

Pandemic Flu Plan

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| PURPOSE: | The purpose of this PANDEMIC FLU PLAN is to serve as a guide to Olive View-UCLA Medical Center staff involved in coordinating an extended response to and mitigation of a flu emergency. An influenza pandemic is the most likely scenario, but most elements of this plan could also apply to other pandemic respiratory viruses (e.g., SARS, MERS). The plan is based on the premise that the operations of ValleyCare facilities are severely compromised due to the numbers of patients, staff and resource agency employees stricken with flu. It is expected that the demand for medical care will exceed capacity. |
|------------------------|--|
| | Unlike typical mass casualty events, a declared pandemic flu event may extend over several weeks and will impact multiple communities around the world simultaneously. This plan focuses on long-term strategies for securing and distributing the various resources Olive View-UCLA Medical Center must manage to adequately respond to a pandemic event. |
| | A Pandemic Flu Planning Committee was established to produce this response plan. It has been designed to ensure that Olive View-UCLA Medical Center is prepared to implement an effective response before a pandemic arrives, throughout a response if an outbreak occurs, and after the pandemic is over. The plan is intended to be dynamic and interactive; it consists of components that are consistent with international, federal, state, and L.A. County guidelines as well as general principles of emergency response. The plan will integrate with the County and State plans for expanded care sites. This pandemic influenza plan is reviewed and updated annually to ensure compliance with regulatory and accrediting agencies. |
| ACTIVATION: | Activation of the plan for "Pandemic Flu in Los Angeles County" requires the authorization of the Chief Executive Officer or designee. Authorization is issued upon notice by the Public Health Officer that a pandemic event has been declared in Los Angeles County. |
| | Due to the initially insidious nature of a flu outbreak, an order to activate the flu plan will likely occur during normal business hours. A Public Health official will notify the Chief Executive Officer of a declared pandemic event. The CEO or designee will then issue the order to activate the Olive View-UCLA Medical Center flu plan. |
| RESPONSE STRUCTURE: | A pandemic flu incident will utilize the Hospital Emergency Incident Command System (HEICS), similar to other disasters. Because a pandemic event is expected to last longer than other types of disasters utilizing this system, a local Pandemic Influenza Advisory Team will be assembled. The team will meet as necessary (probably more frequently during the initial phase of pandemic flu in L.A. County, and then less frequently as the situation is stabilized). The team may consist of the following persons or designees, as determined by the Incident Commander: |
| | Hospital Administration Representative Medical Administration Representative Nursing Administration Representative Infectious Disease Chief |

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- Infection Control Director
- Emergency Department Chief
- Critical Care Chief
- Ambulatory Care Chief
- Human Resources
- Employee Health
- Safety Officer
- Public Relations

It is expected that the Pandemic Influenza Advisory Team will receive regular reports from other key personnel, including:

- Materials Management
- Pharmacy Director
- County Police
- Facilities Management
- Laboratory Director
- ValleyCare Department of Education
- Information Systems
- Respiratory Therapy

Departmental and/or unit level command posts may be activated if they are necessary to mitigate the effects of the event on individual sections.

PANDENMIC FLU <u>PANDEMIC FLU ALERT LEVELS</u> ALERT LEVELS:

The plan is organized according to recognized levels of influenza activity as follows, with a summary overview of the activities triggered by level:

I. <u>Pre-Pandemic/Interpandemic Period</u>

No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals, or a circulating animal influenza poses a substantial risk of human disease. During this period, the organization will:

- Conduct planning
- Conduct education/training
- Conduct routine hospital surveillance for influenza

II. Pandemic Alert Period

This period is defined by human infection(s) with a new subtype, but no human-tohuman spread, or at most rare instances of spread to a close contact. Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans. 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. Actions to be taken are:

- Increase preparation; refine local plan
- Evaluate the existing system for tracking medical supplies to determine if it can detect rapid consumption and to respond to growing needs
- Stockpile consumable goods for 6-8 week duration of pandemic (see Appendix B)
- Determine trigger-points to order additional supplies
- Anticipate the need for additional antibiotics to treat bacterial complications of influenza
- Determine through consulting with the State how to access the National Strategic Stockpile during an emergency
- Determine food supplies in the hospital how many days worth in-house.
- Conduct hospital surveillance for influenza (see surveillance plan below)
- Implement VACCINATION PLAN Pandemic Alert Period
 - Monitor CDC recommendations on development, distribution, and use of vaccine
 - Annual influenza vaccination of hospital employees will be promoted to increase vaccination coverage
 - A computer-based system will be utilized for documenting annual influenza vaccination or declination of healthcare personnel
 - Develop and update local priority list of vaccine distribution (see Appendix C)
 - If available, obtain and stockpile vaccine according to Federal and State guidelines
 - Plan secure storage area for vaccine vials
 - Develop plan for security at sites and accountability of supplies
 - Develop an educational plan on vaccination training and adverse effects monitoring and treatment (following guidelines from CDC)
- Implement SURVEILLANCE PLAN Pandemic Alert Period
 - Test for influenza per normal lab protocol
 - Increase surveillance at triage, clinics, and outpatient services by checking for influenza-like illness year round (see Influenza Assessment Tool in Appendix A)
 - Ask any individuals who present with influenza-like symptoms whether they have recently traveled in a country where the particular strain of influenza has been identified
 - Require testing for patients who present with influenza-like symptoms and have recently traveled to a country where increased and sustained transmission of flu illness has been identified
 - Establish electronic monitoring of the following:
 - Numbers of individuals reporting influenza-like illness (ILI)
 - Numbers of all hospitalized admissions for influenza
 - Numbers of mortality cases from influenza and/or complications of influenza

PANDEMIC INFLUENZA REPORTED OUTSIDE UNITED STATES:

During this period there is increased and sustained transmission in the general population. The actions to be taken are:

- Establish contact with key public health, healthcare, and community partners
- Implement a system for early detection and antiviral treatment of healthcare workers who might be infected with the pandemic strain of influenza virus
- Post signs for respiratory hygiene/cough etiquette
- Reinforce infection control measures to prevent the spread of influenza
- Accelerate the training of staff, in accordance with the facility's pandemic influenza education and training plan (Appendix I)
- Alert food services to stockpile certain non-perishable food goods
- Order additional antibiotics to treat bacterial complications of influenza
- VACCINATION PLAN Pandemic Flu OUTSIDE U.S.
 - Monitor CDC recommendations on development, distribution, and use of vaccine
 - Influenza vaccine will likely be distributed locally through LA County DHS/DPH
 - Valley Care will work with state and local health departments to develop plans for distribution and administration of vaccine to local community after priority groups vaccinated, depending upon availability (see Appendices C and D)
- SURVEILLANCE PLAN Pandemic Flu OUTSIDE U.S.
 - Establish with all areas their surveillance capabilities and that they are aware of heightened surveillance level
 - Implement hospital surveillance for pandemic influenza in incoming and already admitted patients
 - Test patients and employees and report cases per the following criteria:
 - 1. Testing for pandemic flu strain is indicated for <u>hospitalized</u> patients with:
 - Radiographically confirmed pneumonia, acute respiratory distress syndrome (ARDS), or other severe respiratory illness for which an alternate diagnosis has not been established, **AND**
 - History of travel within 10 days of symptom onset to a country with documented pandemic strain influenza in animals and/or humans
 - 2. Testing for pandemic influenza should be considered on a case-bycase basis in consultation with LA County Public Health for **hospitalized or ambulatory** patients with:
 - Documented temperature of >100.4°F (38° C) with one or more of the following: cough, sore throat, shortness of breath, **AND**
 - History of contact with a known or suspected human case of pandemic strain influenza in an affected country within 10 days of symptom onset, or presence of other risk factors particular to the pandemic strain (e.g., poultry contact for bird flu strains).
 - 3. If the above criteria are met, call the Los Angeles County Acute Communicable Disease Center at <u>213-240-7941</u> (daytime) or <u>213-</u> <u>974-1234</u> (after hours and weekends) as quickly as possible. The **local health department**, not the state or CDC is the first to be

contacted in the case of pandemic influenza.

PANDEMIC INFUENZA REPORTED INSIDE THE UNITED STATES: At the time the influenza pandemic has been confirmed inside the United States, the following actions will be taken:

- Pandemic Influenza Response Team meets as determined by pandemic activity.
- Identify when pandemic influenza cases begin in the community. (See surveillance plan below)
- Maintain high index of suspicion that patients presenting with influenza-like illness could be infected with pandemic strain.
- Identify, isolate, and treat all patients with potential pandemic influenza.
- Implement activities to increase capacity, supplement staff shortages, and provide supplies and equipment.
- Maintain close communication within and among health care facilities and with state and local health departments.
- Implement VACCINATION PLAN Pandemic Flu Inside U.S.:
 - Monitor CDC recommendations on development, distribution, and use of vaccine.
 - Influenza vaccine will likely be distributed locally through LA County DHS/DPH.
 - ValleyCare will work with state and local health departments to develop plans for distribution and administration of vaccine to local community after priority groups vaccinated, depending upon availability (see Appendix C).
- Implement SURVEILLANCE PLAN Pandemic Flu INSIDE U.S.
 - Test for influenza on individuals with influenza-like symptoms as recommended by CDC and LA County public health (Patients – Appendix A; Employees – Appendix K).
 - Notify employees to report their flu-like symptoms immediately to Employee Health or ER (during off-hours) for testing.

PANDEMIC FLU
IN LOS ANGELES
COUNTY:The remainder of this plan addresses the plan when pandemic flu cases are occurring
in Los Angeles County. In the event that pandemic flu is being spread in Los Angeles
County, adequate infection control will need to be ensured for influenza patients at
Olive View-UCLA Medical Center and it is likely that the need for hospital beds will
exceed capacity. It will therefore need to maximize surge capacity for the hospital,
including expanding the number of hospital beds, and making available the necessary
extra equipment.

I. COMMUNICATIONS PLAN

A. External Communications

External communication about pandemic influenza will be the responsibility of the Public Information Officer. The CEO or Incident Commander will designate a clinical spokesperson(s) and media spokesperson. With guidance from California and Los Angeles County health departments, the Public Information Officer will determine the methods, frequency, and scope of external communications.

Hospital Infection Control will be responsible for influenza public health reporting to Los Angeles County DHS.

In the event of a pandemic, responsibility for hospital communications with other healthcare facilities, public health and safety agencies will be based on the Emergency Management Plan.

B. Internal Communications:

Employees, patients, and visitors will be informed of the ongoing impact of pandemic influenza on the facility and on the community either via posted signs, intranet, or email communications, as appropriate.

Signs for respiratory hygiene/cough etiquette will be posted in public access areas, such as DEM, hospital and clinic entrances and elevators, clinic waiting rooms, cafeteria (Appendix E)

Information sheets will be provided to patients and families as needed. Templates for patient information sheets are included in Appendices E and F.

II. EDUCATION AND TRAINING

A. Staff Education

Continuing education meetings, medical Grand Rounds, and tabletop exercises and other educational venues will be used as opportunities for training on pandemic influenza. Pandemic Flu Link on the Olive View-UCLA Medical Center intranet will be updated with material approved by the Manager of the Infection Control Department, and hospital management will encourage promotion and use of online education modules during staff meetings. Special sessions will be held during offhour shifts when a pandemic is announced for "just in time" education of staff.

Hospital-specific topics for staff education will include:

- Policies and procedures for the care of pandemic influenza patients, including proper use of PPE and environmental containment measures
- Pandemic staffing contingency plans, including how the facility will deal with illness in personnel
- Policies for restricting visitors and mechanisms for enforcing these policies
- Reporting to the health department suspected cases of infection caused by novel influenza strains
- Measures to protect family and other close contacts from secondary occupational exposure
- Training to screen and detect patients with influenza symptoms and to implement immediate containment measures to prevent transmission
- Psychosocial aspects related to management of mass fatalities.
- Social workers, psychologists, psychiatrists, and nurses will be provided with guidance for providing psychological support to patients and hospital

personnel using appropriate educational materials.

A.

Education of patients, family members, and visitors will include:

- Materials to inform patients and others about what they need to do to prevent influenza transmission in the hospital, as well as at home and in community settings, will be distributed at entrances to the hospital and posted in inpatient and outpatient areas (Appendix E)
- Signs will be posted that promote respiratory hygiene/cough etiquette and social distancing in common areas (e.g., elevators, waiting areas, cafeterias, and lavatories) where they can serve as reminders to all persons in the health care facility (Appendix E).

III. FACILITY ACCESS

Los Angeles County Sheriff and contracted security employees will be utilized to limit and secure access to the facility.

When it has been determined that DEM capacity has been exceeded, then access may be limited as follows:

- First Floor Lobby for suspected influenza patients and those accompanying them.
- Second Floor Lobby entrance for staff. Upon screening, hospital work force members will be given a daily sticker that will allow them to reenter the building throughout the day without being rescreened for influenza-like symptoms.
- Patients arriving for outpatient clinic appointments who do not have influenza symptoms will be screened at the Second Floor Lobby entrance and then will be directed to proceed to the appropriate clinic.

Criteria and protocols for limiting "non-essential" visitor access to the Medical Center will be implemented according to HEICS Disaster Response Guide.

Triggers for temporary closing of the hospital to new admissions and transfers will be implemented based on the Emergency Management Surge Capacity Plan.

All visitors will be screened at point of entry to facility for signs and symptoms of influenza.

Clinical staff will be assigned to perform entry screening. It may be appropriate to use less skilled personnel to screen at entrances.

IV. PATIENT MANAGEMENT

B. Triage, DEM/UC, and Clinic Plan:

- Consider implementing a telephone triage system to discourage unnecessary ED/outpatient department visits. This may be a county-wide effort.
- Patients presenting to scheduled appointments with symptoms of influenza will

be given a mask and screened by the RN or MD on duty in the clinic. Those who are not acutely ill should be sent home and re-scheduled; those who appear to require oxygen, respiratory therapy, or hospital admission should be referred to DEM.

- Patients presenting to DEM/UC will be screened for influenza symptoms; those meeting criteria will be triaged to a separate waiting and treatment area.
- Initially, small numbers of suspected influenza patients may be triaged to designated sections within DEM (e.g. gray area and purple waiting room) and kept segregated from the general DEM population.
- As the DEM patient volume increases, an auxiliary waiting area will be established in the outdoor area adjacent to the DEM waiting room. The main DEM lobby will be used as a triage/treatment area for influenza patients.
- If the number of influenza patients seeking treatment exceeds the increased DEM capacity, the Urgent Care Clinic space would be converted into a supplemental influenza assessment and treatment area.
- As numbers of influenza patients exceed the additional capacity created above, a physically separate "influenza DEM" will be created. At this stage, all patients entering the hospital will be directed to the covered area outside the first floor lobby, where an initial triage/screening area will be established. Setup will include 4-6 tables with at least 8 chairs, and different color patient and visitor stickers to reflect flu versus non-flu patients. Staffing of this area can use non-patient care personnel with multi-lingual capabilities, with perhaps one nurse to identify the more seriously ill.
 - <u>Patients with influenza-like symptoms</u> will be directed to the first-floor lobby for triage/vital signs/financial, etc. The First Floor Lobby information booth will be supplied with computers, phones, vital sign machines, and any other needed triage equipment.
 - The first-floor lobby will serve as a waiting area for patients/visitors WITH influenza-like illness.
 - Patient care will take place in an auxiliary DEM established in the auditorium. This will require:
 - Cots, linens, curtains or other dividers, chairs, portable oxygen tanks/cannulae/masks, and supply carts as used in DEM for patient care supplies, for up to 35 patients at a time.
 - Personal protective equipment carts
 - Tables, chairs, computers, forms, and other equipment needed to establish a nursing station and physician's work area (within or adjacent to the patient care area).
 - Staffing appropriate for the patient load, up to 35 at a time (i.e. equivalent to regular DEM):
 - 1-2 Attending Physicians
 - 3-4 Residents
 - 1 NP
 - 7-10 RNs
 - 3-5 CNAs
 - 2 clerks

- <u>Patients without influenza-like symptoms</u> (e.g., patients here for regular care or for non-flu related unscheduled visits) will be directed to the Second Floor Lobby entrance for screening, as discussed under Section 3, "Facility Access."
 - Ambulatory patients may walk around the building to the second floor entrance, as directed by signage and possibly tape/paint on ground.
 - Patients unable to make the walk may require shuttles, or may be escorted through the lobby directly to the elevators via gurney, with a mask on.
 - Patients arriving by ambulance may bypass the first floor if the paramedic/EMT/driver indicates no signs of pandemic flu in the patient.
 - Patients arriving by private auto who are unable to get out will be directed to the appropriate location by security or frontline personnel.
- Non-flu DEM/UC patients will be triaged and treated as per usual in the primary DEM. As clinics and/or elective procedures are cancelled, that open space and nurse/physician workforce may be recruited to care for DEM/UC patients with specific conditions.
 - Patients may be triaged directly to specialty areas or clinics if appropriate, as is presently done for Psych ER and Pediatric UC patients, e.g.:
 - Podiatry Clinic
 - Hand/Plastics Clinic
 - MFU
 - Eye
 - ENT
 - Orthopedics
 - Alternative care site for ambulatory psychiatric patients. It is anticipated that more patients may require psychiatric counseling or consultation (but not necessarily admission) in the case of a large disaster such as a flu pandemic.
 - All Psychiatric ER patients will be treated in the Psychiatric ER if they are stable to remain there (e.g., not requiring oxygen, monitoring, IVF, etc.) Psychiatric patients with the flu will be kept segregated from the remainder; e.g., using the separate "blue" versus "pink" treatment areas.
- 1. Health Centers Triage and Treatment
 - Implement telephone triage system to discourage unnecessary visits
 - Patients presenting to scheduled appointments with symptoms of influenza will be given a mask and screened by the RN on duty in the clinic. Those who are not acutely ill should be sent home and rescheduled
 - Patients without influenza-like symptoms (e.g., regular care or non-

flu-related unscheduled visits) will be directed to the appropriate area

C. Hospital Admissions Plan

- 1. Patient placement
 - Admission of influenza patients will be limited to those with severe complications of influenza who cannot be cared for outside the hospital setting.
 - Admit patients to either a single-patient room (for first few cases) or an area designated for cohorting of patients with influenza. (see below for details of cohorting plan)
- 2. Cohorting
 - Designated units or areas of the inpatient hospital facility shall be used for cohorting patients with pandemic influenza. During a pandemic, other respiratory viruses (e.g., non-pandemic influenza, respiratory syncytial virus, parainfluenza virus) may be circulating concurrently in a community. Therefore, to prevent cross-transmission of respiratory viruses, whenever possible assign only patients with confirmed pandemic influenza to the same room. At the height of a pandemic, laboratory testing to confirm pandemic influenza is likely to be limited, in which case cohorting should be based on having symptoms consistent with pandemic influenza.
 - Personnel (clinical and non-clinical) assigned to cohorted patient care units for pandemic influenza patients should not "float" or otherwise be assigned to other patient care areas. The number of personnel entering the cohorted area should be limited to those necessary for patient care and support.
 - Personnel assigned to cohorted patient care units should be aware that patients with pandemic influenza may be concurrently infected or colonized with other pathogenic organisms (e.g., *Staphylococcus aureus, Clostridium difficile*) and should adhere to infection control practices (e.g., hand hygiene, changing gloves between patient contact) used routinely, and as part of standard precautions, to prevent nosocomial transmission.
- 3. Patient Transport
 - Limit patient movement and transport outside the isolation area to medically necessary purposes.
 - Consider having portable x-ray equipment available in areas designated for cohorting influenza patients.
 - If transport or movement is necessary, ensure that the patient wears a surgical or procedure mask. If a mask cannot be tolerated (e.g., due to the patient's age or deteriorating respiratory status), apply the most practical measures to contain respiratory secretions. Patients should perform hand hygiene before leaving the room.

- 4. Visitors
 - Screen visitors for signs and symptoms of influenza before entry into the facility and exclude persons who are symptomatic.
 - Family members who accompany patients with influenza-like illness to the hospital are assumed to have been exposed to influenza and should wear masks.
 - Limit visitors to persons who are necessary for the patient's emotional well-being & care.
 - Instruct visitors to wear surgical or procedure masks while in the patient's room.
 - Instruct visitors on hand-hygiene practices.

D. Hospital Inpatient Surge Capacity

The expected maximal surge capacity of this facility is 336 beds, broken down as follows:

- 258 General ward beds (170 baseline plus 88 added surge capacity)
- 78 Step-down/Critical Care beds (50 baseline plus 28 added surge capacity)

A general plan for utilizing and expanding available beds is as follows, in order:

- Initially, if only a few floor beds are needed the isolation rooms on the 4th floor units will be used.
- As those fill up, 4C will be used to cohort the first 22 floor admits. Pediatric non-flu patients will be moved to 3rd floor space in the nursery, NICU, or 3D as appropriate.
- 4D will then accept the next 28 flu patients (including 4 in DWR).
 - As inpatient needs increase, non-flu patients will be redistributed from 4D, to 5th floor beds (medicine), 3D/SDS/L&D (Gyn), or 3D/SDS (Surgery).
- The next 34 influenza patients will be placed in 4A, and non-influenza patients redistributed as above.
- When all available rooms have been filled, then the number of patients per individual ward rooms can be increased to 3 per room, while maintaining at least 3 feet between patients. Begin in unit 4A, then unit 4D, then unit 4C. 5A, 5C, and 5D may also be converted to 3 beds per rooms as needed for noninfluenza patients.
- When the hospital reaches full capacity, areas not normally used for inpatient care will be opened, e.g., Physical Therapy, etc.
- Non-ICU level flu patients will be admitted to 2F (up to15 if single room; 30 if cohorted)
- The first 6 Influenza patients requiring ICU/SDU level care will be placed in 4BS
 - Non-flu patients in 4B South will be redistributed to 5BN/S (if sick) or telemetry/floor beds on the 5th floor (if not).
 - When full Utilize 4BN for the next 12 patients
- If additional ICU beds are needed, flu patients may be admitted to isolation ICU beds in 5BS and 5BN (1, 2, 11, 12). Non-flu ICU patients in those rooms may be moved to swing space on 5D, to the PACU/OR, or ASPU. This will

allow for an additional 10 ventilated influenza patients.

Use of the entire 4th floor and sections of 5th floor would allow a total of 116 beds for influenza patients, of which 28 are ICU/ventilator capable.

- Hospital admissions procedures:
 - The Pandemic Influenza Advisory Team will determine thresholds for deferring elective admissions and procedures until local epidemic wanes.
 - Early rapid discharge may be necessary and should be coordinated with the Medical Director and social services where possible.
 - Where possible, work with home health care agencies to arrange for athome follow-up care of early discharged and deferred admission patients.
 - Work with hotline to arrange follow-up calls for early discharged patients.
 - Determine and address how essential services will be maintained for persons with chronic medical problems served by the hospital (e.g. oncology, etc.)
 - Consider moving some outpatient services to off-site facilities to limit exposure to influenza infection (e.g. Mid-Valley, etc.)

E. Staffing Practices to Increase Surge Capacity

Responsibility for the assessment and coordination of staffing will be assigned to Incident Commander (see Emergency Management Plan and HEICS Disaster Response Guide). Staffing needs shall be assessed daily as the number of patients with pandemic influenza increases and/or health care and support personnel become ill or remain at home to care for ill family members. The Incident Commander will coordinate with Human Resources, which will oversee the pool of volunteers, staff, retirees, etc. to ensure staffing needs are met.

The following options may be utilized to increase the number of available patient caregivers:

- Assigning patient-care responsibilities to clinical administrators
- Recruiting retired healthcare personnel
- Emergency credentialing for health-care professionals. (See Appendix G) Including
 - Emergency System for Advance Registration of Volunteer Health Professionals (ESAR-VHP) system, administrated by L.A. County DHS
 - Web based licensure check for physicians, physician assistants, and nurses
 - Badging with photo ID and title of existing personnel (coordinated by HR, IS, and Security.
 - Rapid badging of new personnel
- Using trainees (e.g., medical and nursing students).
- Using volunteers.
- Using patients' family members in an ancillary healthcare capacity.

- Efforts shall be made to ensure that essential-support personnel needed to maintain hospital operations are available.
- Increase cross training of personnel to provide support for essential patient-care areas at times of severe staffing shortages (e.g. in ED, ICU, Med-Surg, etc.).
- Review the list of non-essential positions that can be re-assigned to support critical hospital services. (e.g., Physical Therapy, Occupational Therapy, Mammography, Surgery, Outpatient Clinics, Education, Billing).
- 5. Physician staffing:
 - It is likely that several ICU/ward teams will need to be created in order to deal with the increase in admissions and hospital census.
 - Attending IM physician staff not currently assigned to inpatient services should remain available to assume care for surge inpatients.
 - IM residents on elective and consult services will be recalled in order to staff inpatient teams.
 - Ideally, outpatient clinics should remain open, as to avoid increasing DEM/UC volume. Therefore, these residents should be pulled primarily for night or weekend coverage rather than removing them from clinics.
 - Outlying DHS clinics should remain open and see all walk-in traffic (rather than direct it to OVMC) in order to reduce crowding at the main campus.
 - Elective surgery and other elective procedures (e.g., IR, cardiac catherization, endoscopy) will be deferred. Physicians normally scheduled for those activities should participate in assessing and treating DEM/UC patients or inpatients, appropriate to their training and skills.
 - In the case that an entirely new DEM is established downstairs, EM and IM attendings and residents will staff it. Therefore, subspecialty physicians (and nurses) may be recruited to see non-flu walk-ins, for example:
 - Surgical: abd pain, wounds, abscesses
 - OB/Gyn: pregnancy, vaginal complaints, breast c/o.
 - Cardiology: chest pain, HTN, SOB
 - GI: n/v/diarrhea, liver complaints, GI bleeding
- 6. Other Staffing Measures for Pandemic Influenza:
 - The labor pool will categorize available staff into three categories:
 1) Recovered from influenza or successfully vaccinated against pandemic strain;
 - 2) Susceptible to influenza;

3) High risk for complications from influenza (e.g., pregnant, lung disease)

• Staff who have recovered from influenza and are well enough to work may care for influenza patients. Workers who have been afebrile for at least 7 days after influenza and are therefore likely immune are also

well suited to care for patients who are at risk for serious complications from influenza (e.g., transplant patients and neonates).

- 1. Consider furlough or reassignment of pregnant staff and other staff at high risk for complications of influenza.
- Change nursing ratios to account for reduced staffing and increased patient load. It is expected that the normal ratios will be exceeded. (see document: Providing Mass Medical Care with Scarce Resources: A Community Planning Guide available at: http://www.ahrq.gov/research/mce/)
- Implement a system for detecting and reporting signs and symptoms of influenza in staff reporting for duty (see Appendix K, Employee Surveillance Plan).
- Implement vaccination program for employees, if vaccine is available (see Appendix K, Employee Surveillance Plan, and Appendix C for priority list).
- Implement program for antiviral treatment of staff with influenza (Appendix K).
- Temporary housing will be provided for those who cannot or do not wish to go home between shifts. Four methods of temporary housing have been identified:
 - The Travelodge Hotel on the corner of Roxford and Foothill Blvd.
 - The Education Center, which has two kitchens with microwaves, 5 large rooms for cots, and bathroom facilities on both floors.
 - Portable showers with hot and cold running water will be located behind the Education Center
 - Storage of cots, linen, food and water supplies, personal hygiene packets can be accommodated behind the building in a self-enclosed tamper proof bin.
 - Cottages with bathrooms and showers on hospital campus will be utilized.
 - A list will be maintained by Human Resources with retired personnel and other local community members who have agreed to volunteer a room or more to house employees.
- Child care for children of personnel will be provided in the Child Care Center. Volunteer employees will be recruited and vaccinated prior to providing care for children. Children with possible influenza symptoms will be segregated from well children.

F. Equipment and Supplies for Increased Surge Capacity

- 1. Stockpiling and Allocation of Scarce Resources
 - It will be important to insure adequate security for critical supplies
 - Materials management will maintain storage containers with vaccination supplies, two week stockpile and supplies to open additional emergency unit in the auditorium.
 - In case of disaster or pandemic, materials management will automatically increase the monitoring of supplies to twice daily and increase levels based on new usage.

- Hospital dietary dept. will maintain supplies on hand to serve approximately 1200 meals a day for 7 days. Additional MREs will be stockpiled.
- 2. Mechanical Ventilation
 - Olive View-UCLA Medical Center will stockpile ventilators as noted in Appendix B
 - Full-feature ventilators in service will be supplemented by a stockpile of single use disposible ventilators (e.g., Vortran)
 - "Octopus" setups will allow 7 Vortran vents off one oxygen supply
 - As ventilator capacity is reached, decisions will need to be made as to how vents are allocated among patients. Decisions regarding discontinuation of ventilator support for some patients to free up ventilators for higher priority patients will be made by the critical care attending physician on duty in the ICU, with oversight by the ethics committee. Established triage protocols (See http://www.cmaj.ca/cgi/content/full/175/11/1377 - F115 for a sample of

ventilator triage plan) should be applied when possible.

- 3. Influenza Vaccine
 - Influenza vaccine will likely be distributed locally through Los Angeles County DHS/DPH.
 - Olive View-UCLA Medical Center will work with state and local health departments to develop plans for distribution and administering vaccine to local community after priority groups vaccinated, depending on availability.
 - A package will be developed for vaccination areas including: handouts (Quarantine / Self-Care information), adverse reactions, syringes, needles, alcohol swabs, needle boxes, epinephrine, Benadryl (see Appendix D).
- 4. Anti-viral medications
 - Los Angeles County DHS/DPH has plans to stockpile oseltamivir centrally for distribution to hospitals and clinical sites.
 - When oseltamivir is released to the facility, priority patients will be those requiring mechanical ventilation, then those requiring inpatient care, then those who are at high risk for complications but are not yet acutely ill. The CMAJ protocol may be applicable here. Key clinical staff with influenza should be treated as well, possibly before patients receive the medication.
 - Decisions regarding allocation of antiviral medications will be made by the infectious disease attending physician identified by the incident commander.
 - The distribution plan may need to be modified to take into account updated recommendations on target groups and projected supplies of antiviral drugs.
- 5. Anti-bacterial antibiotics
 - Morbidity and mortality from influenza proceeds by one of two pathways: severe RDS from the virus itself, or superinfection with pathogenic bacteria resulting in respiratory failure and/or sepsis. The

two entities may be difficult to distinguish initially, so it is likely that many sick (admitted) flu patients will receive antibiotics.

- Adequate supplies will need to be maintained of IV ceftriaxone, doxycycline, azithromycin, vancomycin, and levofloxacin for our usual patients plus 110-120 surge patients.
- It is also likely that patients will be discharged home with antibiotics (from DEM or inpatient). Thus oral doses of doxycycline, azithromycin, and levofloxacin for several hundred treatment courses should be available.
- 6. Oxygen
 - Most or all hospitalized pandemic flu patients will require supplemental oxygen. (if not, they should probably use an alternative care site)
 - We should ensure that we have enough oxygen for 40-50 ventilators and an additional 75 to 100 patients on supplemental oxygen at any given time.
 - Discharging patients on home O₂ may be an effective way to lessen length-of-stay and increase bed availability. Additional bottled oxygen and delivery systems should be requested.

V. EMPLOYEE HEALTH

The ability to deliver quality health care is dependent on adequate staffing and optimum health and welfare of staff. During a pandemic, the healthcare workforce will be stressed physically and psychologically. Like others in the community, many health care workers will become ill. The following approaches will be utilized:

A. Managing ill workers

- Health care personnel will be screened for signs and symptoms of influenza before they report for duty using the ILI assessment criteria using a phone triage system. In addition, healthcare workers will be screened on entrance to the hospital and will not be permitted to work if they have fever or respiratory symptoms.
- Symptomatic personnel should be sent home until they are physically ready to return to duty.
- Staff may return to work when their fever has been below 100.4° F (38° C) for a period of 24 hours without fever-reducing medications and no longer have fever and respiratory symptoms.
- Staff who have recovered from influenza and are well enough to work may care for influenza patients. Workers who have been afebrile for at least 7 days after influenza and are therefore likely immune are also well suited to care for patients who are at risk for serious complications from influenza (e.g., transplant patients and neonates).

B. Reassignment of high-risk personnel

Staff at high risk of complications of influenza (e.g., pregnant women, immunocompromised persons) will be reassigned to low-risk duties (e.g., noninfluenza patient care, administrative duties that do not involve patient care) or placed on furlough.

C. Influenza vaccination and use of antiviral drugs

- A strategy for rapidly vaccinating and, if available, providing antiviral prophylaxis or treatment to healthcare personnel with direct patient-care responsibilities will be implemented based on pending HHS and state health department recommendations and will be coordinated through Employee Health and the incident commander.
- See Appendix C for priority list for vaccination.
- Develop a package for vaccination areas including: handouts (Quarantine / Self-Care information), adverse reactions, syringes, needles, alcohol swabs, needle boxes, epinephrine, Benadryl. (See Appendix D)

D. Use and administration of vaccines and antiviral drugs

- Once the characteristics of a new pandemic influenza virus are identified, the development of a pandemic vaccine will begin. Efforts are underway to stockpile vaccines for subtypes with pandemic potential. As supplies of these vaccines become available, it is possible that some healthcare personnel and others critical to a pandemic response will be recommended for vaccination to provide partial protection for a pandemic strain
- In the interim, we shall monitor updated HHS information and recommendations on the development, distribution, and use of a pandemic influenza vaccine <u>http://www.pandemicflu.gov</u>
 - Health care personnel that are most critical for patient care and to maintain the day-to-day operation of the health care facility will be prioritized to receive pandemic influenza vaccine when it becomes available, based on pending final recommendations of California and Los Angeles County DHS (see Appendix C).
 - Antiviral drugs effective against the circulating pandemic strain can be used for treatment and possibly prophylaxis during an influenza pandemic. Because of the effectiveness of treatment with antiviral drugs such as oseltamivir and zanamivir, and the greater need to utilize limited drug supply for treatment of influenza illness, the use of these agents for prophylaxis will be restricted to maximize health benefits.

VI. SURVEILLANCE PLAN – PANDEMIC FLU IN L.A. COUNTY

- All individuals with influenza-like symptoms (patients and employees) will be screened for influenza and tested as appropriate.
- Selected patients may be tested for specific pandemic strains (e.g., H1N1) according to guidelines to be established by L.A. County Department of Public Health and CDC.
- Employees will be instructed to report their flu-like symptoms immediately to Employee Health or ANO (during off-hours) for screening.
- Infection control staff will maintain a daily census of confirmed and suspected influenza patients, to be shared in briefings with local Pandemic Influenza Advisory Team and L.A. County Public Health.
- Active laboratory and clinical surveillance for influenza will be performed, including assessment and reporting of the following measures:

- Number of positive influenza diagnostic tests/number of tests submitted to Clinical Microbiology (report weekly to monthly);
- Number of patients evaluated in the DEM/UC with ILI (report daily to weekly)
- Number of employees evaluated in Employee Health for ILI and number of employees absent with ILI (report daily to weekly).
- Numbers of hospitalized admissions for ILI/total number of hospital admissions (report daily to weekly)
- Numbers of deaths from influenza or influenza complications (report monthly).
- Percent compliance with hand hygiene and appropriate use of personal protective equipment when caring for a patient with ILI (report daily to weekly).

VII. INFECTION CONTROL

A. Infection Control Principles

The following infection control principles apply in any setting where persons with pandemic influenza might seek and receive healthcare services.

- Limit contact between infected and non-infected persons.
- Isolate infected persons (e.g., confine patients to a defined area as appropriate for the healthcare setting).
- Limit contact between nonessential personnel and other persons (e.g., social visitors) and patients who are ill with pandemic influenza.
- Promote spatial separation in common areas (e.g., sit or stand as far away as possible—at least 3 feet—from potentially infectious persons) to limit contact between symptomatic and non-symptomatic persons.
- Protect persons caring for influenza patients in healthcare settings from contact with the pandemic influenza virus.

Persons who must be in contact should:

- Wear a surgical mask for close contact with infectious patients.
- Use contact and airborne precautions, including the use of N95 respirators, when appropriate.
- Wear gloves (gown or faceshield if necessary) for contact with respiratory secretions.
- Perform hand hygiene after contact with all patients.
- Contain infectious respiratory secretions.
- Instruct persons who have "flu-like" symptoms (see below) to use respiratory hygiene/cough etiquette.
 - Promote use of masks by symptomatic persons in common areas (e.g., waiting rooms in physician offices or emergency departments) or when being transported (e.g., in emergency vehicles).
 - Transport of suspected flu patients, when necessary, will be arranged with Los Angeles County EMS MAC/ReddiNet; especially for patient populations unable to be served by OVMC.

B. Management of infectious patients

Respiratory hygiene/cough etiquette has been promoted as a strategy to contain respiratory viruses at the source and to limit their spread in areas where infectious patients might be awaiting medical care (e.g., physician offices, emergency departments; see Appendix E). The elements of respiratory hygiene/cough etiquette include:

- Education of healthcare facility staff, patients, and visitors on the importance of containing respiratory secretions to help prevent the transmission of influenza and other respiratory viruses
- Posted signs in languages appropriate to the populations served with instructions to patients and accompanying family members or friends to immediately report symptoms of a respiratory infection as directed.
- Source control measures (e.g., covering the mouth/nose with a tissue when coughing and disposing of used tissues; using masks on the coughing person when they can be tolerated and are appropriate)
- Hand hygiene after contact with respiratory secretions.
- Spatial separation, ideally >3 feet, of persons with respiratory infections in common waiting areas when possible.

C. Droplet precautions and patient placement:

Patients with known or suspected pandemic influenza should be placed on droplet precautions for a minimum of 5 days from the onset of symptoms. Because immuno-compromised patients may shed virus for longer periods, they may be placed on droplet precautions for the duration of their illness. Health care personnel should wear appropriate PPE. If the pandemic virus is associated with diarrhea, contact precautions (e.g., gowns and gloves for all patient contact) should be added.

D. Infection control practices for healthcare personnel

Infection control practices for pandemic influenza are the same as for other human influenza viruses and primarily involve the application of standard and droplet precautions during patient care. Personal protective equipment (PPE) is used to prevent direct contact with the pandemic influenza virus. PPE that may be used to provide care includes surgical masks, as recommended for droplet precautions, and gloves and gowns, as recommended for standard precautions. Additional precautions may be indicated during the performance of aerosol-generating procedures (see below).

- 1. Masks (surgical)
 - a. Wear a mask when entering a patient's room. A mask should be worn once and then discarded. If pandemic influenza patients are cohorted in a common area or in several rooms on a nursing unit, and multiple patients must be visited over a short time, it may be practical to wear one mask for the duration of the activity; however, other PPE (e.g., gloves, gown) must be removed between patients and hand hygiene

performed.

- b. Change masks when they become moist.
- c. Do not leave masks dangling around the neck.
- d. Upon touching or discarding a used mask, perform hand hygiene.
- e. If N95 masks are in short supply, employees should perform hand hygiene whenever their hands touch the outside of the mask. The masks may be worn continuously between patients. The masks may also be re-donned and used for the employee's full shift as long as the mask is not visibly soiled or broken.
- 2. Gloves
 - a. A single pair of patient care gloves should be worn for contact with blood and body fluids, including during hand contact with respiratory secretions (e.g., providing oral care, handling soiled tissues).
 - b. Remove and dispose of gloves after use on a patient; do not wash gloves for subsequent reuse.
 - c. Perform hand hygiene after glove removal.
 - d. If gloves are in short supply (i.e., the demand during a pandemic could exceed the supply), priorities for glove use might need to be established. In this circumstance, reserve gloves for situations where there is a likelihood of extensive patient or environmental contact with blood or body fluids, including during suctioning.
 - e. Use other barriers (e.g., disposable paper towels, paper napkins) when there is only limited contact with a patient's respiratory secretions (e.g., to handle used tissues). Hand hygiene should be strongly reinforced in this situation.
- 3. Gowns
 - a. Wear an isolation gown, if soiling of personal clothes or uniform with a patient's blood or body fluids, including respiratory secretions, is anticipated. Most patient interactions do not necessitate the use of gowns. However, procedures such as intubation and activities that involve holding the patient close (e.g., in pediatric settings) are examples of when a gown may be needed when caring for pandemic influenza patients.
 - b. Gowns should be worn only once and then placed in a waste or laundry receptacle, as appropriate, and hand hygiene performed.
 - c. If gowns are in short supply (i.e., the demand during a pandemic could exceed the supply) priorities for use may need to be established. Alternatively, other coverings (e.g., patient gowns) could be used. There are no data upon which to base a recommendation for reusing an isolation gown on the same patient. To avoid possible contamination, it is prudent to limit this practice.
- 4. Goggles or face shield
 - a. In general, wearing goggles or a face shield for routine contact with patients with pandemic influenza is not necessary. If sprays or splatter of infectious material is likely, goggles or a face shield should be worn

as recommended for standard precautions.

- 5. PPE for aerosol-generating procedures
 - a. During procedures that may generate increased small-particle aerosols of respiratory secretions (e.g., endotracheal intubation, nebulizer treatment, bronchoscopy, suctioning), healthcare personnel should wear gloves, gown, face/eye protection, and a N95 respirator.
 - b. If possible, and when practical, use of an airborne isolation room may be considered when conducting aerosol-generating procedures.

E. Precautions for Early Stages of a Pandemic

Early in a pandemic, it may not be clear that a patient with severe respiratory illness has pandemic influenza. Therefore, precautions consistent with all possible etiologies, including a newly emerging infectious agent, should be implemented. This may involve the combined use of airborne and contact precautions, in addition to standard precautions, until a diagnosis is established. This includes use of respiratory protection (an N95 filtering face piece respirator or other appropriate particulate respirator).

F. Caring for patients with pandemic influenza

- 1. Health care personnel should be particularly vigilant to avoid:
 - Touching their eyes, nose, or mouth with contaminated hands (gloved or ungloved). Careful placement of PPE before patient contact will help avoid the need to make PPE adjustments and risk selfcontamination during use. Careful removal of PPE is also important.
 - Contaminating environmental surfaces that are not directly related to patient care (e.g., door knobs, light switches).
- 2. Hand hygiene
 - Hand hygiene has frequently been cited as the single most important practice to reduce the transmission of infectious agents in healthcare settings and is an essential element of standard precautions. The term "hand hygiene" includes both hand-washing with either plain or antimicrobial soap and water and use of alcohol-based hand rub products.
 - If hands are visibly soiled or contaminated with respiratory secretions, wash hands with soap (either non-antimicrobial or antimicrobial) and water.
 - In the absence of visible soiling of hands, approved alcohol-based hand rub products for hand disinfection are preferred over antimicrobial or plain soap and water because of their superior microbiocidal activity, reduced drying of the skin, and convenience.
 - Always perform hand hygiene between patient contacts and after removing PPE.
- 3. Disposal of solid waste

Standard precautions are recommended for disposal of solid waste (medical and non-medical) that might be contaminated with a pandemic influenza virus:

- Contain and dispose of contaminated medical waste in accordance with state regulations for handling and disposal of medical waste, including used needles and other sharps, and non-medical waste.
- Discard as routine waste used patient-care supplies that are not likely to be contaminated (e.g., paper wrappers).
- Wear disposable gloves when handling waste. Perform hand hygiene after removal of gloves.

4. Linen and laundry

Standard precautions are recommended for linen and laundry that might be contaminated with respiratory secretions from patients with pandemic influenza:

- Place soiled linen directly into a laundry bag in the patient's room. Contain linen in a manner that prevents the linen bag from opening or bursting during transport and while in the soiled linen holding area.
- Wear gloves and gown when directly handling soiled linen and laundry (e.g., bedding, towels, personal clothing) as per standard precautions. Do not shake or otherwise handle soiled linen and laundry in a manner that might create an opportunity for disease transmission or contamination of the environment.
- Wear gloves for transporting bagged linen and laundry.
- Perform hand hygiene after removing gloves that have been in contact with soiled linen and laundry.
- Wash and dry linen according to routine standards and procedures.

5. Dishes and eating utensils

Standard precautions are recommended for handling dishes and eating utensils used by a patient with known or possible pandemic influenza:

- Wash reusable dishes and utensils in a dishwasher with recommended water temperature.
- Disposable dishes and utensils (e.g., used in an alternative care site setup for large numbers of patients) should be discarded with other general waste.
- Wear gloves when handling patient trays, dishes, and utensils.

6. Patient-care equipment

Follow standard practices for handling and reprocessing used patient care equipment, including medical devices:

- Wear gloves when handling and transporting used patient-care equipment.
- Wipe heavily soiled equipment with an EPA-approved hospital disinfectant before removing it from the patient's room.
- Follow current recommendations for cleaning and disinfection or sterilization of reusable patient-care equipment.
- Wipe external surfaces of portable equipment for performing x-rays and other procedures in the patient's room with an EPA-approved hospital

disinfectant upon removal from the patient's room.

7. Environmental cleaning and disinfection

Cleaning and disinfection of environmental surfaces are important components of routine infection control in healthcare facilities. Environmental cleaning and disinfection for pandemic influenza follow the same general principles used in healthcare settings.

8. Postmortem care

Follow standard facility practices for care of the deceased. Practices should include standard precautions for contact with blood and body fluids.

9. Laboratory specimens and practices

Follow standard facility and laboratory practices for the collection, handling, and processing of laboratory specimens.

VIII. MORTUARY PLAN – MANAGEMENT OF HUMAN REMAINS

In the event of a Mass Fatality Incident, the hospital will refer to the Olive View-UCLA Medical Center Mass Fatality Plan for both on-site and off-site storage of bodies.

A. On-site Morgue Storage

The normal morgue capacity is eight crypts with an average of 30 percent occupancy. For increased surge capacity, there is the ability to hold 24 bodies. In the event of a Mass Fatality Incident (MFI) (more than 24 bodies), an alternate means of management will be necessary.

B. Off-site Morgue Storage

In the event of a MFI, an off-site morgue will be utilized. The contingency plans listed below have been established for an immediate response to an MFI occurring at Olive View-UCLA Medical Center.

1. Plan A

In the event of a MFI, additional morgue capacity can be obtained by storing the deceased bodies at the Vivarium Building. This is an ideal location because it is secure, equipped with a cooling system and emergency generator. Another benefit to the Vivarium building is that LA County Sheriff Substation is located in an adjacent building, facilitating security of the area.

2. Plan B

With major routes of transportation still open, additional morgue capacity can be obtained by utilizing large mobile refrigeration units. These can be delivered and positioned in the parking lot of the Old Laboratory Building adjacent to the Vivarium building. If refrigeration units are not available, an attempt will be made to obtain dry ice for the short term storage of bodies.

3. Plan C

In the event that none of these options are available, temporary internment with appropriate marking of location of remains is appropriate. The availability of body pouches for the conservation of human remains would be ideal. Large trenches can be employed, avoiding the stacking of human remains.

C. Infection Control Policy

Standard precautions will be practiced by those handling dead bodies. Universal precautions for blood and body and enteric fluids shall be followed.

| References: | | |
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