influenza Planning Guide:**
http://www.astho.org/pubs/Pandemic%20Influenza.pdf

21. **National Vaccine Program Office Pandemic Influenza: A Planning Guide for State and Local Officials (Draft 2.1):** http://www.cdc.gov/od/nvpo/pubs/pandemicflu.htm

22. **CSTE List of State Pandemic Influenza Plans:** http://www.cste.org/specialprojects/Influenza%20Pandemic%20State%20Plans/Influenza%20Pandemic%20Preparedness%20State%20Plans.htm

23 FluAid 2.0: http://www2a.cdc.gov/od/fluaid/