

I. POLICY	2
II. PROCEDURE	3
III. WHO Phase 4.....	3
A. Communications	3
B. Training and Education	4
C. Laboratory	4
D. Laboratory Personnel.....	5
E. Resource Management.....	5
F. Patient Management.....	6
G. Employee Management	7
H. Facilities Management	7
I. Reporting	8
IV. WHO Phases 5 and 6:	8
A. Communications	8
B. Training and Education	9
C. Laboratory	9
D. Resource management.....	9
E. Patient Management	10
F. Employee Management: Plan for Absenteeism:	11
G. Facilities Management and Environmental Services:.....	11
H. Reporting	12
V. ASSOCIATED DOCUMENTS.....	12
ANNEX I:Initial Action Steps for Outbreak Response.....	12
ANNEX II:Pandemic Influenza Toolkit	12
Table 1 – WHO Pandemic Phases, US Federal Government Stages Comparison	12
Table 2 – US Federal Government Stages for Pandemic Influenza Responses: Goals, Actions, Policy Decisions	12
Table 3 – Individual, Family, and Community Response to Pandemic Influenza	12
Table 4 – UCSF Precautions for Febrile Respiratory Illness	12
UCSF Workplace Guidelines for Influenza.....	12
Methods for Reducing the Spread of Influenza	12
Updated Interim Guidance for Laboratory Testing of persons with Suspected Infection with Avian Influenza A(H5N1) Virus in the United States.....	12
ANNEX III:Mass Prophylaxis/Vaccination Distribution Plan.....	12
Incident Management Structure for Dispensing Site	13
ANNEX IV:Employee Screening, Evaluation, Tracking and Decision-Making Tools	13
Communicable Disease Pre-Placement Medical Evaluation.....	13
Guidelines for “YES Desk” Screening – STAFF Only	13
Communicable Disease Self Monitoring Form	13
Communicable Disease Tracking Form	13
Communicable Disease Exposure Rubric.....	13
ANNEX V:World Health Organization (WHO) Case Definitions for Human with Influenza A (H5N1) Virus	13
Updated Interim Guidance for Laboratory Testing of Persons with Suspected Infection with Avian Flu A(H5N1) Virus in the United States.....	13
CDHS Screening Form for Suspect Avian (H5N1) Flu	13
Viral and Rickettsial Disease Specimen Submittal Form for Suspect Avian Influenza A (H5N1)	13
ANNEX VI:CDHS Flowsheet for the Management of Suspect and the First Laboratory- Confirmed H5N1 Case(s) in Humans in California.....	13

I. POLICY

UCSF anticipates the ability to continue delivery of services to the community in response to an epidemic or pandemic (communicable disease outbreak likely to require expanded or extended care capabilities over a prolonged period of time). This policy provides a plan and tools for preventing the introduction of a communicable disease threat into the organization, for recognizing that a communicable disease has been introduced, and/or containing the spread of the communicable disease threat if it is introduced.

This planned response includes a broad range of options including the temporary halting of services and/or admissions, delaying transfer or discharge, limiting visitors within an organization, or fully activating the organization’s emergency management plan. The actual response depends upon issues such as the nature of the communicable disease, the extent to which the community is affected by the spread of the infection, the types of services offered, and the capabilities of the organization.

This policy is organized according to the World Health Organization (WHO), Phases of Pandemic Alert (Fig. 1), with expected actions associated with the pandemic phases.

WHO Phase	Description	Phase	Action
Inter-Pandemic Phase New virus in animals, no human cases	Low risk of human cases	1	Routine
	Higher risk of human cases	2	Business
Pandemic Alert Phase New virus causes human cases	No or very limited human-to-human transmission	3	Routine Business
	Evidence of increased human-to-human transmission	4	Pp. 4-8
	Evidence of significant human-to-human transmission	5	Pp. 4-8
Pandemic Phase	Efficient and sustained human-to-human transmission	6	Pp. 8-10

Figure 1: WHO Phases of Pandemic Alert¹

The goal of this policy is to provide structure to changing healthcare provision from individual-based care provision to population-based care provision. That is, to provide care and allocate scarce equipment, supplies, and personnel in a way that saves the largest number of lives. To that end, it is imperative to keep the healthcare system functioning and to deliver the best care possible to preserve as many lives as possible.²

1. World Health Organization. http://www.who.int/csr/disease/avian_influenza/phase/en/
 2. Homeland Security Council. National Strategy for Pandemic Influenza Implementation Plan. May 2006. <http://www.pandemicflu.gov>

II. PROCEDURE

III. WHO PHASE 4

Evidence of increased human-to-human transmission, OR local transmission of non-pandemic communicable condition or disease (e.g., scabies, norovirus) in increased numbers (e.g., cluster, outbreak, epidemic).

A. *Communications*

Anyone who has information about a communicable disease outbreak will notify Infection Control (**415-443-2644**).

- a. Healthcare providers must maintain a high index of suspicion for increased numbers of human cases to signal an outbreak condition.
- b. Healthcare providers, charge nurses, practice managers or others with knowledge or suspicion of a potential outbreak will notify Infection Control.

IC will communicate information about a potential outbreak situation from WHO, US Department of Health and Human Services (DHHS), California Department of Health (CA DHS), or San Francisco Department of Public Health (SFDPH) to key departments according to:

[Attachment A: UCSF Campus and Medical Center Communication Algorithm for Communicable Diseases](#)

- c. If a regional (or larger) outbreak is suspected, SFDPH will communicate via faxed Health Alerts and/or satellite EM communications system to the ED and Infection Control.
- d. Faxed Health Alerts may arrive up to 24 hours after they are sent by SFDPH.
- e. If internet support is unaffected, alerts regarding increases in incidence of communicable diseases may be sent to IC personnel via email from CA DHS.

A case definition will be used as the inclusion or exclusion criterion for cases, and will be distributed in the most efficient manner available to targeted patient care areas, senior administration and ancillary departments. The case definition will include epidemiological and geographical links to define the limits of disease risk.

- f. If a case definition has not yet been developed by DHHS, CA DHS or SFDPH, IC and Infectious Diseases (ID) will develop a case definition for use by all clinicians, and communicate that definition to DHS.
- g. The case definition will be updated over the course of the outbreak according to changes from city, county, state, or federal DHS.
- h. Case definitions may be communicated by a variety of methods, depending upon infrastructure status, including phone, fax, email, courier, Internet, 800 MHz radio, wireless communications devices (pager, cell, PDA).
- i. All distributed copies will bear the date and time of the most recent revision to ensure consistent application across the continuum of care.
- j. Since case definitions change as an outbreak progresses, tracking of the case definition will be imperative to ensuring everyone working from the same information. [Attachment B: Case Definition Tracking Form](#)
- k. Hospitals will be ranked by risk category by SFDPH, CA DHS, or UCSF depending upon disease distribution and circumstances. (Template in development)

Initiating the Hospital Emergency Incident Command System (HEICS) will depend upon the outbreak agent and the circumstances.

Facilities will communicate changes in facility use and traffic patterns.

Security will communicate requirements for entry into medical center.

B. Training and Education

Just-in-time (JIT) training materials (to be developed) for untrained personnel or personnel unfamiliar with the care or support environment must be prepared in advance, be easily accessible, and easily implemented (Nursing Education, Pharmacy, Nutritional Services, Environmental Services, Financial Services).

Review succession of authority plans (to be developed) in all departments to ensure appropriate leadership and healthcare delivery in case of increased morbidity and mortality within employee populations.

Education regarding outbreak potential will be directed by IC and assigned to appropriate departmental representatives. Education may be conducted in a variety of methods.

- a. Formal presentation
- b. Informal presentation
- c. Email
- d. Fax
- e. Internal and US mail services
- f. Newsletters
- g. IC Website: <http://infectioncontrol.ucsfmedicalcenter.org>
- h. DHS Infectious Diseases Emergencies Website: <http://www.sfcDCP.com>

C. Laboratory

The objective of the laboratory surveillance is to confirm cases of an outbreak organism.

Patient care areas with suspect cases will contact Clinical Microbiology Laboratory at 353-1268 for instructions for sample collection and specimen submittal procedures.

The testing laboratory may limit the number of specimens accepted for testing, and may require specific forms for specimen submittal.

- a. The CA DHS laboratory performs testing for novel organisms.
- b. For suspect novel organisms, UCSF Medical Center clinical laboratories will submit requested reports and isolates to the City and County of San Francisco labs, who then coordinate with the CA DHS labs.

D. Laboratory Personnel

Communicate with local and CA DHS labs. New communications systems may be established as phases of an outbreak progress.

Communicate appropriate information to the staff regarding obtaining and handling specimens.

Prepare to increase the number of specimens processed, and transportation of an increased number of specimens to state or local labs.

Define and communicate specimen collection methodologies: timing, collection methods, transport requirements.

Monitor communications from local and state labs for protocol changes.

Assess morgue capacity if outbreak causes increased mortality.

E. Resource Management

Standard Precautions will be practiced, requiring barriers (masks, eye protection, gowns, gloves), hand cleaning agents, surface disinfection solutions and materials. Refer to the appropriate Annex for disease-specific, transmission-based precautions.

Pharmacy, Materiel, Nutritional and Environmental Services will assess current supplies, contracts and Memoranda of Understanding (MOUs) with suppliers, and increase orders if there anticipated shortages. These departments should anticipate simultaneity of need in the region that would interrupt the supply chain, and increase supply orders accordingly. Lists of anticipated shortages will be sent to the AOC (and to the DCC if initiated).

If increased ordering of supplies occurs, Pharmacy, Materiel, Nutritional and Environmental Services will identify locations for storage of supplies. Senior leadership (Logistics and Planning roles if DCC initiated) will oversee commandeering unconventional storage locations for increased supplies. All storage will meet statute-required safety conditions, and may require additional security or environmental measures.

Pharmacy will order vaccine, antivirals, antibiotics, other critical pharmaceuticals as need is anticipated and pharmaceuticals are available:

- a. Information about vaccines will be distributed as it becomes available, using the communications modalities identified in I.c.iii.
- b. Antiviral stockpiles (as determined by public policy and recommendations from UCSF Medical Center's Department of Pharmacy) will be mobilized at the direction of DPH and/or Medical Center leadership decision with input by IC, ID and EHS.
- c. Distribution of viral vaccine will follow the guidelines found in:
[Attachment C: Guidelines for Vaccine Distribution for Pandemic](#)

Distribution of scarce resources will be determined by the Incident Commander with input by Senior Leadership, Infection Control and Infectious Diseases and may be used to guide this decision-making..

[Attachment D: Distribution of Scarce Resources](#)

Material Services will ensure Powered Air Purifying Respirators (PAPR) functionality, and will coordinate with Facilities Management for use and distribution.

Coordinate with Material Services for PAPR use and distribution.

F. Patient Management

Departments will utilize paper Line Listing Forms to record outbreak cases. When available, computer-generated line lists will replace paper documents.

[Attachment E: Line List Form – Emergency Dept](#)

[Attachment F: Line List Form – Inpatient](#)

[Attachment G: Line List Form – Staff](#)

Patients entering the healthcare system (home care, ambulatory, emergency, inpatient) will be screened for outbreak illness or exposure to outbreak cases, and isolated or barriers placed appropriately (refer to the Infection Control Manual, Section 3 for disease-specific isolation procedures).

Suspect cases will be placed in appropriate precautions for the suspected or confirmed communicable agent.

Confirm the following thresholds for alterations in routine functions. These decisions will be made by the Senior Leadership, or if implemented, the Incident Commander, and may include decisions such as:

- a. STAGE 1: Emergency Department
Emergency Department (ED) daily census 10% higher for 1 week in the setting of heightened public awareness and infection control screening without significant impact on inpatient census. Hospital routine functions, with additional phlebotomy, radiology, spiritual care, care coordination and consultation support in the ED.(Goal: accommodate increased “worried well” patient volume, and streamline patient flow).
- b. STAGE 2: 1% Inpatients
1% of inpatients attributed to outbreak. Defer all non-EMTALA transfers (except transplants if organs available); consider elective procedure cancellations, and alert affected services.
- c. STAGE 3: 5% Inpatients
5% of inpatient census attributed to outbreak, or 5% rooms prepared to accept patients affected by outbreak. Cancel elective and research procedures.
- d. STAGE 4: 10% of inpatient census attributed to outbreak: austere care only

[Attachment H: Austere Care Protocol](#)

G. Employee Management

Regulatory body-required competency and staffing ratio requirements may be relaxed or lifted if the healthcare workforce is reduced. Direction will come from CADHS.

Just-in-time training materials for training workers unfamiliar with patient care or support services may be required if increased morbidity and mortality is associated with the outbreak and affects healthcare workers or their families.

DCC will direct deployment of staff.

Human Resources will ensure leave and compensation policies are followed for:

- a. Medical leave
- b. Leaves of absence
- c. Family leave
- d. Sick leave
- e. Death

Human Resources will identify crucial thresholds for adjusting care based upon absenteeism of healthcare workers.

Human Resources will implement procedures for procuring increased workforce if absenteeism is anticipated to increase to unsustainable levels.

Employee Health Services will:

- f. Develop syndromic surveillance algorithms depending upon disease distribution, organism and circumstances (see templates,
- g. Develop isolation and quarantine directives based upon disease transmission characteristics.
- h. Organize the development, assembly and distribution of information sheets, supply kits (e.g., masks, Tylenol) for symptomatic healthcare workers.
- i. Develop and implement screening tools to be applied to appropriate segments of healthcare workers reporting for duty.
- j. Develop "hotline" messages for unmanned information lines.
- k. Participate in organization and distribution of mass prophylaxis/vaccine.

H. Facilities Management

Ensure properly working heating, ventilation, air conditioning (HVAC) systems with filters and pressures. List of Negative Pressure Rooms is available from Facilities.

Assess materials required to expand air chambers (positive or negative, as required to contain the infectious agent) and expand appropriate air handling to contain infectious agent.

Assess traffic patterns to limit exposure opportunities.
Assess procedures for increased security, access limitation.
Confirm working disaster action plans for uninterrupted water, utilities, telecommunications.

I. Reporting

IC and designees will determine that the case definition is being utilized appropriately.

- a. IC and designees will report weekly statistics to DPH.
[Attachment I: Weekly Surveillance Report](#)
- b. IC and designees will maintain spatial maps or other records of locations of affected patients
[Attachment J: Outbreak Progression by Unit](#)

IC and designees will follow established methods for surveillance, contact tracing, isolation and notification, and will oversee surveillance.

Employee Health Services (EHS) will follow established methods for evaluating staff exposures and illnesses due to the outbreak agent.

When computer-generated reports are available, Information Technologies (IT) will ensure that timely reports containing required information can be downloaded from electronic medical records systems.

IV. WHO PHASES 5 AND 6:

Evidence of significant human-to-human transmission OR widespread transmission of communicable disease with significant morbidity/mortality.

Establish DCC/EOC if not already established. All activities will be directed through the DCC/EOC

In addition to the above measures, add:

A. Communications

IC will communicate updated status reports of the outbreak to senior leadership, Incident Command, ID, Materiel Services, Pharmacy, patient care areas, and ancillary/support departments.

IC will communicate with nursing, bed control, and direct patient care personnel regarding appropriate patient placement.

SFDPH will communicate with area mortuaries re: preparations for increase in volume.

Operations Chief in the DCC will ensure readiness of alternative care sites and supplies for surge capacity.

Alert all departments to implement JIT training of incoming workers.

Alert all departments to prepare for succession of authority.

B. Training and Education

IC and designees will assess all locations for appropriate adherence to infection prevention and control activities.

Alternate locations charge person will report infections to IC.

Visitors: A protocol will be developed depending upon the nature of the outbreak, but will take into account the following:

- a. Vaccination status (if applicable)
- b. Verification of vaccination status
- c. Antiviral treatment status
- d. Crowding of site
- e. Food, water and sanitation available at site
- f. Ability to comply with barrier precautions
- g. Availability of barriers (masks, gloves, etc.)
- h. Availability of hand hygiene facilities and ability to educate visitor.

C. Laboratory

Communicate with IC and other Medical Center departments when DHS has established the outbreak, and that specimens will no longer be tested in order to conserve critical personnel and resources.

Ensure adequate morgue capacity (pathology lab).

D. Resource management

Safety Officer will ensure adequate morgue space is available.

Environmental, Materiel, Nutritional and Pharmacy Services will obtain increased supplies as able; implement rationing if scarcity is anticipated as directed by DCC or DHHS, CADHS, SFDPH.

If pharmaceuticals are available and appropriate, mobilize mass prophylaxis plans/

DHHS, CADHS or SFDPH and DCC, IC and Materiel Services will provide directions for reuse or recycling scarce resources as they become available. Staff will refrain from inappropriate reuse of resources.

SPD will instruct on protocols for reprocessing reusable items

E. Patient Management

Determine suitable spaces for housing or cohorting patients:

Implement thresholds for alterations in routine functions. These decisions will be made by the DCC, and may include decisions such as:

- a. STAGE 5: Emergency Department (ED)
daily census 10% higher for 1 week in the setting of heightened public awareness and infection control screening without significant impact on inpatient census. Hospital routine functions, with additional phlebotomy, radiology, spiritual care, care coordination and consultation support in the ED. (Goal: accommodate increased "worried well" patient volume, and streamline patient flow).
- b. STAGE 6: 1% of inpatients
attributed to outbreak. Defer all non-EMTALA transfers (except transplants if organs available); consider elective procedure cancellations, and alert affected services.
- c. STAGE 7: 5% of inpatient census
attributed to outbreak, or 5% rooms prepared to accept patients affected by outbreak. Cancel elective and research procedures.
- d. STAGE 8: 10% of inpatient census
attributed to outbreak: Austere care only
[Attachment H: Austere Care Protocol](#)

DCC will consult with IC, ID, DHS, and preference for housing affected patients will be made depending upon the nature of the outbreak, and may require progressive isolation measures as affected numbers increase.

Measures may include:

[Attachment K: Infection Control Triage Flowsheet:](#)

- e. Single room
- f. Cohort in semi-private room
- g. Cohort in ward room
- h. Cohort by floor
- i. Cohort by wing
- j. Cohort by facility
- k. Spatial separation in large enclosed rooms (e.g., gymnasium, conference rooms)

IC will assess all alternate locations and make recommendations for enhancements or changes that would facilitate infection prevention and transmission control.

[Attachment L: Alternate Steps for outbreak Response](#)

F. Employee Management: Plan for Absenteeism:

Untrained workers or workers unfamiliar with the work area may be required. Authority for the area will implement JIT training for these workers.

If applicable, immunized or recovered personnel will be assigned to acutely ill patients.

Human Resources will enforce disaster policies as appropriate.

G. Facilities Management and Environmental Services:

Support staff may be overwhelmed, absent, or JIT-trained. Because JIT-trained staff may be utilized, modifications of routine practices related to the environment may need to occur at the direction of the Director of Facilities or designee.

Proper cleaning is imperative in an outbreak situation. PSA/EVS responsibilities:

- a. Director of Facilities will prioritize cleaning to high-risk areas only if workforce is affected:
 - i. Critical care areas
 - ii. Surgery
 - iii. Delivery rooms
 - iv. Emergency department
 - v. Diagnostic and treatment areas
- b. Instruction of JIT protocols to include:
- c. How to mix cleaning agents properly
- d. Information on when to change solution
- e. Methods for cleaning and equipment use
- f. Specific practices in specialized areas
- g. Protocols to identify priority areas
- h. Waste removal
- i. Use of barriers

Facilities responsibilities

- j. Maintain HVAC, vacuum system, oxygen and water supplies
- k. Maintain critical equipment
- l. Maintain utilities, water, telecommunications

H. Reporting

IT will ensure reports required by Incident Command, Nursing Administration, IC, DHS are available.

If electronic medical records systems are nonfunctional, patient care units will submit ED and Inpatient Line Lists to DCC, Infection Control, and/or Nursing Administration, or other entity as required.

[Attachment E: Line List Form – Emergency Dept](#)

[Attachment F: Line List Form – Inpatient](#)

Line Lists for Employees will be submitted to Employee Health or Human Resources.

[Attachment G: Line List Form – Staff](#)

Infection Control will submit Weekly Surveillance Report to senior leadership and DHS as requested.

[Attachment I: Outbreak Weekly Surveillance Report](#)

Infection Control or designee will monitor patient movement and report as requested to DCC.

[Attachment J: Outbreak Progression by Unit](#)

V. ASSOCIATED DOCUMENTS

[ANNEX I:](#) **Initial Action Steps for Outbreak Response**

[ANNEX II:](#) **Pandemic Influenza Toolkit**

Table 1 – WHO Pandemic Phases, US Federal Government Stages Comparison

Table 2 – US Federal Government Stages for Pandemic Influenza Responses: Goals, Actions, Policy Decisions

Table 3 – Individual, Family, and Community Response to Pandemic Influenza

Table 4 – UCSF Precautions for Febrile Respiratory Illness

UCSF Workplace Guidelines for Influenza

Methods for Reducing the Spread of Influenza

Updated Interim Guidance for Laboratory Testing of persons with Suspected Infection with Avian Influenza A(H5N1) Virus in the United States

[ANNEX III:](#) **Mass Prophylaxis/Vaccination Distribution Plan**

Site Commander

Logistics Chair

Safety Chair

Security Personnel

Operations Chief

Pharmacy Chief

Pharmacist

Greeter

Medical Triage

Mental Health Counselors

Briefers

Form Specialists

Health Care Provider
Position Task Cards
Physician Referral Form (Anthrax)
Physician Referral Form (Avian Flu)
Case Report Form
Task Force Summary

Incident Management Structure for Dispensing Site

[ANNEX IV:](#) **Employee Screening, Evaluation, Tracking and Decision-Making Tools
Communicable Disease Pre-Placement Medical Evaluation
Guidelines for “YES Desk” Screening – STAFF Only
Communicable Disease Self Monitoring Form
Communicable Disease Tracking Form
Communicable Disease Exposure Rubric**

[ANNEX V:](#) **World Health Organization (WHO) Case Definitions for Human with Influenza A (H5N1) Virus
Updated Interim Guidance for Laboratory Testing of Persons with Suspected Infection with Avian Flu A(H5N1) Virus in the United States
CDHS Screening Form for Suspect Avian (H5N1) Flu
Viral and Rickettsial Disease Specimen Submittal Form for Suspect Avian Influenza A (H5N1)**

[ANNEX VI:](#) **CDHS Flowsheet for the Management of Suspect and the First Laboratory-Confirmed H5N1 Case(s) in Humans in California**

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