
Hawaii Department of Health



PANDEMIC INFLUENZA PREPAREDNESS & RESPONSE PLAN



HAWAII STATE
DEPARTMENT
OF HEALTH

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i. EXECUTIVE SUMMARY



The Hawaii State Department of Health (HDOH) is the State agency entrusted with leading the medical and public health disaster response. The Hawaii Department of Health Pandemic Influenza Preparedness & Response Plan augments the State Plan for Emergency Preparedness, Disaster Response and Assistance, Version 3, and the State Continuity of Operations Plan. It guides coordination and execution of medical and public health activities required to respond to a potential influenza pandemic. As the pandemic escalates, the State government's response will likely include support from agencies with responsibilities outside of medicine and public health. When interagency cooperation is required, HDOH will coordinate all medical and public health activities through State Civil Defense (SCD) under the direction of the Governor.

This plan is organized into seven major activities as follows:

Public Health Continuity of Operations

This section describes the chain of authority and its basis in Hawaii law for response to an influenza pandemic and ensuing emergency. The plan describes the real and potential responsibilities of HDOH and partner agencies during an influenza pandemic, and it describes HDOH policies and operations to maintain critical functions during the various stages of an influenza pandemic.

Influenza surveillance: routine and pandemic

Currently, this is the most active portion of the plan as early detection and understanding of disease activity, whether regular seasonal influenza, avian influenza, or a potential pandemic influenza is necessary to trigger response activities to attempt to contain and control spread as well as to appropriately direct support and resources.

Influenza surveillance is comprised of routine and enhanced activities. Routine or usual surveillance involving primarily sentinel physician reporting has long been established in the State to monitor circulating and/or new viral strains. Enhanced or extended activities beyond those recommended by the Centers for Disease Control and Prevention (CDC), such as surveillance targeting ill travelers, have recently been added or are anticipated to help ensure early detection of increasing or new influenza activity.

Pandemic influenza vaccines

Immunization by vaccination against the pandemic influenza virus will be the single best method of disease prevention and control. However, because a pandemic influenza virus will be a novel virus and current manufacturing processes are lengthy and limited, any pandemic vaccine is likely to be delayed by months, well after the first wave and potentially even into or after the second wave of a pandemic. When it does become available, quantities are likely to be limited. Prioritization will be required and likely focus on groups with specific societal roles or responsibilities.

Antiviral medications

An insufficient supply of anti-influenza medications will require: 1) use directed at treatment, not prophylaxis and 2) prioritization of groups with specific societal roles or responsibilities. Evolving issues and understanding of efficacy and antiviral resistance will affect expert



recommendations during a pandemic for adequate dose and course duration for treatment of the novel influenza virus.

Community Mitigation

This section encompasses pivotal non-medical public health interventions to contain and control an influenza pandemic. Three major concepts are critical to understanding these interventions. The primary strategy during a response is social distancing, widely thought to be the most critical for people to understand and accept. Social distancing involves awareness and prevention of potential exposure to a contagious disease. Isolation, the most straightforward and readily accepted concept, involves the restriction of movement and separation of ill, contagious people from the well population. Quarantine, however, involves complex points of public health, law, and policy, and involves the restriction of movement and separation of healthy people, who have presumably been exposed to someone with the disease, for a period of time as recommended by experts to determine that those quarantined have not been infected. Enforcement may be necessary, but public education prior to any event may help alleviate much of the need for such.

Health care delivery

The capacity to deliver effective health care will be exceeded throughout the State. There are not sufficient manpower, medical supplies, resources, or facilities for the scale that is predicted. However, HDOH is collaborating closely with the Healthcare Association of Hawaii (HAH), the representative agency for all health care centers in Hawaii. HAH is working to improve surge capacity in all these areas. This section outlines the major activities of HAH and health care centers during the various pandemic phases that will be necessary to ensure appropriate health care delivery.

Communications

Constant and clear communications among HDOH and all partners (public health officials, State agencies, government, health care professionals, industry, public, etc.) across the State as well as with Federal level agencies will be critical. Public health education will be a necessary foundation for all activities to enhance understanding and cooperation with guidance issued by HDOH during an influenza pandemic. This section outlines the major communications activities and relationships throughout the State, but especially via HDOH.

This plan is intended to assist all agencies, organizations, and individuals in the State, County, and the private sector with the coordination and integration of resources required to efficiently respond to an influenza pandemic. Planning efforts require everyone and every agency or organization to communicate with each other and identify critical skilled people, equipment, facilities, resources, and operations. To be successful in our response, everyone must take responsibility and work together in preparing for a potential pandemic or other similar infectious disease emergency.



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ii. INTRODUCTION

I. PURPOSE

- A. This plan describes policies and procedures for interagency cooperation, incident command and control, disease surveillance, vaccine and antiviral medication distribution, health care delivery, social distancing, and communications activities that will be implemented in response to the threat of an influenza pandemic.
- B. If confronted with an influenza pandemic, the priorities of HDOH will be to assure continuity of essential public health services while providing assistance to meet the emergency needs of the affected population.

II. SCOPE

This plan provides operational and logistical guidance for planning and coordinating a statewide response and/or recovery effort to manage a major public health event involving an influenza pandemic. It also identifies the necessary interactions between those primary and secondary Federal, State, County, and private agencies and organizations that may be called upon to support this response.

III. BACKGROUND

The influenza (flu) epidemics that occur nearly every year are important events. Influenza is a respiratory illness to which hundreds of thousands of people succumb each year. Duration of typical primary influenza illness is about one week and is characterized by an abrupt onset of fever, muscle aches, sore throat, and nonproductive cough. Occasionally, severe malaise and cough can persist for several days or weeks. Serious complications leading to hospitalization and even death can develop in the elderly, the very young, and those with chronic diseases, such as diabetes or heart, lung, or other immunocompromising disease.

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 of influenza that circulate each year. The composition of the influenza vaccine is changed annually to help protect people from the influenza virus strains expected to be most commonly circulating during the coming influenza season.

In contrast to the more gradual process of drift, a pandemic influenza virus represents a unique public health emergency and community disaster. The influenza virus changes dramatically and unexpectedly through a process known as “shift.” Shift results in the appearance of a novel influenza virus to which few (if any) people are immune. There may be little warning, but experts believe that there will be one to six months between identification of a novel virus and widespread outbreaks in the United States. If this new virus were to spread easily from person to person, it could quickly travel around the world and affect millions of people as it caused serious illness and death.

There is no simple answer to the question of how serious a pandemic might be. The impact of a pandemic will depend upon the virulence (severity) of the virus, the rapidity of its spread or transmission, and the effectiveness of pandemic prevention and response efforts. The 1918 Spanish flu is an example of a worst-case scenario with a highly contagious and deadly strain. This pandemic killed more Americans than all the wars of the 20th century. Since our world today is more densely populated and people travel the globe with ease, the spread of the next pandemic could be more rapid and perhaps more devastating than previous ones.

IV. ASSUMPTIONS

- A. While Federal, State, and Local governments maintain overall responsibility for managing preparedness and response efforts, the nature of any public health emergency, especially that of an influenza pandemic, requires that a key component of a successful response be ***individual responsibility and accountability***. Each individual and private company or other organization/entity, from all sectors of the community (education, banking, tourism/visitors, business, utilities, information technology, health care, long-term care, special needs, etc.) will need to develop their own internal response plans consistent with Federal and State guidelines.
- B. HDOH will provide guidance to County governments on health-related issues during a pandemic. By law, the District Health Officers will be the County health authorities over health care and will be integral in the health care response efforts.
- C. Vaccine assumptions include the following:
 - 1. Because of the substantial lead time required for vaccine production once a novel strain has been identified, it is likely that vaccine will not be available, especially during the early phases of the pandemic, and when available, may be in limited supply.
 - 2. As of April 2007, the Federal Government approved the first vaccine for humans against the H5N1 avian influenza virus. Currently there is enough pre-pandemic H5N1 vaccine for approximately 6 million people, with plans to stockpile enough pre-pandemic vaccine for 20 million people. If the H5N1 influenza virus evolves into a pandemic virus, this vaccine might provide early limited protection in the months before a vaccine tailored to the pandemic strain of virus could be developed and produced.
 - 3. Federal funds will continue to be earmarked for advanced development of cell-based influenza vaccine production methods, with the goal of being able to acquire 300 million treatment courses within six months after the emergence of a pandemic virus.

D. Antiviral assumptions include the following:

1. As of June 1, 2007, the Strategic National Stockpile (SNS) contains over 27.8 million regimens of oseltamivir and 5.1 million regimens of zanamivir for use in the event of a pandemic influenza response. Procurements of over 3 million additional regimens of oseltamivir and 1.3 million additional regimens of zanamivir are expected. CDC has outlined a process for states to receive the limited quantity of antiviral and other medical supplies from the SNS in response to a pandemic influenza emergency.
 2. While the Federal government will provide overall guidance and recommendations, ultimate responsibility for individualized distribution plans adapted to each State's unique needs and resources, will be the responsibility of the States.
 3. Unless antiviral supply issues change such that supply is virtually unlimited (unlikely), antivirals will chiefly be available for treatment purposes. Worldwide shortages will not allow antivirals to be used for prophylaxis (prevention) for the general population.
- E. A successful response to an influenza pandemic will depend on nonpharmaceutical as much as or more than pharmaceutical measures.
- F. The Federal government will maintain responsibility for coordinating national and international surveillance.
- G. Susceptibility to the virus will be universal.
- H. At least 50% of those who are ill will seek outpatient-care.
- I. There will be successive outbreaks (i.e., one following another with a short time interval between each) that last up to a year or even a few years.
- J. States must be ready to respond to liability and other legal procedural and policy issues during all pandemic phases.
- K. Liability and other legal procedural and policy issues will be a significant concern to which States must be ready to respond in all pandemic phases.
- L. For the purposes of consistency and coordination between National, State, and Local planning and response efforts, the Federal government has developed "stages" for their response actions and coordinated them with the pandemic "phases" using World Health Organization (WHO) criteria as follows:

Interpandemic Period



Phase 1: Risk of human infection with animal virus is considered low
Phase 2: Animal virus poses threat

Pandemic Alert Period

Phase 3: Human infection with new subtype but minimal human-to-human transmission
Phase 4: Small clusters of human-to-human transmission, highly localized
Phase 5: Larger clusters of human-to-human transmission, but still highly localized

Pandemic Period

Phase 6: Increased and sustained transmission in the general population

Postpandemic Period: Return to interpandemic period

Refer to the table on page xiii for further details.

- M. At the time of an influenza pandemic, Hawaii will have approximately 300,000 visitors within the State whose status as visitors will present unique logistical and policy challenges including treatment, travel limitations/restrictions, and social distancing requirements.
- N. Given Hawaii's geographic separation from the continental United States and other available resources, it is anticipated that Hawaii will likely rely solely on resources existing within the State, at least during the initial stages of a pandemic.



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**iii. WORLD HEALTH
ORGANIZATION
PANDEMIC INFLUENZA PHASES
AND FEDERAL GOVERNMENT
PANDEMIC INFLUENZA STAGES**

WHO Pandemic Influenza Phases May 2005. ²		Federal Government Stages ³	
Pandemic Phases	Overarching Goals	Pandemic Stages	
<p><u>Interpandemic period.</u></p> <p>Phase 1. No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk of human infection or disease is considered to be low.</p> <p>Phase 2. No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.</p>	<p>Strengthen influenza pandemic preparedness at the global, regional, national, and subnational levels.</p> <p>Minimize the risk of transmission to humans; detect and report such transmission rapidly.</p>	0	New domestic animal outbreak in at-risk country.
			<p><u>Pandemic alert period.</u></p> <p>Phase 3. Human infection(s) with a new subtype, but no human-to-human spread, or at most, rare instances of spread to a close contact.</p> <p>Phase 4. Small cluster(s) with limited human-to-human transmission, but spread is highly localized, suggesting that the virus is not well adapted to humans.</p> <p>Phase 5. Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).</p>
1	Suspected human outbreak overseas.		
2	Confirmed human outbreak overseas.		

² WHO. WHO Global Influenza Preparedness Plan. Available from: http://www.who.int/csr/resources/publications/influenza/WHO_CDS_CSR_GIP_2005_5.pdf. Accessed 13 Jun 2005.

³ To view corresponding federal actions go to the National Strategy for Pandemic Influenza, Implementation Plan. Available from: http://www.whitehouse.gov/homeland/nspi_implementation.pdf. May 2006.



<u>Pandemic period.</u> Phase 6. Pandemic phase: increased and sustained transmission in general population.	Minimize the impact of the pandemic.	3	Widespread human outbreaks in multiple locations overseas.
		4	First human case in North America.
		5	Spread throughout the United States.
		6	Recovery and preparation for subsequent waves.
<u>Postpandemic period.</u> Return to interpandemic period.			



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iv. PUBLIC HEALTH PANDEMIC INFLUENZA PREPAREDNESS & RESPONSE PLAN AT-A-GLANCE



Component Activity	Interpandemic Period		Pandemic Alert Period			Pandemic Period	Post-pandemic Period
	WHO Phase 1 Minimal or no risk (Fed. Stage 0)	WHO Phase 2 Animal virus with potential human risk circulating (Fed. Stage 0)	WHO Phase 3 Novel (Human) Virus Alert (Fed. Stages 0 and 1)	WHO Phase 4 Highly localized, small infection clusters; limited human-to-human infection (Fed. Stage 2)	Phase 5 Large infection clusters but only localized human-to-human infection (Fed. Stage 2)	Phase 6 Sustained, widespread transmission (Fed. Stages 3-6)	Return to Interpandemic Period
Public Health Continuity of Operations	Establish and clarify HDOH's authority during a pandemic.			Activate HDOH Department Operations Center (DOC). HDOH DOC may be activated in part or full at any time depending upon events in Hawaii, but the DOC is expected to be fully activated during Phase 6.			HDOH DOC will gradually stand down.
	Identify contacts in and establish liaisons between HDOH and partner agencies.		Activate surge capacity for epidemiology, laboratory, and health care delivery as necessary to facilitate medical and public health response.				Evaluate DOC operations and actions.
	Establish roles and responsibilities of HDOH and partner agencies during a pandemic, and identify personnel in all areas for surge capacity.		Ensure liaison is established with State Civil Defense (SCD) Emergency Operations Center (EOC), when activated.				Modify DOC protocol as necessary to improve effectiveness.
	Train HDOH personnel in ICS and NIMS. Conduct exercises/tabletops to prepare HDOH and partner agencies and to identify and address any deficiencies.						
Influenza Surveillance	Conduct routine sentinel influenza surveillance and continue to recruit sentinel physicians.		Fully implement enhanced surveillance to target patients who meet criteria for highly suspect infection with pandemic influenza and to ensure identification of novel virus as soon as it appears in Hawaii.			Maintain all enhanced surveillance activities to extent feasible.	Evaluate resources (people and supplies) to determine surveillance capacity.
	Continue year-round influenza surveillance.		Conduct active surveillance for severe respiratory illness and unexplained deaths by regularly contacting health care facilities and the Medical Examiner; investigate these illnesses to determine etiology.			Monitor capacity and usefulness of activities to determine when to narrow and focus surveillance.	Continue limited enhanced surveillance until certain that transmission has ceased.

Component Activity	Interpandemic Period		Pandemic Alert Period			Pandemic Period	Post-pandemic Period	
	WHO Phase 1 Minimal or no risk (Fed. Stage 0)	WHO Phase 2 Animal virus with potential human risk circulating (Fed. Stage 0)	WHO Phase 3 Novel (Human) Virus Alert (Fed. Stages 0 and 1)	WHO Phase 4 Highly localized, small infection clusters; limited human-to-human infection (Fed. Stage 2)	Phase 5 Large infection clusters but only localized human-to-human infection (Fed. Stage 2)			Phase 6 Sustained, widespread transmission (Fed. Stages 3-6)
Influenza Surveillance (continued)	Identify methods to enhance influenza surveillance and establish when possible. For example: - Airport surveillance for ill travelers - Targeted surveillance for severe lower respiratory tract disease		Monitor CDC bulletins regarding the novel virus, establish regular communications with Federal partners, and disseminate information to District Health Offices (DHOs), health care facilities, health care providers, and partner agencies to update them as needed.			Continue data collection and analyses to refine epidemiology of pandemic and guide measures.	Evaluate surveillance activities and modify protocols as needed.	
	Ensure SLD capacity for timely and accurate laboratory testing in Hawaii.		Convene the Ad Hoc Advisory Group as needed to consult regarding enhanced surveillance activities, establish communications with partners, and seek other potential recommendations.					Revert to interpandemic surveillance if transmission has ceased.
	Investigate any localized influenza outbreaks.		Analyze data collected to define epidemiological characteristics of the pandemic including population at risk, mode of transmission, the effectiveness of treatments and other countermeasures.					
Pandemic Influenza Vaccine Delivery	Promote routine (i.e., non-pandemic) influenza vaccination and increase routine vaccine coverage.		Confirm representation/availability for Ad Hoc Advisory Group to facilitate expert consultation as needed.		Periodically reassess priority groups and modify as pandemic characterized and as needed to ensure most societal benefit to limit and end transmission.	Evaluate overall response.		
	Promote pneumococcal vaccination among 'high-risk' groups to decrease risk for secondary bacterial infection.		Re-establish and confirm priority groups for pandemic influenza vaccination.				Assess remaining resources (supplies and people).	
	Establish priority groups for pandemic influenza vaccination based on Federal guidelines.							



Component Activity	Interpandemic Period		Pandemic Alert Period			Pandemic Period	Post-pandemic Period
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Pandemic Influenza Vaccine Delivery (continued)		Review/update pandemic influenza vaccine distribution plans. Coordinate through SCD EOC to ensure security for the vaccines. Develop vaccine management tracking system.		Track all pandemic influenza vaccine doses distributed/administered as well as remaining supply.			
	Pre-identify sites statewide for possible vaccination centers.		Activate pandemic influenza vaccine distribution plans if and when candidate pandemic vaccine becomes available.				
				Monitor for and record adverse events to vaccine administration.			
Antiviral Medication Distribution	Planning and development period; no distribution of antivirals for pandemic purposes.			Disseminate updated information regarding antiviral use to health care providers. (may start earlier)			Assess antiviral effectiveness through analyses of data.
	Establish priority groups for treatment. Also establish for prophylaxis if supplies ample enough to justify such use. Identify, inventory, and coordinate with pharmaceutical distributors, pharmacies/pharmacists, and health care providers to determine estimated quantities of antivirals in Hawaii and to establish contacts for future lines of communication.	Gather updated data regarding antivirals (numbers and locations) in Hawaii.	Review current prophylaxis and treatment guidelines and monitor CDC updates.	Direct pharmaceutical warehouse distributors to halt distribution of antivirals - may occur during phases 4 or 5 if pandemic has reached Hawaii, but definitely during phase 6. Antivirals will be collected to HDOH depot(s) for directed dispensation in consultation with pharmacists, health care providers, and Healthcare Association of Hawaii (HAH).			Assess effectiveness of operations. Assess remaining resources.

Component Activity	Interpandemic Period		Pandemic Alert Period			Pandemic Period	Post-pandemic Period
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Antiviral Medication Distribution (continued)	Establish legal authority of HDOH Director to order cessation of further antiviral distribution and collection of antivirals from pharmaceutical distributors in State for redistribution to yield the most public health benefit.		Review and update SNS and distribution plans.			Allocate and distribute antivirals to each County. HDOH will coordinate directed treatment with health care providers through the DHOs.	
	Maintain limited supply of oseltamivir (Tamiflu) for use in localized outbreaks of annual influenza.		Coordinate through State Civil Defense EOC to ensure security for the antivirals and persons dispensing.				
	Establish State stockpile of oseltamivir (Tamiflu; and/or other antiviral) to treat high-risk individuals during pandemic.		Treat ill patients with probable or confirmed influenza who are at high risk for complications. Consider limited and directed prophylaxis only if antiviral supplies considered sufficient.				
	Identify centralized accessible re-distribution points for medication dispensation.		Track all antivirals distributed, patient outcomes, and adverse effects.				
	Develop antiviral medication tracking system.		Request and secure resupply of antivirals as needed and as available.				
			Monitor pandemic virus susceptibility to antivirals and review CDC updates and other scientific data to quickly address any changes in recommendations.				

Component Activity	Interpandemic Period		Pandemic Alert Period			Pandemic Period	Post-pandemic Period
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Community Mitigation	Identify sites, facilities, equipment, and other resources that may be used for control measures in case of highly communicative novel respiratory virus outbreak. Ensure that HDOH and all partner agencies (including epidemiology investigators, first responders, health care, and law enforcement) have adequate PPE supplies. Identify necessary support services and supplies in the event of activation of social distancing, isolation, and/or quarantine plans. Educate the public on social distancing, signs & symptoms of influenza, and appropriate influenza prevention practices such as hand, cough, and sneeze hygiene. Monitor current recommendations and collaborate with HAH and other partners in reviewing and updating plans for isolation and quarantine measures. Encourage and discuss with all partners to consider methods to facilitate self-quarantine and other measures (e.g., telecommuting for work and/or school) should such become necessary.		Coordinate through State Civil Defense to ensure potential necessary security and enforcement.				Assess effectiveness of operations.
			Be prepared to close necessary venues and events.	Activate community-based control measures as needed once pandemic influenza virus has reached Hawaii – In a phased approach, close schools, auditoriums, and other areas with potential for large public gatherings.			Assess remaining resources and replenish as needed and possible.
			Be prepared to activate quarantine plans; also isolation plans.	Activate plans and supports for isolation according to CDC/WHO recommendations (depends on what is learned about the novel virus as pandemic progresses) and as necessary to limit spread of infection from ill persons.			Modify plans as necessary to improve operations.
				Activate plans and supports for quarantine according to CDC/WHO recommendations and as necessary to limit potential transmission from exposed healthy persons.			

Component Activity	Interpandemic Period		Pandemic Alert Period			Pandemic Period	Post-pandemic Period
	WHO Phase 1 Minimal or no risk (Fed. Stage 0)	WHO Phase 2 Animal virus with potential human risk circulating (Fed. Stage 0)	WHO Phase 3 Novel (Human) Virus Alert (Fed. Stages 0 and 1)	WHO Phase 4 Highly localized, small infection clusters; limited human-to-human infection (Fed. Stage 2)	Phase 5 Large infection clusters but only localized human-to-human infection (Fed. Stage 2)	Phase 6 Sustained, widespread transmission (Fed. Stages 3-6)	Return to Interpandemic Period
Health Care Delivery	Develop and solidify all health care delivery plans and resources/supports needed to implement such.		Maintain regular communications between HDOH and all key health care partners.				Ensure decontamination of all health care facilities and proper disposal of infectious waste. Assess effectiveness of operations. Assess remaining resources and replenish as needed and possible. Modify plans as necessary to improve operations.
	Identify and establish health care delivery surge capacity.		Institute infection control precautions (for respiratory disease) in health care facilities as necessary, per HDOH recommendations, updated regularly as data are made available from CDC/WHO.				
			Engage focused screening and triaging of patients seeking care at any health care facility; collaborate with HDOH to report and submit specimens from any patients fulfilling criteria for suspect pandemic influenza.				
			Activate health care delivery plans to ensure such operations as soon as first Hawaii case identified and to ensure that operations keep pace as pandemic escalates.				
	Educate and conduct drills and training exercises to prepare HDOH, health care providers, and all key partners. Identify and establish antemortem care and morgue capacity and plans.		Activate health care delivery surge capacity as needed, including requests to Federal government for assistance. Activate plans for antemortem care and morgue capacity as needed.				

Component Activity	Interpandemic Period		Pandemic Alert Period			Pandemic Period	Post-pandemic Period	
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Communications	Establish contact between HDOH and all partner agencies through public information officers (PIOs) and other communication contacts.		Activate JIC and utilize the JIS as needed to facilitate effective communications.					
	Develop, review, and update press relevant materials and messages.		Facilitate and coordinate communications between HDOH and Governor's and County offices.					
	Conduct training exercises with all partner PIOs to ensure familiarity with JIS and JIC operations and readiness to manage demands during pandemic.		Maintain regular contact with all partner agencies through PIOs and other communication representatives and exchange updates on situation.					
	Identify spokespersons and coordinate media interviews as necessary.		Keep public informed and educated by distributing timely and necessary information from HDOH and coordinating media briefings.					
Conduct and facilitate public health education.							Evaluate effectiveness of communication operations.	
		Facilitate training of hotline staff, who will help provide information to the public throughout the pandemic phases.						Modify protocols and incorporate improvements and identified resources.



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Section 1. PUBLIC HEALTH CONTINUITY OF OPERATIONS

I. INTRODUCTION

A. OBJECTIVE

This section describes how mission-critical operations and services will be maintained in response to an influenza pandemic and discusses the following:

1. Authority for the required actions
2. An incident command system (ICS) that is compliant with the National Incident Management System (NIMS).
3. Role of HDOH as the lead State agency in the State's medical and public health response to an influenza pandemic.
4. Method of coordination between HDOH and its partner agencies at the Federal, State, and County levels, including indication of specific responsibilities where appropriate.

B. ASSUMPTIONS

1. There may be less than six weeks of warning from the time the pandemic is announced until it reaches Hawaii, and the time interval between alert stages may be rapid (ranging from days to weeks to months).
2. The pandemic may last as long as 18 months and may have spikes in incidence rates in several waves, each lasting 1-4 months, with mortality and morbidity increasing and decreasing sporadically.
3. The Hawaii Department of Health will be the lead State agency in the State's medical and public health response to an influenza pandemic.
4. Government services will be stressed but will remain functional.
5. Up to 20–50% absenteeism from work by staff, vendors, and services within the community may occur.
 - a. Absenteeism will be the result of workers becoming ill, staying home to care for children or family members, or refusing to go to work.
 - b. Absences may be temporary and range from days to weeks to months, or they may be permanent, by choice or because of death.
6. Critical goods and services provided by contractors, consultants, and vendors may be erratic.

7. Hawaii may not be able to rely on mutual aid resources from state or federal agencies to support local response efforts.
8. Pharmaceutical interventions may be delayed and likely inadequate to meet demands; tiered prioritization will be required.
9. Control of the spread of infection will rely heavily on nonpharmaceutical interventions such as infection control (e.g., respiratory etiquette, hand hygiene) and social distancing strategies (e.g., closing schools, postponing public gatherings) that reduce physical contact in both the community and the workplace and will require alternate methods of providing education, accomplishing work responsibilities, and delivering essential services in the community.

C. AUTHORITY

1. The cornerstone of Hawaii's ability to respond to emergencies and disasters is the State Plan for Emergency Preparedness, Disaster Response and Assistance, Version 3. This plan:
 - a. Outlines the mechanism for providing State assistance to County governments dealing with significant disasters.
 - b. Defines policies, concept of operations, organizational structure, and Federal-State-County interfaces when resources outside of HDOH are needed in order to adequately respond to the pandemic or when the infrastructure of the State is being negatively impacted.
 - c. Outlines the provision of health and medical services in response to emergencies and disasters.
2. Under the authority granted the Director of Health, as the lead public health authority in the State, in Hawaii Revised Statutes (HRS) Chapters 321 and 325:
 - a. The Director of Health will be responsible for officially activating the Hawaii Department of Health Pandemic Influenza Preparedness & Response Plan.
 - b. HDOH has overall responsibility for management of any public health emergency in the State, including an influenza pandemic, and is the lead in coordinating the medical response in collaboration with medical care partners during a public health emergency.
3. Hawaii Law – Emergency Powers and Isolation/Quarantine
 - a. The emergency powers embodied in chapters 127 and 128, Hawaii Revised



Statutes, as vested in the civil defense system are adequate to enable the State to respond to potential or actual public health emergencies.

- b. Section 5 presents information about Hawaii law including definitions of isolation and quarantine, due process, and procedural issues.
- c. Hawaii law allows isolation of an individual who has been informed by HDOH or a health care provider that he or she has been diagnosed with a communicable disease. Any person who has been a contact of someone diagnosed with a communicable disease must comply with the specified restrictions.
- d. Hawaii law allows the restriction of movement and separation of individuals or groups believed to have been exposed (quarantine) or known to be infected (isolation) with a communicable disease of public health significance or that poses a risk to the public's health.
 - i. The Director of Health and the Governor have the authority to declare quarantine/isolation.
 - ii. Quarantine/isolation will be terminated once the Director of Health determines that it is no longer needed to protect the public health.
 - iii. Violation by someone subject to quarantine/isolation of the requisite provisions is a misdemeanor.
 - iv. The HDOH has the authority to engage police authorities to assist in enforcing quarantine/isolation.

II. USE OF THE NATIONAL INCIDENT MANAGEMENT SYSTEM (NIMS)

- A. In a significant public health emergency requiring activation of the State Emergency Operations Center (State EOC), HDOH will activate its Department Operations Center (DOC) in support of the State EOC operated by SCD.
- B. HDOH will work to fulfill Emergency Support Function #8 (ESF 8; Public Health and Medical Services).
- C. All requests for Federal, State, and County assistance will be through the State EOC.
- D. The response will follow a NIMS-compliant ICS. Refer to Appendix C for the Concept of HDOH Operations organizational chart and to Appendix D for Key HDOH Areas Contact Information.
 - 1. During a pandemic, HDOH will establish a DOC, which will communicate with the State EOC to manage the pandemic and request resources, via the HDOH SCD Liaison (Branch Chief of HDOH Emergency Medical Services).

- a. The HDOH Disease Outbreak Control Division (DOCD) will manage the overall pandemic response effort until such time that the DOC is activated.
 - b. The HDOH DOC will coordinate, when activated and as appropriate, all public health support requirements for the response effort.
2. Based on decisions made previously for preparedness plans (as in this document), current event information, and any existing or new national guidelines, HDOH DOC will establish indications for use and prioritize preventive and treatment medications or vaccines to be dispensed, if available.
 3. HDOH leadership will designate personnel required to provide support to HDOH DOC activities and liaise with other partner response agencies.
4. HDOH DOC Positions
 - a. *DOC Manager (Incident Commander)*
 - i. The DOC Manager will collaborate with the SCD Director on health and medical matters related to the pandemic.
 - ii. The DOC Manager will, via the DOC, support the activities of the District Health Offices (DHOs) on the Neighbor Islands.
 - iii. The DOC Manager will, as needed, facilitate the coordination of activities with partner agencies including the Counties and DHOs, the Disaster Medical Assistance Team (DMAT), the Healthcare Association of Hawaii (HAH), the American Red Cross, and the Hawaii Pharmacists Association.
 - b. *Liaison Officer - Civil Defense Coordinator*
 - i. Will coordinate reciprocal updates between HDOH and Civil Defense regarding ongoing response activities.
 - ii. Will identify HDOH resource requirements for the implementation of the Pandemic Influenza Preparedness & Response Plan.
 - c. *HDOH Public Information Officer (PIO)*
 - i. Will be the point of contact for media interview and information requests through the Department of Health Information Center (DOHIC) or the DOC and therefore responsible for coordinating all public information messages and coordinating with the news media.
 - ii. Will be responsible for implementing the HDOH Communications Plan.
 - iii. Will either lead or assist with monitoring the flow of real-time information from and among the different response partners in a Joint Information Center (JIC) setting.

d. *Planning Chief*

- i. Will head the planning section.
- ii. Responsible for the planning and delegation of roles and responsibilities for multi-agency support to effectively manage the pandemic influenza response effort.

e. *Operations Chief*⁴

- i. Will head the operations section.
- ii. Responsible for coordination of all environmental health, clinic services (including ambulatory services, hospital services, and psychological first aid), and epidemiology/surveillance activities (including surveillance, investigations, contact tracing, and field response efforts).

f. *Logistics Chief*

- i. Responsible for ensuring the availability of adequate supplies, facilities, ground support, and communications and information technology hardware and software.
- ii. Oversees the services requested of and provided by the State Laboratories Division (SLD and other clinical laboratories supporting the response) and the collection and maintenance of vital records.

g. *Finance Administration Chief*

- i. Responsible for coordinating all human resources support for HDOH personnel assigned to the response effort.
- ii. Responsible for tracking labor costs such as payroll or contractors, if applicable.
- iii. Responsible for logging all expenditures to substantiate claims for possible future Federal funding reimbursement.
- iv. Oversees volunteer management and resources.

III. PARTNER AGENCIES

A. Federal partners

1. The availability of Federal, military, and related support during a response to an influenza pandemic in Hawaii will not be certain until the time of the event and will depend on a Federal decision to approve allocation of resources during a response in support of the State and County effort.

⁴ During an influenza pandemic, the operations section will be under county-specific/area command. As such, each county will have an Operations Chief.



2. Request for Federal assistance will be through SCD and the State EOC. A HDOH DOC request will be communicated through the HDOH Liaison Officer/Civil Defense Coordinator.

B. State and County partners

1. Support from other State agencies and the Governor will mirror what is outlined in the State Plan for Emergency Preparedness, Disaster Response and Assistance, Vol. 3.
2. State and County partners include but are not limited to, the Hawaii Department of Defense (includes Civil Defense and National Guard), Office of the Attorney General (AG), State Judiciary, Department of Accounting and General Services, Department of Transportation, Department of Education, Department of Public Safety, Department of Land and Natural Resources, Department of Agriculture, Mayors of all Counties and their respective police, fire, emergency medical services, parks and recreation, and public works departments.

C. Other agencies

1. Healthcare Association of Hawaii (HAH). HAH is a private, not-for-profit organization operated by Hawaii hospitals, long-term care, home health, and hospice organizations for their mutual benefit and serves as the point of contact and coordination for all such facilities in the state.
2. American Red Cross
 - a. Will establish phone bank with published number for Red Cross services: family reunification, home delivery services for meals or materials, and crisis support.
 - b. Feeding and logistical support for quarantine or isolation areas.
 - c. Spontaneous volunteer processing and placement.
 - d. Will provide support to vaccine clinics (if held), assuming workers can be adequately protected.
3. Hawaii Pharmacists Association
 - a. Assists with coordinating and providing continuing education and facilitates training of pharmacists and pharmacy technicians in their potential capacities as providers of vaccinations at clinics or antiviral distribution for treatment purposes.



- b. Assists with a pre-event campaign to educate the public on preventive measures.
 - c. Will assist in actively recruiting their membership to provide assistance during any large scale public health/all hazards response where surge capacity for those licensed and trained as health care providers is needed.
 - d. Will coordinate with the HDOH DOC Manager in the management and limitation of community pharmacy dispensing in the event that antiviral supplies need to be centrally coordinated and rationed to ensure sufficient supply of doses for appropriate use.
4. Aloha United Way. Based on pre-event agreements, will work with HDOH on setting up and implementing information hotlines for the public.

IV. HDOH RESPONSE BY PANDEMIC PHASES

1. Interpandemic period

1. Protocols

- a. HDOH chain of authority, including alternates, will be established.
- b. The HDOH All Hazards Planner will be responsible for HDOH's Continuity of Operations Plan, which will augment existing public health and State functional plans.
- c. Each branch or office in HDOH will ensure complete and accurate record keeping as it pertains to maintaining essential operations during plan activation.
- d. The HDOH Pandemic Influenza Preparedness & Response Plan will be tested regularly in accordance with the Homeland Security Exercise and Evaluation program, using a pandemic scenario and measurable objectives.

2. Operations assessment

- a. HDOH will assess its essential operations including departmental requirements for expediting purchasing due to unforeseen events.
- b. HDOH will assess critical supplies and services required to maintain departmental operations; also assess departmental requirements for security.
- c. Alternate methods for clients (i.e., public and partners) to access HDOH

products and services (e.g., expand on-line and self service options) will be identified.

3. Job functions

- a. Essential job functions will be established based on determination of departmental critical tasks.
- b. Primary and alternate staff to accomplish essential job functions will be identified by each departmental branch. Personnel contact information, including after hours and emergency numbers, will be updated at branch level.
- c. Upon employment, HDOH employees are notified that they are emergency workers. They will be reminded to report to work during a pandemic once Stage 3 (beginning of Pandemic Period) is reached. Employees have been encouraged to develop a personal/family disaster plan to care for family members.
- d. Staff may need to be reassigned to alternate work locations to maintain continuity of critical services; all HDOH personnel will be briefed on this option. Where and when possible, HDOH personnel will be cross-trained to ensure surge capacity to complete essential functions. Programs will establish just-in-time training protocols for critical job functions.
- e. Job functions that can be completed remotely during a pandemic will be identified at branch level, and resources to support telecommuting will be identified and secured. Telecommuting will commence upon activation of Stage 3.

4. Pandemic policies

- a. Leave policies will be developed collaboratively by the Human Resources Office (HRO), the Department of Human Resources Development (DHRD), and the public employee unions for those personnel who will require leave due to such factors as school closures, personal illness, family member illness, trauma, isolation, quarantine, and/or public transportation closures.
- b. Flexible work hours policies will be developed collaboratively by HRO, DHRD, and the public employee unions to address the need for alternate work conditions.
- c. Each branch and/or program will develop additional social distancing strategies to help prevent spread of infection (i.e., infection control) but also maintain critical functions with a decreased work force.

- d. HDOH protocols for appropriate office disinfection and immediate sanitation of work stations where staff report illness will be established based on current infection control recommendations and standards.
 - e. Information for department staff on how to prevent infection at home and at work will be provided by the Communications Office in collaboration with DOCD on the department intranet.
 - f. Each branch and/or program will ensure that supplies of hygiene products are available in all HDOH offices.
 - g. All branches and/or programs that require use of personal protective equipment (PPE) by their staff to complete job assignments, whether routinely or on occasion, will ensure that a sufficient PPE supply is available.
5. Product and service vendors
- a. Vendors of critical products and services required to maintain essential department operations will be identified. Vendor plans for ongoing services and/or shipments in the event of absences, shortages, or disruptions in transportation systems will be verified and alternate vendors identified as needed.
 - b. HDOH programs will augment existing inventory with sufficient critical supplies to keep essential services functioning for 7 days or more.

B. Pandemic period

1. Activation and command
- a. HDOH will follow its Pandemic Influenza Preparedness & Response Plan protocol for activating its emergency response capacity. Department leaders will be notified via the BioTerrorism Readiness Suite (BTRS) web-based notification system of the changes in the stages. Leaders and alternates will be refamiliarized with their duties.
 - b. At the beginning of the Pandemic Period (stage 3), HDOH will notify the State Emergency Operations Center.
 - c. HDOH will likely activate its DOC upon identification of potential case(s) of pandemic influenza within the State of Hawaii regardless of the pandemic stage. The degree to which the DOC is activated initially (i.e., limited vs. moderate vs. full) will be determined by the extent and severity of the situation.
 - d. The HDOH DOC will provide internal briefings by disseminating daily

briefings to appropriate personnel.

- e. External briefings will be provided by HDOH-appointed Subject Matter Experts or liaisons to appropriate government and other partner agencies.
- f. The department's Continuity of Operations Plan will be reviewed periodically, and HDOH operations will be revised as necessary to augment the State's Continuity of Operations Plan (the latter developed and established by SCD).

2. Operations

- a. Individual branches or programs within HDOH will continually assess: 1) the ability to provide regular services with available human and material resources; 2) increases and decreases in demand of existing services; and 3) the need for new or alternate services. This information shall be reported to the DOC.
- b. As needed, HDOH leadership may reallocate resources to provide services that are critical, in high demand, and/or are new or alternative.
- c. HDOH leadership may suspend nonessential operations as human resources become limited and/or material resources (e.g., gasoline) must be rationed.

3. Job functions

- a. Individual branches within HDOH shall identify absent employees and job functions. Personnel shortfalls and absences shall be reported to the DOC, which will inform HRO.
- b. In the event of personnel shortages in critical task areas, HDOH leadership may reassign personnel to essential or prioritized job functions and provide job action sheets.
- c. Just-in-time training for staff taking over new job functions will be provided by each program to which alternate or surge staff are assigned.

4. Pandemic policies

- a. All leave and social distancing strategies (i.e., alternate work conditions/telecommuting/teleworking) will be activated department-wide during the pandemic period. Initial activation may be limited and may progress in stepwise fashion depending on the current situation in the State of Hawaii.
- b. All employees will report to their immediate supervisor if they feel ill during

the workday, and supervisors shall follow the protocol for managing staff who become ill at work and will keep records of affected staff.

- c. A process for formerly exposed/at-risk or ill employees to return to work will be developed based on current recommendations regarding quarantine and isolation.

C. Postpandemic period

1. Recovery. Alert leaders and staff to change in pandemic status and gradually return to routine operations.
2. Operations
 - a. The DOC members will assess HDOH operations during the event and write an after action report on the impact of the pandemic on the department's operations, personnel, clients (i.e., public), partners, and vendors.
 - b. Branch chiefs will manage the gradual return to routine HDOH operations based on human and material resources.
 - c. HDOH leaders and program heads will identify community recovery needs and provide assistance as capable.
3. Process assessment
 - a. HDOH leaders and program heads will conduct an internal after action evaluation of the department's pandemic response. Additionally, a department liaison will participate in the SCD evaluation of the overall event.
 - b. The department's Continuity of Operations Plan, Pandemic Influenza Preparedness and Response Plan, and all other pertinent emergency plans will be reviewed and updated as appropriate.

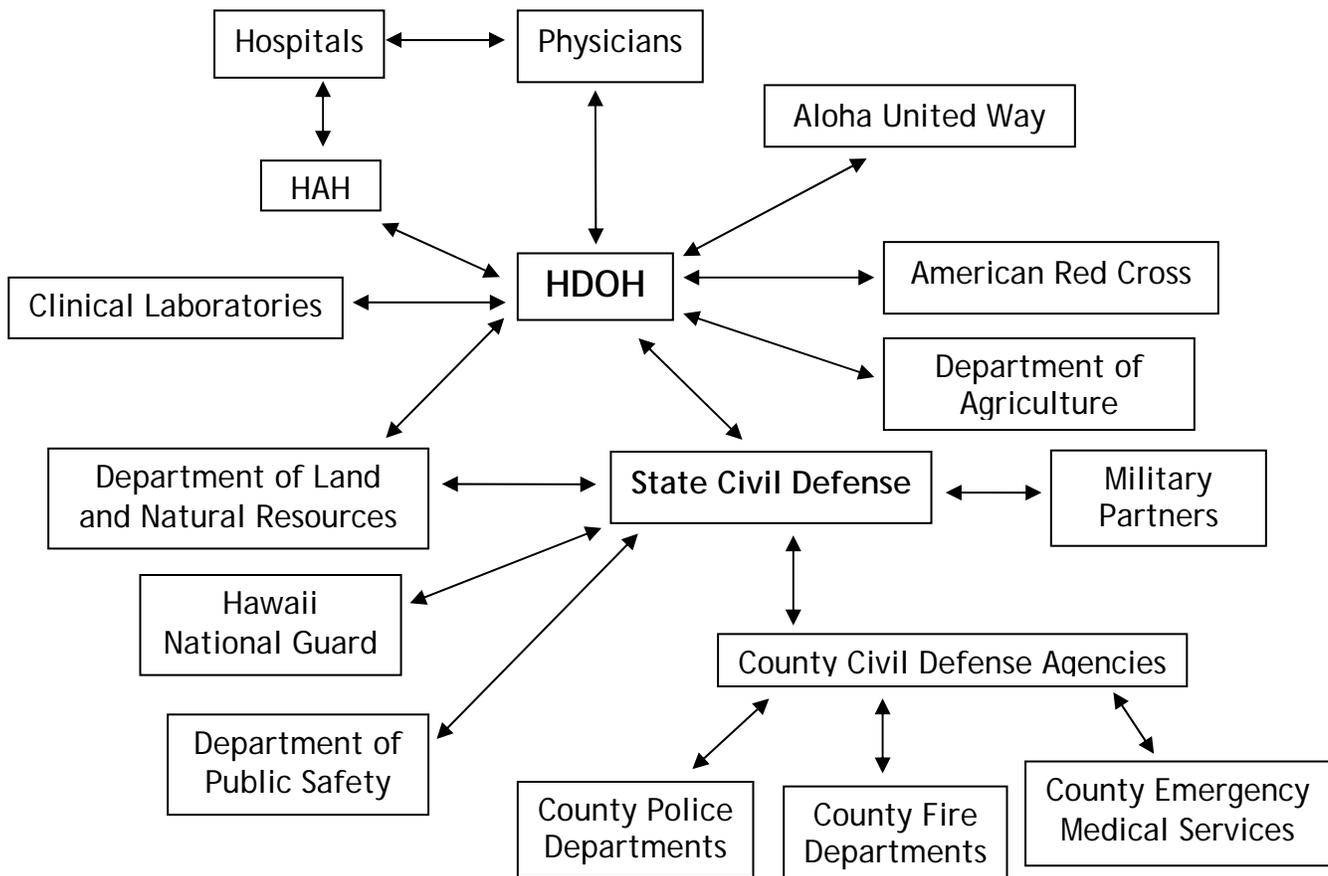
V. NOTIFICATION AND INFORMATION FLOW

- A. Communication is critical throughout all pandemic phases. The following illustrates the expected flow of information. Refer to Section 7 for further details regarding communication.
- B. Reports of increased or unusual influenza activity in the State will come from a number of different sources including, for example:
 1. HDOH District Health Offices
 2. Hospitals

3. Physicians
4. Community clinics
5. Concerned members of the public
6. Clinical laboratories in the state
7. Other states
8. CDC

C. This information will be reported to DOCD and its Disease Investigations Branch (DIB). If, pursuant to surveillance and epidemiological activities described in later sections, a potential pandemic is identified, HDOH will activate its own internal notification protocols starting with the Director of Health and key staff.

D. The following is an *example* of the multiple mechanisms for notification and information sharing that may occur between HDOH and external partners. Not all partner agencies are listed. In the event of an influenza pandemic, these mechanisms will need to be flexible and be able to adapt to changing circumstances.



1. Health and Medical Partners Hospitals, physicians, and HAH will all be communicating with each other and with HDOH, including the HDOH DHOs in the Counties of Maui, Kauai, and Hawaii. In addition, private clinical laboratories that may be called upon to provide laboratory surge capacity, will be in direct



communication with HDOH.

2. State Emergency Preparedness Partners Hawaii SCD is the hub of information in the event of a statewide emergency and reporting to SCD will be consistent with the State Plan for Emergency Preparedness, Disaster Response and Assistance, Version 3. Additional direct lines of communication with HDOH may include, depending on the nature of the pandemic, the Department of Agriculture and the Department of Land and Natural Resources.
3. Community Emergency Partners The American Red Cross will be a significant part of any response to an influenza pandemic. Consistent with that role, they will be in direct communication with HDOH regarding volunteers, resources, and other needs.



Section 2. INFLUENZA SURVEILLANCE: ROUTINE AND PANDEMIC

I. OBJECTIVE

This section describes the activities that are used in Hawaii to detect and characterize circulating strains of influenza virus and generate epidemiologic information. This information will be used to guide the actions of public health officials during a pandemic.

II. INTERPANDEMIC PERIOD: *Phases 1 and 2*

A. An effective influenza surveillance system should:

- a. Provide epidemiologic information during the annual influenza epidemics regarding distribution, magnitude, and severity of influenza illness.
- b. Facilitate monitoring of antigenic changes in circulating viruses.
- c. Detect the introduction of new viruses that have the potential to cause a pandemic and identify low-level spread of any novel virus.
- d. Provide information (including patterns of viral transmission, populations at risk, the effect of treatments, and the effectiveness of interventions) to guide public health actions.

B. The existing influenza surveillance system consists of routine activities that are ongoing in most states and enhanced activities implemented in Hawaii:

1. Routine activities:

- a. *Virologic surveillance.* Characterizes circulating viral strains and attempts to identify new viral strains if introduced.
- b. *Influenza-like-illness (ILI) sentinel surveillance.* Quantifies the level and location of influenza-compatible illnesses being treated in the community.
- c. *Pneumonia and influenza mortality surveillance.* Compares cause specific death rates in Honolulu with national and historical data.
- d. *Illness cluster/absenteeism surveillance.* Identifies clusters of ILI or reports of school absenteeism for additional investigation.

2. Enhanced activities:

- a. *Port of entry ILI surveillance.* Identifies and characterizes influenza viruses causing illness among travelers.
- b. *Year-round influenza surveillance.* Seeks to identify viral isolates that may be

circulating in Hawaii during periods outside the typical influenza season for North America.

C. To prepare for a potential pandemic DOCD and SLD will maintain and enhance the existing influenza surveillance infrastructure.

1. Virologic Surveillance:

- a. Approximately 700 physicians across the State submit specimens to HDOH throughout the year for influenza testing.
- b. Two pharyngeal/throat swab specimens per patient with ILI are submitted: a commercial laboratory performs rapid testing on one, and SLD performs culture or real-time reverse transcriptase polymerase chain-reaction (RT-PCR) testing on the other.
- c. The three major private commercial laboratories in Hawaii (Clinical Laboratories of Hawaii, Diagnostics Laboratory Services, and Kaiser Permanente) perform approximately 9,000 rapid influenza tests per year.
- d. SLD analysis capacity includes the following:
 - i. Provides viral isolation (with routine typing and sub-typing) from specimens submitted by both sentinel and non-sentinel sites. SLD tests 3000-6000 specimens annually.
 - ii. Isolates by culture and identifies other respiratory viruses (e.g., adenovirus, parainfluenza types 1-3, enterovirus, echovirus, herpes simplex, cytomegalovirus, and coxsackie) that may cause ILI.
 - iii. Conducts real-time RT-PCR as a rapid and sensitive screen to determine the presence or absence of influenza to streamline specimen testing.
- e. The specific process for virologic laboratory surveillance and analysis is as follows:
 - i. The DIB Influenza Surveillance Coordinator actively solicits the submission of respiratory specimens and the results of any rapid testing for influenza at regular intervals from all commercial laboratories in the State.
 - ii. SLD staff performs RT-PCR testing on all priority specimens to detect influenza virus. Priority specimens include those submitted by sentinel physicians, specimens related to suspected influenza outbreaks, airport surveillance specimens, and samples from severely ill hospitalized patients with unexplained respiratory illness or patients with a travel history to any international destination.
 - iii. Providers who frequently encounter “high priority” specimens submit

reports electronically through a specific web-based specimen management system.

- iv. SLD staff can perform real time RT-PCR to detect Severe Acute Respiratory Syndrome (SARS) coronavirus and/or avian influenza in specimens from patients with clinically and epidemiologically compatible illness.
 - v. SLD provides weekly cumulative reports of submissions and findings to DIB and WHO, and periodically sends selected culture-confirmed influenza isolates to CDC for sub-typing confirmation and possible molecular analysis.
- f. The DIB Influenza Surveillance Coordinator maintains a database containing information on all specimens tested, demographic, travel, and exposure history of patients from whom specimens were collected.

2. ILI Sentinel Surveillance

- a. HDOH participates in national ILI surveillance through the U.S. Influenza Sentinel Surveillance Project, which is jointly coordinated by CDC and the individual States.
 - i. This project provides a central repository for influenza morbidity and virologic surveillance data that can be rapidly analyzed.
 - ii. As of December 2006, Hawaii has 68 influenza sentinel surveillance sites enrolled across the State, well over CDC recommended standards.
- b. Sentinel sites report ILI data directly to CDC via the internet during the traditional influenza season (October – mid-May). Each site reports the number of patients seen for ILI by age group and the total number of patients seen for all medical problems by week.
- c. CDC compiles morbidity data submitted by sentinel sites across the nation and provides weekly reports on the percent of visits due to ILI on the national, regional, and state level.
 - i. This percent is compared to a baseline of 0-3%.
 - ii. The weekly reports also include influenza activity as assessed by state and territorial epidemiologists as “sporadic”, “local”, “regional”, or “widespread.”
 - iii. National reports are available on CDC’s website (<http://www.cdc.gov/flu/weekly/fluactivity.htm>), and state specific reports on DIB’s website (http://www.hawaii.gov/health/family-child-health/contagious-disease/influenza/Flu_Glance.htm).

3. Pneumonia and Influenza (P&I) Mortality Surveillance

- a. The Office of Health Status Monitoring/Vital Statistics reports to CDC weekly numbers of deaths due to P&I in Honolulu.
 - b. This information is compiled with data from 122 U.S. cities to determine if death rates due to P&I are unusually high.
 - c. Findings are published in the Morbidity and Mortality Weekly Report (<http://www.cdc.gov/mmwr/>) and reviewed by DIB investigators.
4. Illness Cluster/Absenteeism Surveillance
- a. Specimen collection kits are sent to DHOs at the beginning of the influenza season (and as needed) for rapid investigation of outbreaks or suspect novel or avian influenza cases.
 - b. Kits are also rapidly deployed to schools and long-term care facilities on an as-needed basis to facilitate diagnosis and outbreak control.
 - c. Schools are requested to report absenteeism of >15% in any one classroom or >10% in any school. These absences are investigated to determine if the cause is ILI and, if so, appropriate virologic testing ensues.
 - d. DIB staff also investigate reported clusters of ILI at long-term care facilities and other institutions.
5. Port of Entry ILI Surveillance
- a. Hawaii receives approximately 2.5 million international visitors annually with a large proportion from East and Southeast Asia, where novel viruses are expected to emerge.⁵
 - b. Current protocols require commercial airlines to report incoming ill passengers to the CDC Honolulu Quarantine Station.
 - c. Through a collaboration among the CDC Honolulu Quarantine Station, the airport medical group, and DIB, specimens are collected from travelers meeting clinical criteria for ILI (a fever or history of fever of 38°C [100.4°F] or greater plus one or more of the following symptoms: headache, body aches, sore throat, cough, chills, malaise, and/or vomiting) and sent to SLD for influenza testing.

⁵ Hawaii State Department of Business, Economic Development & Tourism, Research and Economic Analysis Division, 2000 Annual Visitor Research Report (2001), pp 58-60.

6. Year-round Influenza Surveillance

- a. Sentinel sites are encouraged to submit specimens during the ‘inter-season’ (April through September). Sites that include patient populations likely to travel to or visit from other countries, particularly Asia and the Southern Hemisphere, are solicited more heavily.
- b. The Influenza Surveillance Coordinator maintains a list of Influenza Coordinators for all states for rapid notification in the event of an emergency or high priority alert.

III. PANDEMIC ALERT: *Phases 3, 4, and 5*

When augmented surveillance is needed to respond to a growing threat of pandemic influenza, DIB will enlist the assistance of sentinel providers and other health care facilities to rapidly identify illnesses that warrant investigation.

A. Novel virus alert. Defined as a virus that has never previously infected humans or has not infected humans for many years, such that no one, or very few, will have antibodies, or immunity, to protect them against such a virus. Novel virus alert occurs when two or more human infections (with a novel virus) have been confirmed. The ability of the virus to spread from human-to-human and cause serious disease, however, is still questionable.

B. Human infection confirmed

1. Continue routine and enhanced surveillance activities as established during the *Interpandemic* period and consider implementation of enhanced laboratory surveillance.
2. Update public health and health care providers of the region(s) where the novel influenza virus has been detected.
3. Consult the Department of Agriculture regarding animal surveillance.
4. Implement expanded laboratory surveillance to include the following:
 - a. Notification of public health and health care providers to collect respiratory specimens from patients who meet one of the following criteria:
 - i. Present with ILI and had recent travel to a region where the novel influenza strain has been identified.
 - ii. Present with unusually severe symptoms of ILI regardless of their travel history.

- b. Two respiratory specimens, from separate anatomical sites, should be submitted directly to SLD to test for the novel influenza virus.
 5. Monitor CDC bulletins regarding virologic, epidemiologic, and clinical findings associated with new variants isolated within or outside the United States.
 6. Distribute these bulletins to DHOs, health care facilities, providers, and other agencies as appropriate.
 7. Meet with the SLD Chief and staff and other partners to review major elements of enhanced surveillance activities and modify and update plans as needed.
 8. Investigate cases of severe respiratory illness and unexplained deaths associated with respiratory illness to determine etiology.
 9. Explore and establish potential laboratory diagnostic capacity through private clinical laboratories to work in concert together with SLD.
- C. Human transmission confirmed.** Once a pandemic influenza strain has been identified as circulating internationally, the goal of *Pandemic Alert* surveillance is to identify the appearance of the novel virus in Hawaii. Activities to be implemented during this stage will include the following:
1. The State Epidemiologist and DOCD staff will review existing surveillance activities, assess their findings, and evaluate possible enhanced surveillance plans.
 2. HDOH Communications staff will coordinate with the State Epidemiologist and DOCD to determine media requirements.
 3. Routine meetings between DIB and SLD will be established to assess resources, specimen submissions, and prioritizations.
 4. Fully operationalize active surveillance activities (e.g., daily calls to hospital contacts for updates regarding ILI visits and admissions).
 5. Establish regular communication with HAH to receive reports and discuss status of isolation capacity and overall bed capacity of hospitals and other health care institutions.
 6. DIB, in consultation with CDC Division of Quarantine and Global Migration, will implement active ILI surveillance among travelers returning from novel virus activity areas.
 7. Implement laboratory surge capacity plans statewide for laboratory personnel, equipment, and supplies.

8. Convene the Pandemic Influenza Preparedness & Response Ad Hoc Advisory Group from agencies and organizations listed in Appendix E to initiate contact and communication with HDOH partners. This advisory body will serve to make recommendations to the DOH Director based on the combined diverse background and experience of the representative members.

IV. PANDEMIC PERIOD: *Phase 6*

A. **Pandemic onset.** Implement surveillance enhancements developed in earlier stages as follows:

1. Maintain and monitor, in collaboration with CDC, local health officials, clinicians, and academicians, enhanced surveillance activities.
2. Continue analysis of incoming patient data to determine populations at greatest risk.
3. Document population-specific influenza outbreaks.
4. Determine population-specific attack rates, morbidity, and mortality.
5. Describe any unusual clinical syndromes (including risk factors and appropriate treatment).
6. Describe any unusual pathological features of fatalities.
7. Assess effectiveness of vaccination or treatment (and chemoprophylaxis, if such is possible).
8. Assess health care (e.g., hospitals and outpatient clinics) capacity and delivery.
9. Maintain active port of entry ILI surveillance system.

B. **Regional and multiregional epidemics.** Describe the epidemiology of pandemic influenza in Hawaii to develop preventive action recommendations, allocate medical resources, and respond to public and media questions and concerns.

1. Assess all current surveillance activities to eliminate or modify those lacking support due to limited resources.
2. When the large numbers of patients meeting clinical criteria exceed laboratory capacity to test and/or case categorization may be established based on conclusive clinical and epidemiological history, consider limiting specimen collection to a

representative sampling of patients. Such sampling will be representative of age, gender, and geographic location.

3. Focus laboratory surveillance on detection of antigenic drift variants by submitting specimens to CDC for molecular analysis.
 4. Monitor surveillance reports on national and international morbidity and mortality for dissemination.
- C. **End of first pandemic wave.** Assess remaining resources, evaluate surveillance data, and prepare for a likely second wave of influenza activity. Consider return to any enhanced surveillance activities that had been suspended prior to this phase.
- D. **Second or successive pandemic waves.** Consider necessity and feasibility of surveillance activities which may consist of the following:
1. Continued surveillance as described in III.B above.
 2. Continued limited enhanced influenza surveillance until the novel influenza virus has been identified in all regions of the State or when transmission of the novel virus has ceased.

V. **POSTPANDEMIC PERIOD: *Evaluation Stage***

- A. Surveillance activities will revert at this point, if not sooner, back to DIB/DOCD, and the HDOH DOC may be deactivated.
- B. The primary objective will be to assess the following:
1. Availability and readiness of all HDOH and external staff to maintain surveillance and to what level.
 2. Detailed retrospective characterization of the pandemic.
 3. Effectiveness of recommended prevention and control measures and emergency management responses
 4. The need to prospectively continue pandemic surveillance activities.



HAWAII STATE
DEPARTMENT
OF HEALTH

Section 3. PANDEMIC INFLUENZA VACCINES

I. INTRODUCTION

A. Objective. To outline the plan to procure, secure, distribute, and administer vaccine applicable to prevent and control infection by a pandemic influenza virus when/if such vaccine becomes available.

B. Background. Vaccination is the primary intervention to decrease the health impacts of an influenza pandemic. The overall impact of vaccination during a pandemic depends on how rapidly a pandemic influenza vaccine becomes available; its effectiveness in preventing infection and disease; its supply; and the ability to allocate and administer it.

C. Assumptions

In addition to the vaccine assumptions identified in the Introduction, ii-IV-B:

1. The overall target population will encompass Hawaii's resident and visitor population.
2. It will be impossible to predict when a pandemic virus will arrive. However, because of Hawaii's unique location and high volume of visitors, travelers, and immigrants relative to the resident population, a pandemic virus may arrive in the islands sooner than in some parts of the continental United States.
3. Due to the time needed to appropriately scientifically identify and characterize a novel virus and the current influenza vaccine manufacturing processes, a pandemic influenza vaccine will not be available for a *minimum* of six to eight months after identification of the pandemic virus. It is also possible that no pandemic influenza vaccine will be available, or that only a vaccine that potentially offers development of partial immunity at best may be available (e.g., avian H5N1 specific vaccine may be useful for a pandemic virus which originated from this virus).
4. Given the probability of limited pandemic influenza vaccine supply during the early months of a pandemic, the Federal government will be responsible for procurement and determining the number of doses distributed to each State health department.
5. If and when pandemic influenza vaccine supplies become available, Hawaii will not initially receive sufficient doses to vaccinate the entire population. A tiered system, based on current federal recommendations, that prioritizes the recipients receiving the initial doses of pandemic influenza vaccine and adherence to this tiered system will be necessary.
6. Should a vaccine that offers partial immunization (i.e., partial match influenza vaccine) become available, distribution and prioritization will be applied in the

same manner as would be applied to a pandemic vaccine.

7. Based on current and past targeted mass vaccination programs such as the school influenza vaccination program during the 2007-2008 influenza season and mass vaccination of the elderly and medically compromised during the flu vaccine shortage in the 2004-2005 season, multiple clinics (range 5-20) may be operated throughout the state such that up to 1,000 vaccine doses (injectable formulation) may be administered per hour with at least 200 vaccinators required during peak hours.
8. Security measures will be needed to safeguard the supply of pandemic influenza vaccine and to ensure the safety of the staff administering the vaccine and the people receiving it.
9. The public, including the health care community, must be educated on the rationale for a tiered system. Hot lines for calls from the public must be established. Mental health/crisis workers must assist with distressed callers.
10. Because immunologic responses following a single vaccination of serologically negative individuals is often suboptimal, the emergence of a pandemic strain will likely require two doses of pandemic influenza vaccine, given an appropriate time (usually several weeks) apart.

II. ROLES

A. Federal roles

1. Development of reference strains for pandemic influenza vaccine
2. Pandemic influenza vaccine or a partial match influenza vaccine evaluation and licensure
3. Distribution of tiered system for vaccine prioritization and recommendations for strategies for vaccine use
4. Deployment of federally purchased vaccine to control an influenza pandemic
5. Evaluation of pandemic influenza vaccine or a partial match influenza vaccine safety

B. Hawaii Department of Health roles

1. Receive, store, and distribute a pandemic influenza vaccine (and/or a partial match influenza vaccine) within the State.

2. Based on current information and any existing or new national guidelines, implement a tiered system for persons to receive available pandemic influenza vaccine (or a partial match influenza vaccine).
3. Conduct statewide distribution of a pandemic influenza vaccine (or a partial match influenza vaccine) consistent with the standard HDOH procedures for vaccine administration.
4. Provide standing orders for administration of a pandemic influenza vaccine (or a partial match influenza vaccine).
5. As necessary, conduct vaccination clinics at previously determined sites (potential site list maintained under separate cover by the HDOH Public Health Emergency Preparedness [PHEP, formerly Bioterrorism Preparedness and Response] Branch).

III. RESPONSE BY PANDEMIC PHASES

A. Interpandemic period

1. Promote seasonal influenza vaccination in traditional high risk groups as well as general population to increase vaccination coverage levels.
2. Increase vaccine demand and coverage before annual influenza epidemics by:
 - a. Increasing vaccine acceptability through public education targeted at familiarizing people with the safety profile and benefits of vaccination.
 - b. Strengthening the vaccine delivery system.
3. Promote pneumococcal vaccination in traditional high risk groups to reduce the incidence and severity of secondary bacterial pneumonia (potential serious complication of influenza infection) at the time of a pandemic.

B. Pandemic alert period: early phases - isolated cases to small, localized cluster

1. Confirm representation on the Pandemic Influenza Preparedness & Response Ad Hoc Advisory Group (Refer to Appendix E).
2. Begin identifying those groups in the first tier for receipt of the limited supply of pandemic influenza vaccine (or a partial match influenza vaccine) when available and deemed necessary.

- a. Although during annual influenza epidemics more than half of the hospitalizations and more than 90% of deaths occur in persons who are age 65 years and older, the age distribution of severe disease in a pandemic may differ. In previous pandemics, young adults were just as likely to be affected.
 - b. One of the population groups most responsible for community spread of infections or germs are young children. Control of a pandemic may depend on controlling infection especially in this group.
 - c. Because of uncertainties regarding who will be most susceptible and most at risk for severe disease, strategies for pandemic vaccination will need to be flexible and probably modified at the time of the pandemic, based on the epidemiology of the disease.
 - d. As information about the impact of a pandemic influenza virus becomes available, recommendations regarding prioritizing limited supplies of a pandemic influenza vaccine will be formulated at the national level with development and implementation of a tiered system from the U.S. Department of Health & Human Services (DHHS) as outlined in the DHHS Pandemic Influenza Plan.
 - e. Hawaii specific circumstances will be considered in adaptation of the tiered system for distribution of vaccine here in Hawaii.
3. Determine numbers of doses for each island based on proportions of tiered system groups and total available vaccine.
 4. Review, execute, and modify, as needed, pandemic influenza vaccine (or a partial match influenza vaccine) distribution and administration plans (based on previously developed SNS and Smallpox Response distribution plans) to account for updates, such as: a recommended tiered system for distributing limited supplies of vaccine, projected vaccine supply, and available human resources.

2007 Hawaii Tiered System Tier 1 estimates* are:

Tier	Priority	Category	Target Group	Estimated HI Numbers
1	1	Health Care and Community Support	Front Line inpatient and Hospital based health care workers	12,000
	2	Critical Infrastructure	Front line Emergency Medical Service Personnel	500
	3	Health Care and Community Support	Front line outpatient health care providers	4,700
	4	Critical Infrastructure	Front line fire and law enforcement personnel	4,500
	5	General Population	Pregnant women and infants 6-11 months old	38,000

6	Multiple	Other Tier 1 personnel	55,155
Total			114,855

*Based on available numbers and federal government total estimates (multiplied by 0.42%, which is Hawaii's portion of the total U.S. population)

- a. The following table shows the number of pandemic vaccine doses, vials, and 100 vial master packs that Hawaii could receive under 3 hypothetical pandemic vaccine planning scenarios (note that the first shipment will be larger as it will represent 10 weeks of production) provided by CDC in 2007.

Dose (microgram)* and Formulation	Number of doses Initial/Subsequent	Number of vials Initial/Subsequent	Number of 100 vial master packs Initial/Subsequent
90 / 5 dose vial	28,140 / 2,814	5,628 / 563	57 / 6
15 / 10 dose vial	369,600 / 36,960	36,960 / 3,696	370 / 37
7.5 / 20 dose vial	1,092,000 / 109,200	54,600 / 5,460	546 / 55

*The seasonal influenza antigen dose is 15 mcg; however, given the pandemic influenza virus will be a novel virus, it is currently unclear what dose amount is required to provoke a sufficiently protective immune response.

- b. Considerations for vaccination should also include:
- i. Vaccination of at-risk/hard to reach populations.
 - ii. Possibility of distributing vaccine to public and private providers for administration to their patients.
 - iii. If previous occurs, then HDOH may reserve vaccination clinics targeted at the uninsured and those without physicians.
- c. Specify procedures to ensure secure receipt, transport, storage, delivery, and administration of pandemic influenza vaccine (or a partial match influenza) through the HDOH Immunization Branch (IMB).
- d. Review Standing Orders for pandemic influenza vaccine (or a partial match influenza vaccine) administration in designated clinics (maintained by HDOH DOCD in the Vaccination Clinic Operations Manual).
- e. Activate personnel from surge capacity lists (e.g., Medical Reserve Corps, contract nursing, etc.) maintained by HDOH. Lists will be County-specific and will contain personnel with a variety of needed skill sets and from various occupational backgrounds including personnel from government, private health care, community organizations, and others. Note, must not rely solely on one primary source for surge capacity personnel, as allowances must be made for illness and other pandemic related barriers to activation.
- f. Additional contingency plans may be required depending upon how the vaccine supply is delivered (i.e., enough doses to immunize Hawaii's population all at once vs. receiving vaccine spread over a period of time) and

depending upon the pandemic situation in Hawaii and the rest of the world.

5. Coordinate with the State Department of the AG to ensure that legal issues are addressed. Some issues may be addressed in advance of any pandemic. Examples of such issues that may arise include:
 - a. The type (i.e., professionals and/or trained lay public) of volunteers legally allowed to administer vaccine
 - b. Mandated vaccine for school attendance (students and staff)
 - c. Mandated vaccine in a health care setting
 - d. Liability of regular health care worker and volunteers to provide emergency care and vaccines to patients during a pandemic
 - e. Medical/legal implications of administering pandemic influenza vaccine only to priority groups
 - f. Quarantine and Isolation
 6. Monitor adverse events post-vaccination through the Vaccine Adverse Events Reporting System (VAERS; <http://vaers.hhs.gov/>). The IMB pediatrician will serve as the HDOH Vaccine Safety Coordinator and will be the HDOH liaison with CDC regarding vaccine safety related issues in Hawaii.
 7. Develop a data management system to track vaccine supply, distribution, administration, adverse reactions, and recall for second doses.
 8. Ensure redundancy of knowledge and responsibility for pandemic activities through pre-event training.
- C. Pandemic alert period: late phase - large, localized cluster**
1. Review Pandemic Influenza Preparedness & Response Plan with stakeholders.
 2. HDOH will review and modify the tiered vaccine priority system as necessary using Federal guidelines and in collaboration with outside partners from the Pandemic Influenza Preparedness & Response Ad Hoc Advisory Group.
 3. Update the Pandemic Influenza Vaccine Standing Orders, based on any new recommendations from the Federal government, as needed.
 4. Order supplies necessary for vaccine administration.



5. Ensure that human resources, equipment, supplies, security, and sites necessary for vaccination clinics are in place.
 6. Obtain Vaccine Information Statement, including translations for non-English readers, from CDC.
- D. Pandemic period.** Proposed mass vaccination plan based on 3 hypothetical, CDC-provided vaccine allotment scenarios and to be enacted depending on when vaccine is made available.
1. Confer with CDC and SNS on the number of pandemic influenza vaccine (and/or partial match influenza vaccine) doses Hawaii will receive and date of receipt.
 2. Notify SCD to coordinate all aspects of mass vaccination plan, especially with respect to logistics and security.
 3. The HDOH SNS Pharmacist will be responsible for maintaining the centralized depot for receipt of the pandemic influenza vaccine and keeping the location identity secure.
 4. Receive and distribute pandemic (or partial match) influenza vaccine, and stockpile sufficient vaccine administration supplies in the secure centralized depot to support administering approximately 15,000 doses.
 - a. The SNS Pharmacist will oversee receipt and storage of the pandemic influenza vaccine in the centralized depot on Oahu.
 - b. The SNS Pharmacist will oversee distributing pre-determined, specified doses via contract courier services to neighbor island DHOs under the responsibility of the respective PHEP Planners or their equivalents. Neighbor Island distribution will be according to the proportion of the total Hawaii State population represented by the respective island.
 - c. Deliver vaccine and supplies on Oahu to pandemic vaccine clinics (note III.B.4.b and the table in III.D.5.c below) by designated HDOH IMB or other DOCD staff and contracted courier service as needed.
 - d. Deliver vaccine and supplies on neighbor islands as coordinated by respective PHEP Planners via designated DHO staff and contracted courier service as needed.
 - e. Request additional supplies through SNS and/or replenish supplies through medical supply distributors.
 - f. Communicate with healthcare partners regarding the process for pandemic

vaccine administration.

- g. Notify the general public through public service announcements coordinated with the HDOH Communications Office regarding pandemic vaccine clinics.

5. Pandemic vaccine clinics, staffing, and operations.

- a. The number of pandemic vaccine clinic (or point of distribution [POD]) sites will be based on the number of pandemic influenza vaccine doses allotted to the State of Hawaii.
- b. Potential POD sites have been identified, and the list is securely maintained by the HDOH PHEP Branch.
- c. The following table uses the 3 hypothetical, CDC-provided vaccine allotment scenarios for Hawaii to provide potential clinic requirements.

Islands/Staff	SMALL (28,140 doses or 14,070 persons)	MEDIUM (369,600 doses or 184,800 persons)	LARGE (1,092,000 doses or 546,000 persons)
	Number of Clinics per day	Number of Clinics per day	Number of Clinics per day*
Oahu	3	4-5	* Vaccine doses will be distributed to providers and health centers. HDOH to hold mass clinics for persons without a medical home.
Hawaii	2	2	
Maui	2	2	
Kauai	1	1	
Molokai	1	1	
Lanai	1	1	
	Clinic Staffing Requirements	Clinic Staffing Requirements	Clinic Staffing Requirements*
Clinic Manager	1	1	*Vaccine doses will be distributed to providers and health centers. HDOH to hold mass clinics for persons without a medical home.
Clinic Manager (asst.)	3	5	
Registrar	8-13	8-16	
Flow Controller	8-13	8-16	
Vaccinators	8-16	10-24	

- d. Staffing resources for pandemic vaccine clinics/PODs will be drawn from HDOH staff, Medical Reserve Corps volunteers, contract nursing staff, and surge capacity lists maintained by HDOH PHEP Branch.
- e. Job Action Sheets for each clinic role will be available on site for just-in time training for:

- i. Clinic Manager
 - ii. Clinic Manager Assistant
 - iii. Vaccinator
 - iv. Registrar
 - v. Flow Controller
- f. Each clinic staffing will follow an ICS structure with appropriate badge identification to ensure efficient and secure operations.
- g. A basic concept of the physical set-up and flow of a pandemic vaccine clinic (see Appendix F) has been developed.
 - i. Based on current and past experience with targeted mass vaccination programs (e.g., 2004 mass flu vaccination of elderly and medically compromised and 2007-08 school flu vaccination program).
 - ii. Average transit time (time from sign-in to exit) expected to be approximately 8 minutes (i.e., Registration [form completion, addressing questions]=6 min, Vaccination=1min, Exit=1min)
6. Administer pandemic influenza vaccine (and/or partial match influenza vaccine) according to Hawaii's adapted tiered system with prioritization of first tier.
7. Monitor for adverse reactions post-vaccination.
 - a. Emergency Kits will be provided at each clinic site to respond to emergent adverse events.
 - b. Events occurring outside of clinic hours will be referred to person's primary care provider.
 - c. A hot line will be available for primary care providers for reporting adverse events post-vaccination to HDOH.
 - d. VAERS forms filed by primary care providers will be submitted to VAERS via HDOH.
8. Data collection and transfer.
 - a. Use the Pandemic Information Management System (PIMS) and CDC RITS (Receiving, Storing & Staging Inventory Tracking System) to track all vaccine supply and distribution information.
 - b. Tracking individuals vaccinated.
 - i. Hard copy clinic registration forms will be completed at clinic sites.

- ii. Data entry for each vaccinee will be completed at a separate location directly into the Hawaii Immunization Information System (IIS) or designated stand alone program (e.g., PIMS).
 - iii. Aggregate data will be transmitted to CDC.
 9. If decision has been made to administer second dose to prioritized group, recall patients at the appropriate time for second dose of vaccine.⁶
 10. Prepare for subsequent waves as follows:
 - a. Inventory pandemic influenza vaccine, pharmaceuticals, and supplies.
 - b. Evaluate vaccination protocols and procedures.
 - c. Critique and improve vaccination and distribution sites.
 - d. Inventory personnel available to work in subsequent pandemic wave vaccination clinics.
- E. Postpandemic period.** HDOH with assistance from partner agencies will develop an After Action Report (AAR) to evaluate overall success of vaccination effort and identify any areas for improvement/modification. The report will be made available to all partner agencies and the public.

⁶ Management information systems (e.g., IIS or PIMS) that may be able to track the information necessary to recall patients at the appropriate times for a second dose of the pandemic influenza vaccine are being developed by HDOH but are not yet operational.



HAWAII STATE
DEPARTMENT
OF HEALTH

Section 4. ANTIVIRAL MEDICATIONS

I. INTRODUCTION

- A. Objective.** To outline the plan to secure and monitor the supply of influenza-specific antiviral medications as well as allocate, distribute, and administer these medications to the public based on availability as well as known or theoretical effectiveness.
- B. Background.** When WHO/DHHS/CDC declare that an influenza pandemic is “deemed imminent,” programmed actions may necessitate the need for distributing antiviral pharmaceuticals throughout Hawaii. During Stage 2 of the Federal response, Hawaii must be prepared to receive distributions from SNS.
1. In the likelihood that an effective vaccine is unavailable, antiviral agents potentially could play a valuable role as the only virus-specific intervention during the initial response to an influenza pandemic.
 2. However, the *overarching limitation* to antiviral use in a pandemic is inadequate availability. The initial wave or waves of a pandemic would create a high global demand and quickly deplete antiviral supplies unless stockpiles are in place or manufacturers are able to markedly enhance surge production capacity.
 3. There are four licensed prescription medications with antiviral activity against influenza viruses that are commercially available in the United States. Based on their chemical properties and activities against influenza viruses, these four drugs are classified into two categories:
 - a. *Adamantane derivatives* or M2 ion channel inhibitors, which include the antivirals amantadine and rimantadine.
 - b. *Neuraminidase inhibitors*, which include the antivirals oseltamivir (Tamiflu) and zanamivir (Relenza).

C. Assumptions

1. The points in Section 3, I.C.1-4 (Assumptions) apply here as well.
2. Antivirals may lessen the total burden of the disease (morbidity and mortality). They may also reduce viral shedding or transmission of the virus and severe complications.
3. During a pandemic, antivirals could have a significant beneficial impact in reducing morbidity, hospitalizations, other demands on the health care system, social disruption, and economic loss caused by an influenza pandemic.
4. Protection afforded by antivirals is virtually immediate, last only as long as the

antiviral is taken (as prescribed), and do not interfere with the response to influenza vaccine. However, depending on the nature of the pandemic influenza virus, such protection may not be complete.

5. Due to the limited amount of antivirals in the pharmaceutical distribution system at any given time, there will likely be only sufficient antivirals available to *treat* individuals. Although chemoprophylaxis would be desirable to help control the pandemic and is discussed in various parts of this Plan, this measure is unlikely. Therefore, this Plan *focuses, by necessity, on using antivirals for treatment*. Antivirals will be administered as prophylaxis only under extremely limited circumstances, and as determined by the Ad Hoc Advisory Group.
6. Adequate security measures are needed to safeguard the limited supply of antivirals and to ensure the safety of all personnel involved in the distribution of the antivirals.
7. Additional resources and timely replenishment of antivirals may be difficult because of Hawaii's geographic location.
8. In the absence of sensitivity testing, a neuraminidase inhibitor (oseltamivir) is the drug of choice since current indications are that the virus will be less likely to be resistant to this class of antiviral drugs than to the adamantane derivatives (amantadine and rimantadine).
9. Oseltamivir and rimantadine may be requested through the SNS, if supplies are available.
10. All sources of external aid may be compromised during a pandemic.⁷
11. An influenza pandemic would likely spread to the United States within one to two months after the first emergence elsewhere in the world.⁸
12. The "forward" placement of antiviral assets in various locations throughout the State will expedite delivery of additional antivirals to locations that require them in the event of a non-routine emergency.
13. During Stage 5 (Spread throughout the United States) of the National Pandemic Plan, persons presenting with findings consistent with the clinical and epidemiological case definition as established by CDC will be presumptively managed as being infected with the pandemic influenza virus.
14. It will take up to seven days for SNS antiviral assets to arrive in Hawaii from

⁷ Implementation Plan for the National Strategy for Pandemic Influenza, page 8

⁸ Implementation Plan for the National Strategy for Pandemic Influenza, page 75



CDC.

15. Hawaii will receive its full share of 186,093 regimens of antivirals from SNS when requested.

II. CONCEPT OF OPERATIONS

- A. The intent of this operation is to efficiently deliver antiviral medication to predetermined distribution channels to allow them to treat residents and visitors of the State of Hawaii. HDOH will work with pharmaceutical wholesale distributors and pharmacies to maintain control of all major stocks of antiviral agents that have yet to be distributed to individual pharmacies throughout the state.
- B. Consistent with the request and distribution mechanisms in place as a part of the State SNS Plan,⁹ the distribution of antiviral medication will use commercial shipping/delivery agencies for all necessary locations throughout the State. In the event that commercial agencies are unavailable when an influenza pandemic occurs, SCD assistance will be requested via the HDOH Civil Defense Liaison.
- C. State-controlled antiviral medications will be maintained at a central storage location and shipped as needed to locations around the State. The Distribution Phase of using stockpiled antiviral medication will only occur during an actual emergency that exceeds local response capabilities with on-hand antiviral medication. The decision to distribute antiviral medication from the stockpile will reside with State leadership or their designated representatives.
- D. During Stage 4 (first human case in North America) of the National Pandemic Plan, we will use antiviral medications to treat individuals with confirmed infection, and when appropriate under very limited circumstances, prophylax immediate contacts from local stocks. HDOH will be looking at a diverse group of potential locations for dispensing of treatment dosages to affected individuals.
- E. When Stage 5 (Spread throughout the United States) is declared, antiviral medication will only be used for treatment. During Stage 5, HDOH will distribute antiviral medication to hospital pharmacies and alternative care centers to fill prescriptions written by physicians legally authorized to do so. HDOH will also distribute to hospitals for use in treating admitted individuals and will stage emergency stocks of antivirals on neighbor islands under the control of the DHOs.
- F. Upon a decision to distribute antiviral assets, HDOH will contact SCD to coordinate actions statewide. HDOH will assign individuals to report to the storage site to control packaging and distribution operations. HDOH will alert distribution partners to assist in the distribution efforts. There will not be a need for immediate,

⁹ The State SNS Plan is maintained by the HDOH Bioterrorism Preparedness and Response Branch.



simultaneous distribution to all dispensing locations at this point, so alternate distribution means may be used. Antiviral medication will not be repackaged; the original manufacturers' packaging will be maintained.

- G. When the antiviral medications are distributed to dispensing locations, an authorized individual(s) at the receiving organization will be required to sign for the contents. All antiviral deliveries will be tracked by amount and lot number. A chain of custody for antiviral assets must be documented. Dispensing organizations will be required to keep records of dispensing.
- H. HDOH officials will work to determine the need for extended or long term-dispensing efforts or for follow-up resupply of required medications. Resupply operations will be accomplished through HDOH. Organizations will request additional assets through the on-line HDOH request system. Requests for additional Federal antiviral assets will be coordinated through HDOH and SCD to CDC.

III. ROLES

A. Federal

- 1. Maintains a supply of antivirals in SNS as recommended by national agencies.
- 2. Determines populations at highest risk and develops antiviral use strategies for prophylaxis and treatment of influenza.
- 3. Deploys and distributes SNS assets upon request.

B. HDOH

- 1. Advises and coordinates with SCD or with the State EOC for an effective response.
- 2. Determines prophylaxis and treatment options.
- 3. Utilizes data derived from local surveillance to prioritize and time the use of antivirals during a pandemic.
- 4. Procures and maintains a limited cache of antivirals to be used during the early event until additional resources can be requested and deployed from outside of Hawaii.
- 5. Ensures that proper storage requirements are met for antiviral medications including proper environmental conditions and proper security as coordinated with SCD. This will be monitored by DOCD.

6. Will be responsible to request, receive, store, allocate, and distribute the antivirals within the State.
7. Coordinates with health care and pharmacy communities regarding antiviral usage directives during an influenza pandemic.
8. Educates the public regarding availability, use, and effectiveness of antiviral medications.
9. Provides standing orders for distribution of antivirals in medication clinics (only if supply is sufficient for dispensing vs. treatment priority) and provides guidelines for health care providers for antiviral prescribing/dispensing.
10. Determines appropriate medication protocols specific for adults, children and adolescents, and special populations based on CDC recommendations. Information regarding contraindications and adverse affects will also be developed.
11. Assists the Counties by providing protocols for distribution, adverse event monitoring, and other support as coordinated or requested.

IV. ANTIVIRAL RECOMMENDATIONS

A. Interpandemic period

1. Antivirals will not be distributed or administered for pandemic purposes during this period; the only action during this time is that plans for such will be reviewed and developed further as needed.
2. The actual antiviral supply in the State will be known at the start of a pandemic and will be based on what has been amassed by the State and the supply available in pharmacies, health care facilities, and pharmaceutical distributor facilities.
 - a. State supply of antivirals:
 - i. Maintain a supply of oseltamivir and zanamivir that includes shelf life extension, if possible, to avoid outdating of the antivirals. This limited supply may be used for treatment and for public health intervention during the initial stages of a pandemic until resources can be received or requested and obtained from SNS, if available.
 - ii. Maintain a State stockpile of oseltamivir and zanamivir. At a minimum, the number of treatment courses in stock should be enough to account for a 25% symptomatic attack rate (per guidelines in the Federal Plan) among those persons in the State who are at high risk for complications from

influenza. Using the CDC *Flu-Aid* software, this population in Hawaii is estimated to be 49,783 individuals.

- b. Antiviral supply in pharmacies, health care facilities, and with distributors.
 - i. Identify and inventory pharmaceutical warehouse distributors to determine the estimated quantities and time-line of re-supply of antivirals in Hawaii.
 - ii. Coordinate with the pharmaceutical warehouse distributors on a plan to shut-down further commercial/private distribution of antivirals within 8 hours of official notification regarding a pandemic and person-to-person transmission nationwide.
 - iii. Establish legal authority and protocol such that the Director of Health can hold existing inventory, control the point of distribution once a pandemic has been identified, and invoke the emergency stockpile statute to centrally locate and distribute existing supplies of antivirals not already in the supply chain/not already located at individual pharmacies.
3. Given current limited world supply of oseltamivir and the cost, prioritization for treatment may be required. Such prioritization in Hawaii will be guided by CDC recommendations current as of the time of a pandemic. Any extension of the prioritization or other related issues should be addressed by the Ad Hoc Advisory Group¹⁰, which will forward recommendations to the Director of Health.
4. Conduct training programs on the Hawaii SNS Plan to prepare HDOH staff who will be involved in antiviral distribution protocols and procedures.
5. Review and modify antiviral distribution plans as needed to account for updates, if any, on recommended target groups, projected antiviral supply, and human resources.

B. Pandemic alert period: no human-to-human spread

1. This is also a planning period with no pandemic-specific distribution or administration of antivirals.
2. As stated in III-A-2 of this section, the actual antiviral supply in the State will be known at the start of a pandemic and will be based on what has been amassed by the State and the supply available in pharmacies, health care facilities, and pharmaceutical distributor facilities. HDOH will review current CDC prophylaxis and treatment guidelines for antivirals and based on these guidelines and supply estimates, HDOH will determine options for antiviral use, including treatment of

¹⁰ An updated list of Ad Hoc Advisory Group members is maintained by HDOH DOCD.

ill individuals for whom treatment can be initiated within the first 48 hours of their illness

3. Review and update, if needed, the Hawaii SNS Plan, which will be utilized to request, receive, store, distribute, and manage the antivirals and other SNS material deployed to Hawaii.
4. Review and update, if needed, the total number of antiviral doses and days supply that may be requested from SNS for treatment. This review shall be based upon the following estimates for each County. (Note, it is understood that it is highly unlikely that there will be sufficient doses for every single person in the population; hence, the need for prioritization.).

County	Resident Census 2004	Visitor Census 2003	5% Factor ¹¹	Total	Estimated population that will be used to calculate the total number of doses to be requested.
Oahu	899,593	76,776	48,818	1,025,187	1,025,200
Maui County	138,221	44,510	9,137	191,868	191,900
Kauai County	61,929	17,828	3,988	83,745	83,800
Hawaii County	162,971	21,934	9,245	194,150	194,200
Total State	1,262,714	161,048	71,188	1,494,950	1,495,100

C. Pandemic alert period: person-to-person transmission

1. As stated in III-A-2 of this section, the actual antiviral supply in the State will be known at the start of a pandemic and will be based on what has been amassed by the State and the supply available in pharmacies, health care facilities, and pharmaceutical distributor facilities.
2. Notify the medical community of the status of antiviral availability and disseminate antiviral use guidelines using HDOH broadcast fax and email alerting systems and protocols.
3. Utilize MedWatch (<http://www.fda.gov/medwatch/index.html>), the Federal Drug Administration drug safety information and adverse event reporting program, to assist in the monitoring and tracking of adverse reactions to antivirals.
4. Confer with CDC and SNS to determine if antivirals will be available through the Federal government. Ensure that human resources and logistics are in place to begin antiviral distribution; must consider need for staff surge capacity due to illness and effects of social distancing measures.
5. If antivirals are severely limited in supply, priority for *treatment within the first*

¹¹ This is an arbitrary factor to account for assumed underestimates of census data.

48 hours of illness onset will be given to the groups identified through the process outlined in III.A at the time of a Pandemic Alert Period. HDOH will re-examine and revise the priority as needed.

D. Pandemic period

1. Request antiviral drugs, as needed, from previously identified sources, including SNS.
2. Utilize local oseltamivir (and any other antiviral or adjunct medication indicated by CDC for treatment) supplies to provide an early response prior to the arrival of SNS. Activate State-based plans for targeting antiviral drugs to priority groups for treatment and possibly limited prophylaxis.
3. Control access to antiviral pharmaceuticals throughout the State by working with pharmaceutical wholesalers to shut off the distribution mechanism within 8 hours of notification of a pandemic.
4. Notify pharmacies of this action and coordinate with them to address any public concerns and complaints when antiviral prescriptions are unable to be filled due to the State-coordinated stoppage of distribution of any further antiviral supply from the pharmaceutical wholesalers.
5. Confer with CDC and SNS on the number of antiviral doses Hawaii will receive (if available) and date of receipt.
6. Assist hospitals in implementing procedures for early detection and treatment of influenza in health care workers.
7. Identify and activate, as needed and if possible (given limited supplies), mobile/field treatment centers.
8. Notify SCD of antiviral arrival date and coordinate with SCD to ensure secure transport, storage, delivery, and distribution.
9. Distribute allocated doses to Counties; HDOH will coordinate with health care providers through DHOs for directed treatment.
10. Track all antiviral doses distributed.
11. Provide antiviral treatment according to the priority list approved by the Director of Health in consultation with the State Epidemiologist and the Ad Hoc Advisory Group.
12. Continue to work with health care partners to ensure appropriate use of antiviral



medication in the medical management of early cases and contacts.

13. Monitor the susceptibility of the circulating influenza strain to the available antivirals.
14. Work with federal partners to begin monitoring the safety and effectiveness of drugs and ensure that available antiviral medications are used in accordance with federal and local recommendations.
15. Monitor for adverse reactions to antivirals administered for treatment.
16. Request re-supply of antivirals and supplies, if needed and available, from SNS.
17. Regularly review and confer with CDC on the rapidly changing scientific evidence to provide updated public health information, recommendations, and options for treatment with antivirals.

E. Postpandemic period

1. Deactivate operations associated with the pandemic.
2. Recover assets from the operations.
3. Conduct post-evaluation of the pandemic response with all agencies.
4. Assess the effectiveness of antiviral treatment.
5. Revise Hawaii Pandemic Influenza Preparedness & Response Plan based on the above evaluation.



HAWAII STATE
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SECTION 5. COMMUNITY MITIGATION

I. INTRODUCTION

A. Objective. To outline the plan to limit the transmission of pandemic influenza virus with primary focus on methods of social distancing, and to identify pre-established procedural mechanisms in place for the use of isolation and quarantine if needed to ensure control of disease transmission.

B. Definitions

1. Social distancing measures will be utilized to reduce the risk of disease transmission by limiting the potential for social interactions (e.g., canceling public events, closing schools, limiting public transportation, and restriction of movement of segments of the community) and by preventing inadvertent exposures in public or common daily experiences (e.g., fever monitoring before entering place of congregation such as schools, use of masks, and community-wide voluntary quarantine).
 - a. The effectiveness of these community measures are being evaluated, and initial studies^{12,13,14} of measures implemented during the 1918 influenza pandemic indicate that they may be effective in controlling the spread of a pandemic.
 - b. Social distancing measures may be used to delay the spread of disease and allow more time for the development and production of vaccines and antiviral drugs.
2. Isolation is the separation and restriction of movement of persons who have a specific infectious illness from those who are healthy to stop the spread of that illness.
 - a. Usually put into practice in a hospital setting but may also be implemented at home or in a dedicated isolation facility.
 - b. May be applied at the individual, group, or community level.
3. Quarantine is the separation and restriction of movement of persons who are not ill but have been exposed to an infectious agent or person and therefore may have become infected.

¹² Markel H, Lipman HB, Navarro JA, Sloan A, Michalsen JR, Stern AM, Cetron MS. Nonpharmaceutical interventions implemented by US cities during the 1918-1919 influenza pandemic. *JAMA*. 2007;298:644-654.

¹³ Hatchett RJ, Mecher CE, Lipsitch M. Public health interventions and epidemic intensity during the 1918 influenza pandemic. *PNAS*. 2007;104:7582-7587.

¹⁴ Bootsma MCJ, Ferguson NM. The effect of public health measures on the 1918 influenza pandemic in U.S. cities. *PNAS*. 2007;104:7588-7593.

- a. May be applied at the individual, group, or community level and may be implemented in the home setting or in a dedicated quarantine facility.
- b. Quarantine requires a clear definition of the term *close contact* or what constitutes an exposure to determine when a person is to be quarantined.

C. Assumptions

1. After the initial detection of the pandemic virus, the public will likely be faced with vaccine unavailability for an undetermined, but conceivably, prolonged length of time.
2. Also faced with an extremely limited supply of available antivirals, public health measures of social distancing, isolation, and quarantine may be the best options for slowing the spread of pandemic influenza virus.
3. Nationally, empirical studies and disease modeling efforts have shown that social distancing will be as effective, if not more effective, in limiting the spread of an infectious disease such as a pandemic influenza virus, than the processes of isolation and quarantine alone.
4. In the State of Hawaii, in contrast to public health and health care terminology and usage, pursuant to existing statutory language (i.e., legal issues), any reference to “quarantine” automatically includes “isolation” within the scope.
5. Controlling exposure to influenza may be difficult due to:
 - a. Today’s highly mobile society
 - b. The likely short incubation period of 1-3 days for the virus
 - c. The period of communicability (i.e., ability to transmit infection) beginning prior to onset of symptoms
6. While Federal law has authority to prevent interstate and international travel and importation, government at the State level in Hawaii has the primary responsibility for the implementation of social distancing and mandatory isolation and quarantine measures within its jurisdiction.
7. If a large proportion of the population becomes ill during an influenza pandemic, and a likely shortage of personnel to monitor and enforce mandatory containment measures occurs, CDC may recommend voluntary home quarantine when possible, with exposed persons checking themselves for fever and reporting early symptoms to public health authorities.

8. Personal hygiene measures such as handwashing and recommendations for personal protective equipment (PPE) such as masks will likely also be included in recommendations to the community to help limit transmission.
9. Most people will likely follow self-quarantine and home quarantine recommendations provided by HDOH and CDC, especially when they understand that those in quarantine will be more accessible to receive supplies and necessary health care.
10. If, however, individuals are unwilling to isolate or quarantine themselves voluntarily when requested, Hawaii Revised Statute (HRS) 325-9 makes it clear that State law enforcement entities have the authority and duty to enforce isolation and quarantine orders. They have the authority to use such force as is “reasonably necessary.”
11. Public health and law enforcement responders involved in enforcement of quarantine orders will be provided appropriate PPE and related training by their respective agencies as recommended by CDC.
12. By law, all isolation and quarantine orders must include the length of time for the isolation and quarantine periods.
13. The Director of Health is responsible for determining and justifying the isolation and quarantine time periods.

II. SOCIAL DISTANCING MEASURES

A. Background

1. Based on recent studies,¹⁵ while children and teenagers represent only 29% of the population, they are responsible for the majority of infectious contacts because they are present in most “infectious contact networks” (i.e., schools, neighborhoods, and households). In addition, most of their infectious contacts are within their same age classes.
2. Children who go to preschool or school are also more likely to contract influenza and transfer it to their family/household members.¹⁶
3. When considering adults, there is a need to define what constitutes a public gathering and what situations would create opportunities for “close contact.”

¹⁵ Glass RJ, Glass LM, Beyeler WE, Min HJ. Targeted social distancing design for pandemic influenza. *Emerg Infect Dis.* 2006 Nov. Available from <http://www.cdc.gov/ncidod/EID/vol12no11/06-0255.htm>

¹⁶ Germann TC, Kadau K, Longini IM, Macken CA. Mitigation strategies for pandemic influenza in the United States. *Proc Natl Acad Sci U S A.* 2006; 103:5935-40.

4. Implementation of aspects of social distancing should take into consideration these determinations and be consistent with the severity and phase of the pandemic.
 5. There are a myriad of situations and settings that could constitute a public gathering, including:
 - a. Childcare situations
 - b. Schools and other educational settings
 - c. Workplaces
 - d. The public transit system
 - e. Places of worship
 - f. Community events
 - g. Homeless shelters
 - h. Other enclosed areas where people potentially congregate
 6. Depending on the severity and the pandemic phase, general public health containment strategies could range from recommendations to the public to remain at home or avoid crowds to mandatory closure of schools and public buildings and cancellation of public activities and events.
- B. Initial strategies.** To appropriately advise the public as to the impact of an influenza pandemic and to prepare them for the possibility of large-scale social distancing activities, the following should take place:
1. Basic education of all individuals regarding recognition of potential signs and symptoms of influenza, measures for management of illness, and steps for notification of appropriate public health and health care authorities. (Refer to Appendix G.)
 2. Education of government, private sector, response partners/stakeholders, and the media regarding the nature of influenza pandemics, how it spreads, the impact it has on individual health and daily life, and what can be done to contain it.
 3. Coordination with these same groups as to specific processes for communicating the need for social distancing and support of development of their own Continuity of Operations plans to address the impact large-scale social distancing measures will have on their operations.
 4. Confirm the threshold and criteria for various levels of social distancing recommendations with key public health and government officials.
- C. Specific strategies.** Consistent with the stages in the National Implementation

Plan¹⁷, the Director of Health in consultation with the State Epidemiologist, other advisors in the HDOH DOC, and other key emergency response partners in the State EOC, will specify the time period within which the following strategies will take place:

1. Communicate public education messages that address:
 - a. Postponement of non-essential travel.
 - b. Avoidance of crowds and other public gatherings.
 - c. Reinforcement and/or local adaptation of federal travel advisories.
2. Cancellation/postponement of public events/large public gatherings as defined by the HDOH DOC in consultation with advisors (through the State EOC).¹⁸
3. Potential limitation or modification of Federal, State, County, and private work environments and hours (e.g., recommendations to utilize internet commuting).
4. Closure of schools¹⁹/childcare centers, non-essential government offices, and other functions within the community that could act as a barrier to an effective response (through the State EOC).
5. Issuance of public and private transportation recommendations and guidelines
 - a. Restriction of mass transit schedules (through the State EOC)
 - b. Closure of major access roads/routes (through the State EOC)
 - c. Restriction of use of private vehicles (through the State EOC)

III. ISOLATION - CONCEPT OF OPERATIONS

If social distancing efforts are successful, the need for isolation becomes less critical. The reason for isolation is clear: there is a need to keep separate an ill and contagious person from the well population. Isolation facilities may include homes, hospitals, and/or alternative facilities in the community such as nursing homes, public auditoriums, hotels, or tents.

¹⁷ National Strategy for Pandemic Influenza, p. 8 – www.whitehouse.gov/homeland/nspi_implementation.pdf

¹⁸ This and the following strategies are likely to be highly controversial at the time as studies have indicated that to be effective, a number of strategies will need to be employed early when morbidity and mortality ratios are still low (i.e., societal awareness and concern may be low).

¹⁹ The Department of Education will implement its pandemic influenza response plan when it is decided to close schools.

A. Levels of isolation

1. The first patients presenting in Hawaii with the novel influenza virus most likely will be isolated in isolation rooms in a hospital setting.
2. When hospital isolation beds have reached capacity and pandemic influenza cases continue to increase, the next level of isolation may be in alternative care modules established near hospitals and staffed by hospital and/or other medical surge personnel to provide surge capacity.
3. The third level of isolation will take place in cohort facilities²⁰ that will provide living quarters for a number of people all ill with the same disease, in this case, the novel influenza virus.
4. The increasing levels of isolation will provide for the increasing numbers of ill patients. However, the added complexity may compromise effectiveness of isolation and quality of medical attention.
5. When the number of influenza cases increases to the point where cohort facilities are needed, HDOH will remind the public that they may receive more attentive care, be less likely to be exposed to other infections, and be less likely to infect others if they remain at home after becoming ill and notify public health authorities from home.

B. Isolation facility requirements

1. Isolation rooms should conform to guidelines from the CDC and its Healthcare Infection Control Practices Advisory Committee.
2. Although airborne precautions are not currently recommended for influenza-infected persons, it is possible that characteristics of a novel virus may require some level of airborne precautions due to potential localized aerosolization of respiratory droplets (e.g., as during a medical procedure such as intubation for mechanical ventilation). Therefore, facilities with negative pressure capacity are desirable.
3. When persons requiring isolation cannot be accommodated either at home or in a health care facility, a community-based facility for isolation will be required.
 - a. The availability of a community-based facility will be particularly important during a large outbreak.
 - b. Potential sites for isolation should be identified and evaluated in advance of an

²⁰ Location and logistics of these cohort facilities are not yet fully in place (as of January 2007).

- outbreak as part of preparedness planning.
- c. An assessment team will identify appropriate locations and resources for community isolation facilities, establish procedures for activating them, and coordinate activities related to patient management.
 - d. The team should consider the use of both existing and temporary structures.
 - i. Options for existing structures include community health centers, gymnasiums, auditoriums, nursing homes, apartments, schools, dormitories, and hotels.
 - ii. Options for temporary structures include trailers, barracks, tents, and “bubble systems.”
 - e. Features to consider in site and facility selection include:
 - i. Size of facility and rooms
 - ii. Ability to provide strict standard contact and droplet isolation precautions
 - iii. Ventilation system separate from all other buildings (therefore, capacity for airborne precautions if necessary)
 - iv. Restroom facilities
 - v. Onsite showers for patients
 - vi. Provision of infection control facilities for hospital staff, such as gowning/de-gowning areas, changing rooms, shower facilities, and widely available hand-washing basins or waterless hand sanitizers
 - vii. Controlled access
 - viii. Food service
 - ix. Laundry service
 - x. Telephone to allow patients contact with family and friends
 - xi. Waste disposal procedures
 - xii. Procedures to monitor staff’s health
4. When ill persons are asked to isolate themselves at home, these additional recommendations will be made to both the ill and their family members:
- a. Persons should remain at home during their illness (usually 7-10 days after their symptom onset).
 - b. Restrict visitors to the home.
 - c. Ill persons should cover their nose and mouth when coughing or sneezing, dispose of any used tissues immediately after use, and should wash their hands after using tissues. Use of surgical type mask for the ill person to limit spread of respiratory droplets may be useful (recycling/reuse of a used

surgical mask is not recommended).

- d. Family members should immediately wash their hands after any contact with the ill person, linens from the ill person, or any tissues or handkerchiefs.
- e. Persons entering the homes of suspected influenza infected persons should restrain from coming within six feet of the ill person and should wash their hands after any contact with the patient and before leaving the home.

C. Authority

1. Pursuant to the provisions of HRS 325-8, the Director of Health and HDOH have authority, separate from the Governor's authority identified in HRS 128-8, to require isolation of an individual in this situation.
2. The Director of Health will have primary authority for implementation of the Hawaii Pandemic Influenza Preparedness & Response Plan, including recommendations and request for social distancing, isolation, and quarantine, with guidance from the State Epidemiologist.
3. From the beginning, HDOH will advise and inform the Governor and SCD as to the progression (or non-progression) of the pandemic threat. As the pandemic threat escalates and in the event that it becomes a civil defense emergency requiring resources outside of the control of the Director of Health, the Governor and SCD will be asked to actively support the response.
4. In a civil defense emergency period, HRS 128-8 applies and provides for the suspension of any law that "tends to impede or be detrimental to the expeditious and efficient execution of, or to conflict with, civil defense or other emergency functions..."

D. Notification and communication

1. Notification and communication of isolation (and quarantine) requirements will follow the same protocols between HDOH and other State agencies.
2. HDOH will reach clinicians through HDOH broadcast fax and email system used for health notifications.
3. Multiple media sources, such as television, radio, newspapers, and the HDOH website will be used to send announcements to the public.

E. Enforcement. Enforcement mechanisms would be the same as those identified in section IV.E. below.

F. Additional planning considerations. HDOH and other State and Federal partners must address and plan for possible human cases of influenza on board international transport (airplanes and boats).

IV. QUARANTINE - CONCEPT OF OPERATIONS

If ill or symptomatic individuals, or contacts of those individuals, refuse to comply with recommended voluntary social distancing, isolation, and quarantine measures, the government will have to resort to mandatory quarantine orders. Mandatory quarantine is a very complex measure as it raises a number of serious issues concerning public health, public health law, and public policy. It can be resource and labor intensive, taxing the reserves of virtually every area within the State such as health care, public health, social service, and law enforcement.

A. Types of quarantine

1. The primary strategy will be social distancing and voluntary home quarantine. However, alternative quarantine sites may be needed if contacts do not have an available and appropriate home environment.
2. Work quarantine may also be considered as was used in Toronto during the SARS epidemic of 2003.
 - a. Applies mainly to health care workers or other essential personnel who have been exposed to cases, but whose services are critical and are therefore needed to continue working.
 - b. Quarantined either at home or in a designated facility during off-duty hours.
3. If needed, the HDOH DOC Manager, will identify alternative quarantine sites based on a number of considerations (many of which are similar to isolation considerations) including:
 - a. Scope of pandemic
 - b. Size of facility/room/site
 - c. Controlled access
 - d. Restroom facilities
 - e. On-site showers
 - f. Food service
 - g. Laundry service
 - h. Telephone to allow individuals contact with family and friends
 - i. Waste disposal procedures
 - j. Procedures to monitor staff's health

B. Authority. The authority is the same as that provided for Isolation needs and is

described in section III.C.

C. HDOH due process plan

1. A significant concern during any situation where mandatory quarantine is required and necessary to stop the spread of an infectious disease is the protection of individual rights.
2. HRS 325-8 lays out in detail the steps that will be taken should a need arise to quarantine an individual or group of individuals who do not want to be quarantined voluntarily but need to be.
3. All actions will be coordinated with the Counties via the DHOs and County EOCs.
4. The HDOH legal counsel at the Department of the AG will be responsible for all matters related to these court proceedings. They have drafted a template for an “Ex Parte Petition for Order of Quarantine” to have available should the need arise.

D. Support services

1. During quarantine, movement will be restricted to the area of quarantine.
2. Physical as well as mental health is a concern.
3. In anticipation of the need for basic necessities and mental health support, a Memorandum of Agreement between HDOH and the American Red Cross-Hawaii Chapter has been established. Coordination will also need to occur with and through SCD.
4. HDOH will discuss and collaborate with various nonmedical officials to encourage their planning for the implementation of measures to facilitate adherence to quarantine (e.g., tele/internet commuting for work and/or school). Such has been shown to be integral to ensuring effective quarantine measures.²¹

E. Enforcement

1. As part of the quarantine instructions provided to an affected individual, an HDOH representative may make at least two randomly timed phone calls to the quarantined person each day.

²¹ DiGiovanni C, Bowen N, Ginsberg M, Giles G. Quarantine Stressing Voluntary Compliance. *Emerg Infect Dis.* 2005;11(11):1778-1779.



2. When phone calls fail to reach the quarantined individual, an HDOH response member or member of the Medical Reserve Corps, trained in the use of appropriate PPE and related equipment, will be sent to make an in-person visit to the quarantined individual for the purpose of ensuring compliance or confirming non-compliance.
3. If an in-person visit confirms non-compliance by the absence of the individual, pursuant to HRS 325-9, law enforcement has the authority to locate and confine individuals in violation of the quarantine order, using reasonable force.



HAWAII STATE
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Section 6. HEALTH CARE DELIVERY

I. INTRODUCTION

A. **Objective.** To outline the actions that will be undertaken by Hawaii hospitals and other major clinical facilities when faced with an influenza pandemic and the resulting overwhelming demand for services. The specific goals of the health care delivery system during an influenza pandemic include:

1. Early detection of new and existing cases will be enhanced by rapidly transitioning from passive to active surveillance.
2. Hospitals will take prompt and well-coordinated initial actions designed to reduce the potential for institutional disease transmission and focused on protecting the health care workforce.
3. Clinical care and services to existing (non-influenza) and influenza patients will be prioritized and provided within the context of available resources.
4. Active management of critical resources will be initiated including staffing, equipment, supplies & pharmaceuticals, and clinical venues.
5. Operational and doctrinal alignment will be established and maintained between public and private hospitals with HDOH in the lead role.
6. Public information and other communications shall be coordinated by HDOH with input from community practitioners and hospitals.

B. Background

1. Organization. Hawaii hospitals maintain a collaborative relationship via HAH with HDOH on matters of public health emergency preparedness. The full detail of health care emergency preparedness and response is articulated in the *Hospital Services Coordinating Plan*, also known as Annex 'H' of the HDOH Emergency Preparedness Plan and a component (known as 'Volume I') of the Emergency Management Plans of all hospitals.
2. Perspective. From the perspective of public health emergency preparedness, Hawaii and its unique, remote geography suggests a large, highly vulnerable population that is physically remote from traditional sources of mutual assistance.
 - a. There are no nearby large cities or Border States that are capable of providing timely emergency assistance.
 - b. Given the State is comprised entirely of individual Island-Counties separated by open ocean, even mutual assistance among neighboring Counties requires innovative strategies, detailed planning, and a high degree of self-sufficiency.

3. Routine health care operations. Hawaii hospitals operate year round with average daily census (ADC) often exceeding 90%.
 - a. The majority of acute care hospitals with specialty services are located on the island of Oahu resulting in a significant dependence on aero medical transportation for even routine, non-emergent specialty care.
 - b. The Queens Medical Center is the only Level II²² trauma center in the State (as defined by the American College of Surgeons).

4. Threat and Impact. Of the many high-risk, high-vulnerability hazards identified by the 2005 Hazard Vulnerability Analysis, none appears to present a greater risk to the population and to Hawaii hospital services than an influenza pandemic.
 - a. Using the CDC *Flu-Surge* hospital bed capacity planning tool, HDOH and HAH were able to model the consequences to hospitals of an influenza outbreak at the local (County area) and State levels.
 - b. Using parameters²³ recommended by CDC influenza planners²⁴, *Flu-Surge* demonstrated that Hawaii hospitals would experience severe adverse consequences during the course of an 8-week outbreak:

State of Hawaii Flu-Surge findings, July 2005

Influenza Pandemic Impact / Weeks		1	2	3	4	5	6	7	8	9	10
Hospital Admission	Weekly admission	286	476	714	905	905	714	476	286		
	Peak admission/day				141	141					
Hospital Capacity	# of flu patients in hospital	286	476	714	905	951	875	677	447		
	% of hospital capacity used	11%	18%	26%	33%	35%	32%	25%	16%		
ICU Capacity	# of flu patients in ICU	43	91	140	184	200	194	154	106		
	% of ICU capacity used	18%	39%	59%	78%	85%	82%	65%	45%		
Ventilator Capacity	# of flu patients on ventilators	21	45	70	92	100	97	77	53		
	% usage of ventilator	9%	18%	28%	37%	41%	39%	31%	22%		
Deaths	# of deaths from flu			56	93	140	177	177	140	93	56
	# of flu deaths in hospital			39	65	98	124	124	98	65	39

²² There are multiple trauma center designation levels. Level I: regional resource trauma center that is a tertiary care facility central to the trauma care system; all patients who require the resources of such a center should have access to it; must have capability of providing leadership and total care, from prevention through rehabilitation; must have adequate depth of resources and personnel; most are university-based teaching hospitals. *Level II: also expected to provide initial definitive care, regardless of injury severity; may not be able to provide same comprehensive care as Level I; however, may be most prevalent facility in a community and where a Level I center does not exist, takes responsibility for education and system leadership.* Level III: serves communities with no immediate access to Level I or II centers; can provide prompt assessment, resuscitation, emergency operations, and stabilization and also arrange possible transfer to a facility that can provide definitive trauma care. Level IV: provides advanced trauma life support before patient transfer in remote areas where no higher level care is available; may be a clinic rather than a hospital and may or may not have a physician.

²³ 25% attack rate over an 8-week period. Hospital input values (beds, ventilators) were updated in May 2005 and reflect a maximum ± 5% margin of error

²⁴ CDC Pandemic Influenza Planning Conference, Denver, Colorado, February, 2005

- i. Nearly 1,000 in-hospital deaths
 - ii. Nearly 5,000 additional hospital admissions
 - iii. 85% of all intensive care unit (ICU) beds and half of all mechanical ventilators would be dedicated to care of influenza patients. Counties of Maui (132%) and Kauai (158%) would experience much higher rates
- c. While the timing and true extent of a potential pandemic event are unclear, the resulting data are compelling. The findings of the Flu-Surge tool and related planning factors are carefully considered when preparing the *Hospital Services Coordinating Plan*, and the *Hawaii Bioterrorism Hospital Development Plan*²⁵.

C. Assumptions.

1. During an influenza pandemic, there will be an increased demand for hospital-based clinical services due to the large number of patients who will present with severe illness.
 - a. Patient demand will slowly emerge and progressively saturate clinical venues and resources (beds).
 - b. Given that the design of hospital facilities and services is based on typical non-emergency patterns of utilization, extraordinary demand could easily result in an inability to meet expected levels of access and care.
2. Up to 25% of health care workers will be lost due to illness and other factors.
3. Adjustments in the standard of care will be necessary to optimize the balance between available resources and patient demand.
4. As hospital ICUs saturate with high-acuity, ventilator-dependent patients, non-ICU spaces in hospitals will need to increase to meet patient load.
5. The early actions of hospitals to cope with increasing demand will likely become ineffective entering the second week of the outbreak.
6. Antiviral medication will not be available in sufficient amounts to mitigate the demand for hospital care and services.
7. Neighbor island hospital facilities will experience a greater gap between patient demand and available resources.

²⁵ Prepared annually in response to HRSA National Bioterrorism Hospital Preparedness Program guidance.

8. Mortality from the novel pandemic influenza virus is likely to be high. Therefore, the mortality rate may exceed the routine capacity to appropriately inter bodies.
9. Augmentation from the mainland United States will be either significantly reduced or unavailable as the pandemic reaches into large urban mainland cities.

II. PREPARATION AND RESPONSE

A. Basic organization. The response of hospitals and other major clinical facilities is phased and functions within the context and organization of HDOH.

1. Operationally, hospitals are coordinated by a qualified representative of HAH under the authority of HDOH within the structure of the HDOH Department Operations Section (Hospital Coordination).
2. This coordination is an on-going, continuous process escalated from a virtual to a physical entity when directed by the Director of Health.

B. Interpandemic period. The interpandemic period (phases 1 and 2) represents the ‘resting’ state of emergency operations. Hospitals and other health care agencies will focus on aggressive public health emergency preparedness planning, preparation, and training. Current, ongoing activities include:

1. Integration of the influenza pandemic threat into existing and new emergency management plans in hospitals and other major clinical facilities.
2. Enhancement of the surveillance activities of hospitals, Emergency Medical Services, major outpatient clinical facilities, and community health centers.
3. Regular education of hospital leaders and clinical staff on matters of public health emergency preparedness with a focus on acts of terrorism and pandemic influenza emergency response operations.
4. Aligning the development efforts articulated in the *Hawaii Bioterrorism Hospital Development Plan*. Specifically, this includes the acquisition of emergency supplies such as disposable PPE, equipment such as ventilators, and facility upgrades such as increasing the quality and quantity of negative airflow, HEPA-filtered isolation rooms.
5. Deliberate and concerted efforts to increase the rate of annual health care worker influenza vaccination.
6. Development of a volunteer health professional recruitment, screening and credentialing, and assignment program that includes Hospital Emergency

Response Team members, the Hawaii DMAT, and the Medical Reserve Corps²⁶.

7. Professional education and training of Hospital Emergency Response Team members.

C. Pandemic alert period. Once a *Pandemic Alert* is issued by CDC through HDOH, hospitals and other major clinical facilities will immediately initiate emergency operations at Level I; such operations will ensure maintenance of their physical (critical) infrastructure.

1. During Level I operations, hospitals are brought to a specified level of readiness in anticipation of casualty care operations.
2. Activities initiated and sustained include:
 - a. Maintaining all of the activities outlined for the interpandemic period (see II.B).
 - b. Providing frequent briefings to hospital leaders, clinical staff, and response teams regarding situation and operational options.
 - c. Providing just-in-time education to clinical staff and distributing literature describing clinical manifestations, diagnosis, and management of the pandemic influenza.
 - d. Transitioning from passive to active surveillance.
 - e. Posting of HDOH-provided case definitions in all patient intake areas.
 - f. Reviewing plans and procedures.
 - g. Updating notification and recall lists of volunteer health professionals.
 - h. Providing information to health care workers regarding family emergency preparedness.
 - i. Initiating focused screening and triage of all patients seeking care at hospital Emergency Departments, urgent care centers, outpatient primary care offices, and community health centers.
 - j. Managing all suspect cases in accordance with hospital procedures for infectious (respiratory) disease patients including the use of isolation, PPE,

²⁶ Health Resources and Services Administration's Emergency Systems for Advance Registration of Volunteer Health Professionals (ESAR-VHP) program.

and respiratory hygiene.

- k. Providing influenza vaccination to all high-risk health care workers and others integral to the pandemic influenza response plan, as is available. (Antiviral prophylaxis, as stated previously in this Plan, is unlikely to be possible, but in the event that a limited amount is available for such, it will be administered on a case-by-case basis through HDOH.)
- l. Cooperating with State and Federal officials regarding necessary actions to contain and prevent the transmission of pandemic influenza in institutional and community settings.
- m. Conducting a physical inventory of all HAH-managed equipment and supply caches.

D. Pandemic period. Hospitals and other major clinical facilities will escalate their operations to Level II – full contingency operations. The following activities will be initiated and maintained:

- 1. Maintaining all appropriate activities outlined in the interpandemic and pandemic alert periods (II.B and II.C, respectively).
- 2. Activating the HAH EOC on a 24/7/365 basis and providing a qualified, decision-making representative to the HDOH DOC.
- 3. Requesting the activation of all Hospital EOCs (HEOCs) statewide.
- 4. Coordinating facility access policies and procedures with County law enforcement agencies to enhance facility (critical) infrastructure protection.
- 5. Recommending that all acute care hospitals establish and maintain a ‘managed corridor’ to their facilities with fully-staffed patient, staff, and visitor screening procedures.
- 6. Mobilizing one or more 20-bed acute care modules or ACMs as staffing permits to augment neighbor island inpatient services and provide cohort isolation.
- 7. Mobilizing the Hawaii DMAT either as a State team or request Federal authorization to mobilize as a Federal National Disaster Medical System team. The team would be pre-positioned in the Honolulu area and deployed where needed.
- 8. Recommending all hospitals and long-term care facilities restrict non-essential access to their facilities.

9. Initiating a once-daily conference call with all HEOCs and maintaining real-time communication using WebEOC.
 10. Distributing elements of the HAH-managed hospital caches as needed.
 11. Adjusting hospital standard of care in accordance with current and future patient demand.
 12. Implementing family and caregiver just-in-time education as needed.
 13. Augmenting telephone advice processes of hospitals and outpatient facilities to maximum degree.
 14. Coordinating the medical support of home-isolated individuals by providing essential pharmaceuticals and access to their family physician.
 15. Coordinating all public information through the HDOH DOC PIO.
 16. Facilitating the disposition of the dying and dead by:
 - a. Anticipating the need for additional palliative antemortem care and morgue space.
 - b. Facilitating the rapid interment of dead bodies after appropriate samples are collected and/or autopsies performed. Refer to the State Plan for Emergency Preparedness, Disaster Response, and Assistance for details. HRS 338-23 requires a written permit for the removal, burial, or other disposition of dead bodies. Should the mortality rate exceed the routine capacity to inter bodies, this law may be suspended should the Governor decide to, under HRS 128-8D, suspend all laws due to the emergency.
 17. Coordinating access to the assets of the SNS and national laboratories with the HDOH DOC.
 18. Preparing and publishing a Hospital Situation Report or SITREP; providing copies to Chief of Operations and all hospital facilities by 2400 hours each day. This report may be prepared and published on WebEOC.
 19. Taking other actions as requested or directed by the Director of Health.
- E. Postpandemic period.** This period defines the return to the interpandemic period. It is characterized by the activities necessary to restore normal clinical operations and prepare for future events. The following activities will be initiated and maintained during this period:



1. Demobilizing HAH EOC, Hospital EOCs, and all response teams.
2. Providing opportunities for staff and physician rest and personal restoration including indicated post-traumatic stress management.
3. Decontaminating essential facilities and disposing of infectious waste.
4. Progressively re-establishing non-essential medical and surgical services beginning with primary care and outpatient pharmacy services.
5. Completing an accounting of all extraordinary costs and time.
6. Honoring and recognizing all appropriate staff and physicians for their courage and sacrifice – formally and officially.
7. Maintaining a ‘fire watch’ surveillance program to watch for reemergence of pandemic activity.
8. Repairing and restoring all damaged, modified, or abandoned facilities to pre-operational state.
9. Conducting after-action reviews of key facilities, staff, and other groups.
10. Preparing and publishing a comprehensive operations management report.



HAWAII STATE
DEPARTMENT
OF HEALTH

Section 7. COMMUNICATIONS

I. INTRODUCTION

A. **Purpose.**²⁷ This communications and outreach plan aims to define:

1. Background for Communications activities
2. Communications goals
3. Key messages
4. Communications and outreach activities in each of the pandemic phases

B. Background

During any public health emergency or natural disaster, timely and continuous communication among key agencies and partners is critical to ensure a rapid and appropriate response. Communication between HDOH and the general public is just as critical to encourage community cooperation and prevent misunderstandings that could impede an effective public health response.

Those who have accurate information can make informed decisions and choices that may be life preserving or even life saving. Changes in community behavior are required to control disease. In the case of Hawaii's pandemic preparedness plan, the goal is to create a "culture of preparedness."

C. Assumptions

1. In an emergency situation, accurate, consistent, and timely messages are key in notifying and educating the public.
2. Assuring adequate communication systems will be a joint responsibility of Federal, State, and County agencies.
3. The public will likely encounter some unreliable and possibly false information in the media and on the Internet. The HDOH will communicate accurate and reliable information regarding the influenza pandemic.
4. Mechanisms for communication with the public will vary depending on the phase of the pandemic and its impact on Hawaii communities statewide.
5. The HDOH will strive to communicate with all essential partners. Keeping all essential partners completely informed throughout the pandemic may be difficult.

²⁷ See Appendix F for user-friendly 9-step brochure developed by HDOH.

D. Goals

1. Develop and maintain a reliable system for communicating timely and accurate information among all stakeholders as part of the prevention and/or containment response to an influenza pandemic.
2. Conduct outreach to media outlets to ensure media-government partnership in serving the public during a public health emergency.
3. Notification and/or awareness of planning and preparation steps/techniques should reach 100% of the State's residents, visitors, and other population.
4. Increase local expertise on pandemic influenza threat and related public health issues and make expertise publicly accessible.
5. Integrate awareness of pandemic influenza and prevention behavior into school settings at all levels K-12.

E. Duties and responsibilities

1. Maintain a system to effectively communicate with public health officials, health care professionals, and other target audiences to ensure consistent information and messages to the public.
2. Develop and regularly distribute informational updates to the media and all appropriate partners.
3. Advise the Director of Health on public information matters.
4. Develop a list of appropriate media spokespersons from areas of expertise and maintain current contact information.
5. Monitor and analyze media coverage and correct any inaccurate information reported to the public.
6. Coordinate with SCD and County Civil Defense (CCD) agencies to provide accurate and timely information to the media via the State EOC/Joint Information Center (JIC) when activated.
7. Regularly update and maintain the HDOH website with current and useful information.
8. Be prepared to coordinate and maintain an emergency public hotline for public health information and referral.



9. Utilize the Health Alert Network to notify health partners of new developments and share treatment protocols and other relevant information.
10. Translate written information for non-English speaking populations as needed.
11. Provide assistance and support to the Counties in statewide public information planning and in development and dissemination of health and public safety information.

F. Coordination with DHOs. As the situation gradually escalates to a full-scale pandemic, reliable, coordinated communications between HDOH main operations and DHOs will be critical. To facilitate this, DHO activities will include:

1. Developing a communication plan in conjunction with CCD, response agencies, and hospitals in their area.
2. Coordinating media messages with the HDOH Communications Office.
3. Developing a list of local media contact names and numbers and methodology to quickly send them information.
4. Developing internal protocols on how to gather and distribute information from HDOH main operations to appropriate DHO staff and County agencies.
5. Establishing a local public health information hotline and developing a plan to staff a call center.
6. Conducting daily briefings with local spokespersons and clinic/health care leaders to determine new information to be relayed to the public. This information should also be relayed to HDOH for State communications.
7. Developing a system to post current information on the HDOH website.
8. Developing plans for communicating with special populations in the local area.
9. Designating spokespeople for local media.
10. Monitoring and evaluating local media for accuracy and effectiveness.

II. CONCEPT OF OPERATIONS

A. The HDOH Communications Office

1. Responsible for informing the public via the media throughout the pandemic.

2. Will inform and update all public information partners through a web-based notification/Joint Information System (JIS).
3. During the initial stages of a pandemic, will brief the Governor's Communications staff.
4. Once the EOC is activated, will work with SCD to implement a JIC.

B. Template press releases and Q&As

1. The HDOH Communications Office will work with DOCD to prepare talking points for the Director of Health and Governor as needed.
2. Template releases will be prepared to provide information and disseminate it quickly.
3. Timely releases will be sent to the media and all JIS partners for distribution.

C. Key Messages

1. **Influenza (flu) is a threat to the health and safety of Hawaii residents.** Pandemic influenza could infect 25-35% of the population and kill hundreds of thousands nationwide. It is a much more serious threat than seasonal influenza, because people have little or no immunity to a virus that can cause a pandemic.
2. **Pandemic preparedness begins with good health and good habits for disease prevention.** Every single person should take steps to prepare for a potential pandemic or public health emergency. Good hygiene practices including proper cough etiquette and vigorous hand-washing should be second nature. Maintaining one's general health and well-being can also reduce susceptibility to viruses, helping both the individual and our community.
3. **Spread your aloha, not your germs.** Stay home from work or school when sick and avoid close contact with others who are sick.
4. **Get that flu vaccine.** Public health authorities urge Hawaii residents to receive an annual vaccine for regular seasonal influenza.
5. **Every family should develop and establish an emergency plan for their family.**
6. **Get connected and stay informed.**
7. **The Hawaii State Department of Health is working to keep Hawaii pandemic free.**

8. Messages specific to birds and handling of birds must be coordinated with the Hawaii State Department of Agriculture and other related partners.²⁸
9. Messages specific to tourism must be coordinated with input from the Hawaii Tourism Authority, the Governor, and other related stakeholders.

III. ACTIVITIES DURING PANDEMIC PERIODS

A. Interpandemic period

1. Communications staff will notify partner agencies through public PIOs or other designated contacts using JIS or the Response Manager web-based notification system.
2. Press materials on current surveillance activity will be developed and disseminated.
3. Communications staff will work with DOCD to develop and maintain messages pertaining to pandemic influenza.
4. Pandemic informational materials/templates will be developed and provided to DHOs.
5. Health educators will be provided with community outreach materials and presentations for community meetings.
6. The HDOH Communications offices has maintained and will update and confirm a list of spokespersons.
7. Website information will be updated and accessible.
 - a. HDOH pandemic influenza website: <http://hawaii.gov/health/elder-care/health-assurance/health/health/health/health/family-child-health/contagious-disease/communications/pandemicflu.html>
 - b. HDOH brochures for emergency preparedness available at: <http://hawaii.gov/health/about/pr/brochures.html>
8. Media interview(s) conducted as needed.
9. Media and JIS contact information will be updated.

²⁸Specific messages pending discussion with appropriate partners/stakeholders.

10. Hotline staff will be trained and provided with informational materials.

B. Pandemic alert period: early phase - isolated cases to small, localized cluster

1. Communications staff will be updated regularly on developments by the DOCD Chief or designate. (Note, if the HDOH DOC has been activated, this role will be fulfilled by the designate of the Director, although most likely the Operations Chief.)
2. Communications staff will identify appropriate public information contacts to be notified of influenza pandemic activities through JIS, to include: State agencies through PIOs or other designated contacts, health care agencies, DHOs, Federal, State, and County officials.
3. The HDOH Communications staff will contact the Governor's communications staff and coordinate press conferences and media briefings.
4. Communications staff will consult with the State Epidemiologist (or HDOH DOC equivalent), to identify and maintain a list of specific target audiences for messages that pertain to pandemic influenza.
5. Communications staff will consult with the State Epidemiologist (or HDOH DOC equivalent) to develop and maintain messages appropriate to specific audiences. Separate packages of issues/messages may be developed around areas including:
 - a. Vaccine development and supply
 - b. Isolation and quarantine recommendations
 - c. Antiviral use
 - d. Social distancing measures
 - e. Prevention and infection control methods
 - f. Contact investigations
6. Communications staff will consult with the State Epidemiologist (or HDOH DOC equivalent), to develop a disease fact sheet and other informational materials specific to an influenza pandemic.
7. Communications and HDOH PHEP (or HDOH DOC equivalent) staff will maintain a system to effectively communicate with public health officials, health care professionals, and other targeted audiences that will include securing venues for holding:
 - a. News conferences
 - b. Media briefings

- c. Teleconferencing
 - d. Other related activities as needed
8. Information (such as brief situation updates, advisories regarding infection control and preventive measures, general informative communications regarding disease, basic information regarding care and comfort needs, any relevant instructions to the community, etc.) will be distributed by:
- a. Emergency Medical Services Communications System
 - b. SCD warning system
 - c. Hawaii Warning System
 - d. Law enforcement telecommunications systems
 - e. Nextel cellular phones
 - f. Global Secure Systems/Response Manager
 - g. HDOH media fax and e-mail lists
 - h. HDOH resource contact inventory lists for special needs groups
 - i. HDOH Physicians Alert System
 - j. Aloha United Way 2-1-1
 - k. American Red Cross
- C. Pandemic alert period (late phase - large, localized cluster) to Pandemic period**
- 1. The HDOH Communications Office will issue JIS updates via phone, web, e-mail, and fax, weekly and/or daily as needed. Media updates will take place regularly.
 - 2. The State Epidemiologist will issue alerts to physicians as needed.
 - 3. The HDOH emergency website pages will be activated and updated daily or as needed.
 - 4. Hotline resources will be activated and identified staff assigned to internal public phone bank.
 - 5. When the State EOC is activated, the EOC's JIC will be activated.
 - a. Initial State-level media briefings will be held at the EOC or at the State Capitol, depending upon the Governor's involvement.
 - b. Assigned JIC staff are divided into teams focusing on specific public information areas.
 - c. Functions of the communication teams will include:

- i. Message content and clearance
 - ii. Government and media communications
 - iii. Website and hotline management
 - iv. Public health partner and stakeholder communication
 - v. Identification of spokespersons
 - vi. Monitoring and analysis of media reports
 - d. Team leaders will meet twice daily to share information and determine communication priorities.
 - e. Team leaders will report to the PIO at the HDOH DOC and update partners through JIS.
6. Activities when the EOC is not activated include:
 - a. The HDOH DOC may activate a DOHIC, and HDOH Communications and other staff will be divided into teams focusing on specific audience/communication methods.
 - b. Team leaders will be public health educators and risk communication specialists from HDOH.
 - c. Team leaders will meet daily to share information and determine communication priorities.
 - d. Team leaders will report to the HDOH Public Information Office.
7. In preparation for potential subsequent pandemic waves, the following activities will continue:
 - a. Public awareness and communications strategy effectiveness measured through surveillance and evaluations
 - b. Public education through media and community outreach activities

D. Postpandemic period

1. The HDOH Communications Office will work with mental health professionals to craft messages to aid in the recovery efforts.
2. Communications Office will participate in the evaluation of the pandemic response.
3. Public awareness and communications strategy effectiveness will be measured



through surveillance and evaluations.

4. Public education through media and community outreach activities will continue.
5. Planning for future influenza public information campaigns will begin.



APPENDICES

Appendix A

Glossary of Terms

Antibody	A protein produced by the body's immune system that recognizes and helps fight infections and other foreign substances in the body.
Antigen	A substance, foreign to the body, that stimulates the production of antibodies by the immune system. Antigens include foreign proteins, bacteria, viruses, pollen, and other materials.
Antigenic drift	The capacity of influenza viruses to undergo gradual change in their two surface antigens is known as antigenic “drift”. This minor change leads to the emergence of new variant strains. Antigenic drift may result in epidemics, since incomplete protection remains from past exposures to similar viruses.
Antigenic shift	Influenza A viruses, including subtypes from different species, can reassort or swap genetic materials and merge. This reassortment process, known as antigenic “shift,” results in a novel subtype different from both parent viruses. As populations will have no immunity to the new subtype, and as no existing vaccines can confer protection, antigenic shift has historically resulted in highly lethal pandemics. For this to happen, the novel subtype needs to have genes from human influenza viruses that make it readily transmissible from person to person for a sustainable period.
Antiviral	These are medicines that specifically target viruses. There are currently four antiviral drugs that target influenza (amantadine, rimantadine, zanamivir and oseltamivir). Indications, mechanisms of action, and efficacy differ for each and depend upon the situation for use. All require physician consultation and prescription.
Avian influenza	Also referred to as bird flu, is a disease of birds (e.g., ducks and chickens). Since 2003, the H5N1 avian influenza virus has infected millions of birds globally. Although it is primarily a disease of birds, a small number of people have also been infected after having close contact with birds.
Communicability	Transmissibility; ability to spread from infected to susceptible hosts.
Contact	A term used to refer to someone who has been in close proximity with an individual who is or is suspected of being infected with an infectious disease like influenza.
Epidemic	Any disease, infectious or chronic, occurring at a greater frequency than usually expected. The term “outbreak” is sometimes used synonymously.
General public health	The restriction of movement of certain segments of the community to



containment

decrease social contact.

Hand hygiene

Applies to the cleaning of one's hands. This is usually done with soap and water, hand sanitizer, or hand wipes. To kill an influenza virus, hands must be washed with soap and water for at least 15 seconds and hand sanitizers or wipes must be used for 10 seconds and have an alcohol content of at least 60%.

Human-to-human transmission

Refers to the ability of an infectious disease to be passed continuously from one person to another. Some viruses can be transmitted between animals (animal-to-animal), some can be transmitted from animal-to-human (and vice versa), and some can be transmitted from human-to-human.

Infection control

A broad term used to describe a number of measures designed to detect, prevent, and contain the spread of infectious disease. Some measures include hand washing, respiratory etiquette, use of personal protective equipment (PPE), prophylaxis, isolation, and quarantine.

Influenza pandemic

Occurs with the appearance of a novel influenza virus, against which the human population has no immunity, resulting in multiple, simultaneous epidemics worldwide with high morbidity and mortality.

Isolation

The restriction of movement and separation of the sick or person(s) infected with a contagious disease. This is usually done in a hospital setting but may also be implemented at home or in a dedicated isolation facility. Isolation may be applied at the individual level or may be implemented with groups.

Morbidity

A diseased condition or state.

Mortality

Death.

Novel virus

A virus that has never previously infected humans or has not infected humans for a long time.

Personal Protective Equipment (PPE)

Specialized clothing or equipment worn to protect someone against a hazard including an infectious disease. It can range from a mask or a pair of gloves to a combination of gear that might cover some or all of the body.

Prophylaxis

An infection control measure whereby antimicrobial, including antiviral, medications are taken by a healthy individual (e.g., nurse, contact) to prevent illness before or after being exposed to an individual with an infectious disease (e.g., influenza).

Quarantine

The restriction of movement and separation of well person(s) presumed exposed to someone who has a contagious disease (i.e.,

confirmed case of the disease). This may be applied at the individual or community level and may be implemented in the home setting or in a dedicated quarantine facility. The objective is to reduce the incidence of new cases. Quarantine, in turn, also requires a clear definition of the term *close contact* or what constitutes an exposure to determine when a person is to be quarantined.

Respiratory etiquette

Good coughing and sneezing manners are one way of minimizing the spread of viruses, which are passed from human-to-human in the tiny droplets of moisture that come out of the nose or mouth when coughing, sneezing, or talking. Healthy and sick people should cover their nose and mouth when sneezing, coughing, or blowing their nose and then put the used tissue in the trash to prevent the spread of germs.

Seasonal influenza

An infectious disease that is commonly referred to as the flu. In the United States, flu season usually occurs between December and March. The influenza virus is one that has the ability to change easily; however, there is usually enough similarity in the virus from one year to the next that the general population is partially immune from previous infection or vaccination. Each year experts monitor the influenza virus and create a new vaccine to address changes in the virus. For this reason people are encouraged to get vaccinated against flu each year.

Social Distancing

A voluntary method of infection control that requires people to reduce the frequency and closeness of contact with others in large social/community gathering places (i.e. malls, schools, parks, theatres, etc.) and to avoid contact with anyone who may have been infected.

Vaccine

A preparation that contains an antigen, consisting of whole disease-causing organisms (killed or weakened) or parts of such organisms, that is used to confer immunity against the disease that the organisms cause.

About *influenza vaccine*: Every year the WHO Influenza Program convenes meetings to analyze global data on circulating influenza strains and make recommendations, based on degree of difference from previous strains and epidemiologic significance, for the three strains to be used in the vaccine for the coming influenza season. The current method for production of the influenza vaccine requires months and large numbers of embryonated hens' eggs (required to grow and sufficiently expand the number of virions that will be inactivated and used as antigens in the vaccine).



Appendix B List of Acronyms

AAR	After Action Report
AG	Attorney General
APSTPHLD	Association of State and Territorial Public Health Laboratory Directors
CDC	Centers for Disease Control and Prevention
CSTE	Council of State and Territorial Epidemiologists
DHO	District Health Office
DIB	Disease Investigations Branch
DMAT	Disaster Medical Assistance Team
DOC	Department Operations Center
DOCD	Disease Outbreak Control Division
DOHIC	Department of Health Information Center
EFS	Emergency Support Function
EOC	Emergency Operations Center
HEOC	Hospital Emergency Operations Center
HAH	Healthcare Association of Hawaii
HDOH	Hawaii Department of Health
DHHS	U.S. Department of Health & Human Services
HPhA	Hawaii Pharmacists Association
HQS	Honolulu Quarantine Station
HRO	Human Resources Office
HRS	Hawaii Revised Statute
IC	Incident commander
ICS	Incident command system
ICU	Intensive care unit
IIS	Immunization Information System
ILI	Influenza-like illness
IMB	Immunizations Branch
JIC	Joint Information Center
JIS	Joint Information System
NACCHO	National Association of County and City Health Officials
NIMS	National Incident Management System
PIMS	Pandemic Information Management System
PIO	public information officer
PHN	Public Health Nursing
PHEP	Public Health Emergency Preparedness
PPE	Personal protective equipment
RITS	Receiving, Storing & Staging Inventory Tracking System
RT-PCR	Reverse transcriptase-polymerase chain reaction
SARS	Severe Acute Respiratory Syndrome
SITREP	Situation Report
SCD	State Civil Defense
SLD	State Laboratories Division
SNS	Strategic National Stockpile



HAWAII STATE
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WHO

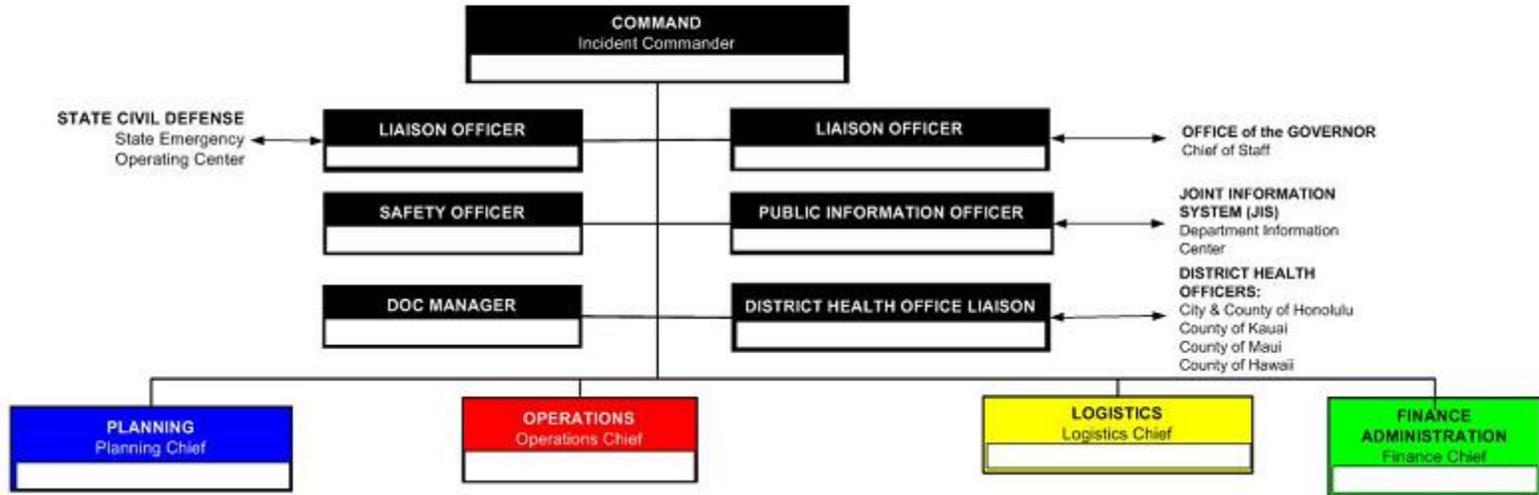
World Health Organization



Appendix C. Concept of HDOH Operations Center

DEPARTMENT OPERATIONS CENTER
ESF-8 Public Health and Medical

ICS 207





HAWAII STATE
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APPENDIX D

Key HDOH Areas Contact Information

Director's office	586-4410
Deputy Director	586-4412
Deputy, Health Resources	586-4433
Deputy, Environmental Health	586-4424
Deputy, Behavioral Health	586-4416
Communications	586-4442
Disease Outbreak Control Division	587-6845
Disease Investigation Branch	586-4586
Immunization Branch	586-8300
Bioterrorism Preparedness & Response	587-6569
Community Health Division	587-4748
Public Health Nursing Branch	586-4618
Bilingual Health Services	832-5685
Emergency Medical Service System	733-9210
Environmental Health Services Division	586-4576
State Laboratories Division	453-6655
Medical Microbiology	453-6700
Bacteriology/Parasitology	453-6706
Mycobacteriology/Mycology	453-6707
Virology	453-6705
Bioterrorism Response Laboratory	453-5990
Environmental Health Analytical Services	453-6671
Environmental Microbiology	453-6601
District Health Office of Hawaii	808-974-6006
District Health Office of Kauai	808-241-3614
District Health Office of Maui	808-984-8200



HAWAII STATE
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APPENDIX E

Pandemic Influenza Preparedness & Response Ad Hoc Advisory Group* Members

District Health Offices

Hawaii

Kauai

Maui

HDOH Communications Office

Public Health Nursing

Hawaii Medical Association

American College of Physicians

American Academy of Pediatricians

American Academy of Family Physicians

American College of Emergency Physicians

Medical Examiner's Office

Healthcare Association of Hawaii

Association for Professionals in Infection Control

Emergency Medical Services

American Red Cross

Dept of Agriculture, State Veterinarian

Bioethicist

State Government

(including one representative for the Governor and each house of the State
Legislature)

Representatives for each County Mayor

State Attorney General

Tripler (TAMC)

Pacific Command (PACOM)

CDC/PHS Quarantine Station

State Civil Defense

County Civil Defense

County Police Department

County Fire Departments

*Each group or organization would provide one chief representative to attend ad-hoc



meetings and one alternate in the event that the chief representative is unavailable.

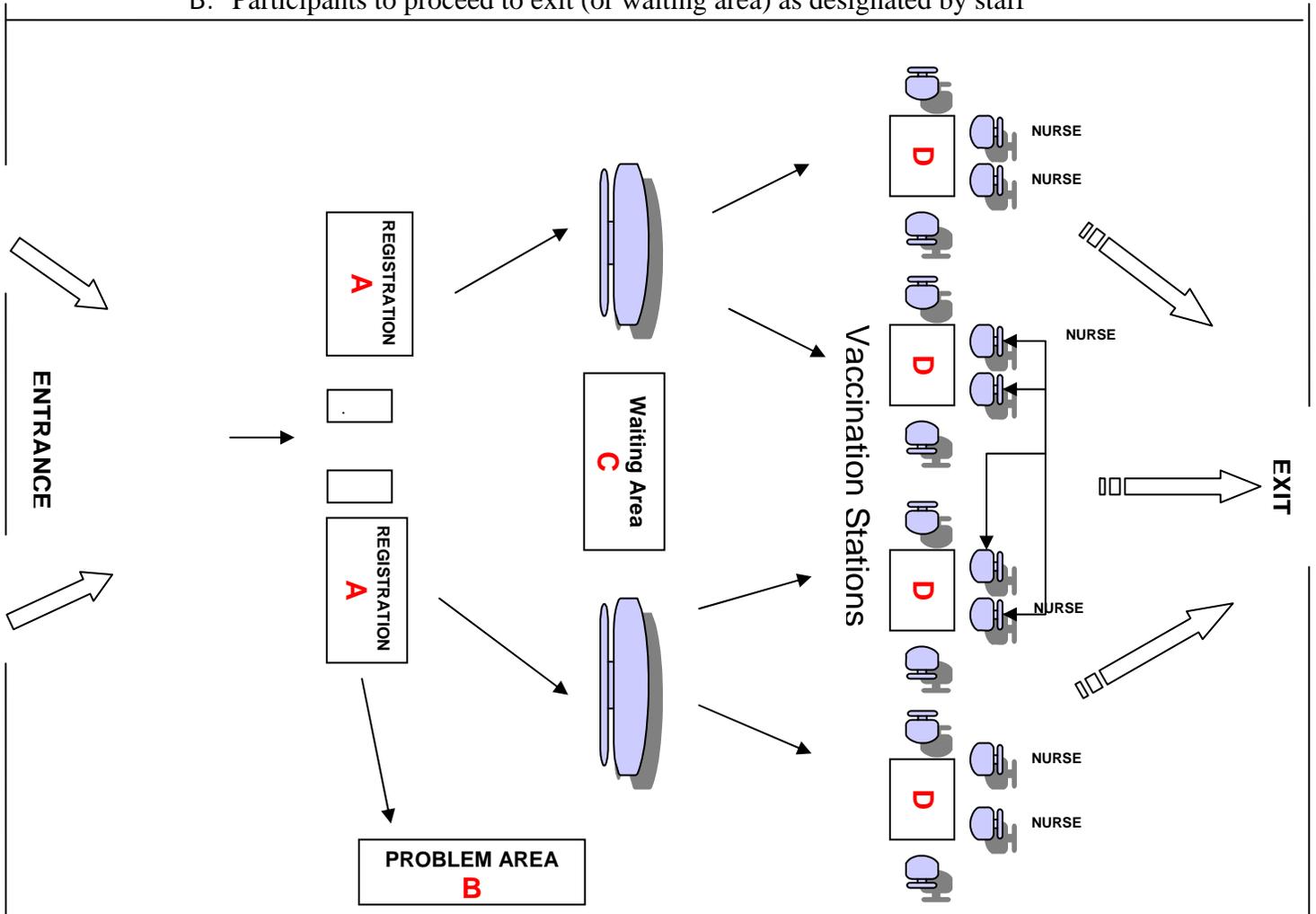
Other groups that may be consulted/asked to participate as needed:

- Infectious Diseases (Adult and Pediatric)
- Hawaii Primary Care Association
- Hawaii Medical Services Association
- Kaiser Permanente
- Hawaii Pharmacists Association
- Hawaii Nursing Association
- Hawaii Visitors Association
- Dept of Education
- Dept of Parks and Recreation (State and County)
- Dept of Accounting and General Services, Public Works Division (State)
 - Dept of Public Works (County)
- Dept of Transportation

APPENDIX F

Pandemic Vaccine Clinics Set-up and Flow Concept

- I. Staff will assist and direct participants to proper stations
- II. Station A [**Registration check**]
 - A. Consent form and informational materials
 - B. If there are uncertainties or questions, participants to proceed to “station B,” otherwise proceed to “station C” or “station D”
- III. Station B [**Problem Area**]
 - A. Clinic manager and/or clinic manager assistant(s) to review and assess problematic issues (i.e., contraindications, etc.)
 - B. Area where vaccinee may be assessed if medical or other problem occurs at any time during vaccinee’s time in clinic
- IV. Station C [**Waiting Area**]. Area where vaccinees may wait if vaccination tables are occupied.
- V. Station D [**Vaccination Stations**]
 - A. Administration of pandemic influenza vaccine to participants
 - B. Participants to proceed to exit (or waiting area) as designated by staff



APPENDIX G

Guidelines for Recognizing Influenza (Flu) Symptoms and Management

Signs and Symptoms of Influenza (Flu)

Infection with the influenza virus typically causes:

- fever (temperature $>101^{\circ}$ F)
- cough
- sore throat
- tiredness
- headache
- muscle aches.

People infected with the current strain of the avian influenza virus (H5N1) or with a new human pandemic influenza strain may show typical human influenza-like symptoms such as those listed above, but some will have more serious symptoms such as pneumonia, severe respiratory diseases, and other life-threatening complications.

Other Facts about Influenza Infection



The influenza virus is spread by the tiny droplets expelled when an infected person coughs or sneezes. These respiratory droplets do not usually remain airborne as they are heavy enough to quickly fall out of the air; however, they can spread approximately 3-6 feet from the infected individual. Infection can result from breathing in these droplets before they fall or by touching a surface on which the droplets landed (such as a doorknob or computer keyboard) and then touching the mucous membranes of the mouth, nose, or eyes. Depending on conditions, the virus may live for 1-2 days on hard surfaces.

A person infected with influenza can spread the virus in their respiratory droplets for about 24 hours before they begin to feel ill and will continue to expel the virus in respiratory secretions for about 3-5 days after they develop symptoms.

How to Limit the Spread of Infection

- Stay healthy – eat, rest, drink plenty of fluids, exercise, and get vaccinated yearly against seasonal flu
- Wash your hands frequently or use alcohol-based hand sanitizing gel
- Clean hard surfaces such as doorknobs and telephones with disinfecting wipes
- Cover your nose and mouth with the inside of your elbow or a tissue when you cough or sneeze and encourage others to do the same





- Put used tissues in the trash
- Stay home from work if you are ill, and keep your children home from school if they are ill
- Practice social distancing (for example, work from home, bank on the internet, or avoid unnecessary travel)
- Be prepared if you are asked to voluntarily remain at home – have an emergency supply kit for your home including water, food, and medications (both basic non-prescription medications like ibuprofen and at least a 2 week supply of prescription medications.)

What to Do if You Are Ill

A fever may indicate infection with influenza. Have a thermometer at home and know how to use it properly.

- Place the thermometer bulb under the tongue for at least two minutes
- Wait more than 10 minutes after eating or drinking before taking your temperature
- A temperature 101° F or higher indicates a fever

If you have a fever and have recently traveled to a country where avian influenza is present, or if you have been in contact with someone who has, you should contact your doctor immediately and avoid contact with other persons to whom you could spread infection. Putting on a surgical-type mask may be helpful to decrease the chance of spreading infectious respiratory droplets.

If you have not recently traveled or been in contact with anyone who has, you may still wish to see your doctor for seasonal influenza treatment or to exclude other illnesses (including leptospirosis or dengue fever). In general, healthy persons with seasonal flu may remain at home and care for themselves as described in the next section.

If the pandemic phase increases, meaning there is human-to-human transmission of a pandemic influenza virus, persons with fever should follow the directions issued by HDOH to obtain treatment from the appropriate hospital, clinic, or alternate health care facility.

Caring for a Person Infected with Influenza at Home

The ill person should:

- Avoid contact with healthy family members
- If possible, stay in a separate room with the door closed
- Cover coughs and sneezes with a tissue and dispose of the tissue in the trash
- Wear a surgical-type mask, if available
- Not go out to go to work, school, the store, or anywhere else
- Drink plenty of fluids and eat a healthy diet as possible
- Get plenty of rest



- Take over the counter medications (e.g., to treat fever, congestion, cough) as needed to support you through the illness

Other people in the house should:

- Discourage visitors
- Try to stay away from the ill person, or at least stay more than 3 feet away
- Encourage the ill person to drink plenty of fluids and a nourishing diet and get plenty of rest.
- Not use the ill person's plates, silverware, towel, or toothbrush
- Wash the ill person's sheets and clothing in warm water and soap
- Wash any other items touched by the ill person with soap and water or clean with disinfectant wipes
- Monitor the ill person for signs of potential need for specialized health care at an appropriate facility. Such signs may include:
 - Shortness of breath or increasing difficulty breathing
 - Persistently high fever (temperature greater than 102° F) despite taking appropriate medications (e.g., acetaminophen [e.g., Tylenol] or ibuprofen [e.g., Advil or Motrin])
 - Mental confusion
 - Lethargy (i.e., not alert or responding to normal stimuli)
- If the ill person shows signs of worsening or if uncertain, contact your primary care physician and/or public health authorities (contact information will be made available during a pandemic)
- Stay at home until at least **three days** after the ill person has recovered