

Los Angeles County Emergency Medical Services Agency

Recommended Actions to
Prepare EMS Providers for Pandemic Influenza
by Pandemic Phase

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INTRODUCTION

For EMS providers, the winter season is routinely characterized as a time of high volume and taxing demand. Not surprisingly then, during even normal circumstances, the healthcare system in Los Angeles County (LAC) can be easily overwhelmed. But the projected tremendous and unprecedented demand for healthcare services during a pandemic will likely challenge our healthcare resources to levels not previously experienced.

LAC Department of Public Health has projected the impact of an influenza pandemic upon LAC's medical and healthcare system using the Centers for Disease Control and Prevention's (CDC) FluSurge 2.0 software. Estimates were calculated according to a modified model of the 1918 pandemic; it assumed

- a 30% attack rate
- a duration of an initial wave of illness to extend about 12 weeks, and
- hospitalization (if needed) to last about five days.

With those assumptions, the model predicted the number of hospitalizations in LAC to be about 376,000, and the predicted mortality to be about 63,000 deaths.

The World Health Organization (WHO) has developed a global influenza preparedness plan which defines the phases of a pandemic and recommends measures to take before and during a pandemic according to phase. LAC has adopted these phases to facilitate pandemic planning, response and recovery activities. These phases are considered the 'triggers' for recommended actions.

All of the preplanning in the world will not eliminate the increased demand that comes with a pandemic, but preparation can ease the burden on EMS personnel and administration. In order to assist EMS Providers to better prepare for and cope with a region-wide pandemic, the Emergency Medical Services Agency developed lists of Recommended Actions to Prepare EMS Providers for Pandemic Influenza by Pandemic Phase.

To make recommendations for future updates, please contact Kay Fruhwirth, Assistant Director, LAC EMS Agency, at 323-890-7539 or kfruhwirth@ladhs.org.

PANDEMIC INFLUENZA GUIDELINES FOR EMS PROVIDERS – MANAGEMENT

INTERPANDEMIC PERIOD	ACTIONS
WHO Phase 1 <ul style="list-style-type: none"> ▪ No novel influenza virus causing illness in humans 	<ol style="list-style-type: none"> 1. Assess supplies needed for universal precautions 2. Review the differences between seasonal and pandemic influenza 3. Fit test staff for N-95 masks 4. Educate staff on how they can stop the spread of germs 5. Post 'respiratory etiquette' posters and signs in work areas 6. Provide boxes of facial tissues and trash receptacles 7. Provide alcohol-based hand washing gel in all emergency vehicles 8. Subscribe to LAC Public Health Flu Watch Listserv
WHO Phase 2 <ul style="list-style-type: none"> ▪ No novel influenza virus causing illness in humans ▪ Circulating animal influenza virus subtype poses a substantial risk of human disease 	
PANDEMIC ALERT PERIOD	ACTIONS
WHO Phase 3 <ul style="list-style-type: none"> ▪ Human cases from the novel influenza virus ▪ No human to human transmission ▪ No cases in the United States 	<ol style="list-style-type: none"> 1. Review and update internal emergency operations plans 2. Plan for infrastructure disruptions 3. Establish vacation and on-call procedures for peak periods 4. Locate supplemental transport assets 5. Evaluate triage models 6. Consider placing masks on all patients transported with flu-like symptoms 7. Educate staff on the current situation 8. For updated information, review: <ul style="list-style-type: none"> ▪ US DHHS, http://www.pandemicflu.gov/ ▪ LAC Public Health, http://lapublichealth.org/acd/Pandemicflu.htm
WHO Phase 4 <ul style="list-style-type: none"> ▪ Small clusters with limited human-to-human transmission ▪ No cases in the United States 	
WHO Phase 5 <ul style="list-style-type: none"> ▪ Large clusters of illness ▪ Localized human-to-human transmission ▪ Little to no cases in the United States 	
PANDEMIC PERIOD	ACTIONS
WHO Phase 6 <ul style="list-style-type: none"> ▪ Widespread illness in the population throughout the world ▪ Sustained human to human transmission 	<ol style="list-style-type: none"> 1. Implement internal emergency operations plans 2. Implement adjusted staffing patterns 3. Implement essential staffing and services only 4. Limit the number of responders to the minimum necessary 5. Maintain 3 foot separation of all staff in sleeping quarters 6. Monitor the health of staff 7. Implement plan to evaluate symptomatic staff before they report for duty 8. Reassess staffing and consider redistribution of resources 9. Decontaminate ambulances using standard operating procedures 10. Follow LEMSA guidelines for patient transport, as available 11. Follow Public Health guidelines for vaccine and/or antivirals, as available
POST PANDEMIC PERIOD	ACTIONS
Return to WHO Interpandemic Period <ul style="list-style-type: none"> ▪ End of first pandemic wave ▪ Next wave may occur within several months 	Prepare for a possible next wave: <ol style="list-style-type: none"> 1. Conduct staff debriefings on what went well and what needs improvement 2. Implement appropriate changes based on debriefing and other analysis 3. Replenish supplies 4. Continue to monitor the health of staff

PANDEMIC INFLUENZA GUIDELINES FOR EMS PROVIDERS – RESPONDERS

INTERPANDEMIC PERIOD	ACTIONS
WHO Phase 1 <ul style="list-style-type: none"> ▪ No novel influenza virus causing illness in humans 	<ol style="list-style-type: none"> 1. Use universal precautions for every patient encounter 2. Review the differences between seasonal and pandemic influenza 3. Get fit tested for N-95 masks 4. Learn how to stop the spread of germs 5. Follow 'respiratory etiquette' 6. Use facial tissues and trash receptacles 7. Use alcohol-based hand washing gel after all patient contact
WHO Phase 2 <ul style="list-style-type: none"> ▪ No novel influenza virus causing illness in humans ▪ Circulating animal influenza virus subtype poses a substantial risk of human disease 	
PANDEMIC ALERT PERIOD	ACTIONS
WHO Phase 3 <ul style="list-style-type: none"> ▪ Human cases from the novel influenza virus ▪ No human to human transmission ▪ No cases in the United States 	<ol style="list-style-type: none"> 1. Continue to use universal precautions for every patient encounter 2. Perform safe work practices 3. Review internal emergency operations plans 4. Review triage models 5. Consider placing masks on all patients transported with flu-like symptoms 6. Notify receiving facility that patient has flu-like symptoms 7. Attend trainings on the current situation 8. Implement guidelines received from local EMS agency
WHO Phase 4 <ul style="list-style-type: none"> ▪ Small clusters with limited human-to-human transmission ▪ No cases in the United States 	
WHO Phase 5 <ul style="list-style-type: none"> ▪ Large clusters of illness ▪ Localized human-to-human transmission ▪ Little to no cases in the United States 	
PANDEMIC PERIOD	ACTIONS
WHO Phase 6 <ul style="list-style-type: none"> ▪ Widespread illness in the population throughout the world ▪ Sustained human to human transmission 	<ol style="list-style-type: none"> 1. Continue to use universal precautions for every patient encounter until otherwise instructed 2. Consider placing masks on all patients transported with flu-like symptoms 3. Ventilate ambulances if possible 4. Notify receiving facility that patient has flu-like symptoms 5. Implement internal emergency operations plans 6. Load ambulances with more than one patient with like symptoms 7. Limit the number of responders to the minimal necessary 8. Maintain 3 foot separation of all staff in sleeping quarters 9. Decontaminate ambulances using standard operating procedures 10. Follow LEMSA guidelines for patient transport, as available 11. Follow Public Health guidelines for vaccine and/or antivirals, as available
POST PANDEMIC PERIOD	ACTIONS
Return to WHO Interpandemic Period <ul style="list-style-type: none"> ▪ End of first pandemic wave ▪ Next wave may occur within several months 	Prepare for a possible next wave: <ol style="list-style-type: none"> 1. Participate in debriefings on what went well and what needs improvement

RECOMMENDED ACTIONS: INTERPANDEMIC PERIOD

WHO Phase 1

- No novel influenza virus causing illness in humans

WHO Phase 2

- No novel influenza virus causing illness in humans
- Circulating animal influenza virus subtype poses a substantial risk of human disease.

MANAGEMENT

1. Assess supplies needed for universal precautions.
2. Review the differences between seasonal and pandemic influenza. See chart on the Comparison of Seasonal and Pandemic Influenza on page 16.
3. Fit test staff for N-95 masks. However, surgical masks may be used as needed. See Use of Masks During a Pandemic on page 17.
4. Educate staff on stopping the spread of germs at the work place. See CDC handout on page 18.
5. Post 'respiratory etiquette' posters and signs in work areas. See CDC poster: Cover Your Cough on page 20.
6. Provide boxes of facial tissues and trash receptacles in the work place and for patient transport.
7. Provide alcohol-based hand washing gel in all emergency vehicles and the work place and promote its use.
8. Subscribe to LAC Public Health Flu Watch Listserv. The Influenza Watch LISTSERV of the LAC Department of Public Health is maintained by the Acute Communicable Disease Control Program. The purpose of this LISTSERV is to keep health professionals informed about local, state and national influenza activity. Influenza Watch is sent out to all subscribers every week during flu season. Send an email to LISTSERV@listserv.ladhs.org, and in the body of the email enter SUBSCRIBE FLUWATCH. No information in the subject line is needed.

RESPONDERS

1. Use universal precautions for every patient encounter.
2. Review the differences between seasonal and pandemic influenza. See chart on the Comparison of Seasonal and Pandemic Influenza on page 16.
3. Get fit tested for N-95 masks. However, surgical masks may be used as needed. See Use of Masks During a Pandemic on page 17.
4. Learn how and follow steps to stop the spread of germs.
5. Follow 'respiratory etiquette' procedures.
6. Use facial tissues and trash receptacles.
7. Use alcohol-based hand washing gel after all patient contact.

RECOMMENDED ACTIONS: PANDEMIC ALERT PERIOD

WHO Phase 3

- Human cases from the novel influenza virus
- No human to human transmission
- No cases in the United States

WHO Phase 4

- Small clusters with limited human-to-human transmission
- No cases in the United States

WHO Phase 5

- Large clusters of illness
- Localized human-to-human transmission
- Little to no cases in the United States

MANAGEMENT

Phases 3-4

1. Review and update internal emergency operations plans. Review the US DHHS Pandemic Influenza Planning Checklist for Emergency Medical Services on page 21. Consider what is the threshold at which it may not be possible to respond to all calls for service, and what operational procedures would need to be altered to respond as effectively as possible (e.g., loading ambulances with more than one patient with like symptoms). Also plan for psychosocial issues; review the Impact of Pandemic Influenza on Healthcare Workers and the Checklist for Workforce Support Services/Resources on page 28.
2. Plan for infrastructure disruptions that may result due to staffing shortages in other industries. These may include a reduction or lack of services in utility, sanitation, transportation (including fuel), information technology, supply chain, communications, and education fields. Develop contingency plans to maintain operations if one or more of these industries decline.
3. Establish vacation and on-call procedures for peak periods.
4. Locate supplemental transport assets.
5. Evaluate triage models.
6. Consider placing masks on all patients transported with flu-like symptoms. Review the Influenza-Like Illness Assessment Tool on page 31. Review the US DHHS Pandemic Influenza Plan, Supplement 4, Pre-Hospital Excerpt on page 32 for additional infection control information.
7. Educate staff on the current pandemic influenza situation.
8. For updated information, review: US DHHS, www.pandemicinfluenza.gov and LAC Public Health, <http://lapublichealth.org/acd/Pandemicflu.htm>.

Phase 5

1. Activate internal emergency operations plans, and educate staff on these plans.
2. Encourage safe work practices among EMS personnel to prevent transmission of influenza. Activities include:
 - Avoid touching one's face with contaminated gloves.
 - Avoid unnecessary touching of surfaces in the ambulance vehicle.
 - Arrange for the receiving facility staff to meet the patient at the ambulance door to limit the need for EMS personnel to enter the emergency department in contaminated PPE. (It may not be practical to change PPE before patient transfer into the facility.) Remove and discard PPE after transferring the patient at the receiving facility and perform hand hygiene. Treat used disposable PPE as medical waste.
3. Engage mutual aid partners.
4. Maximize usage of supplies needed for universal precautions and other basics.
5. Conserve usage of BLS and ALS units.
6. Begin creating adjusted staffing patterns. This may include implementing changes to vacation and on-call policies; adjusting the minimum number of essential personnel required for transport; adjusting sick leave policies; cross-training staff; and using volunteers/others for non-technical positions. Staff assignments may be affected by influenza/health status; review Occupational Health Management During an Influenza Pandemic ("Fit for Work") on page 36.
7. Educate staff on the current pandemic influenza situation.
8. Educate staff on staffing and procedure changes.
9. Implement guidelines received from the local EMS agency (LEMSA).

RESPONDERS

1. Continue to use universal precautions for every patient encounter.
2. Perform safe work practices to prevent transmission of influenza. Activities include:
 - Avoid touching one's face with contaminated gloves.
 - Avoid unnecessary touching of surfaces in the ambulance vehicle.
 - Arrange for the receiving facility staff to meet the patient at the ambulance door to limit the need for EMS staff to enter the emergency department in contaminated PPE. (It may not be practical to change PPE before patient transfer into the facility.) Remove and discard PPE after transferring the patient at the receiving facility and perform hand hygiene. Treat used disposable PPE as medical waste.
3. Review internal emergency operations plans.
4. Review triage models.
5. Consider placing masks on all patients transported with flu-like symptoms. Review the Influenza-Like Illness Assessment Tool on page 31.

6. Notify the receiving facility that the patient has flu-like symptoms.
7. Attend trainings on the current pandemic influenza situation.
8. Implement guidelines received from the local EMS agency (LEMSA).

RECOMMENDED ACTIONS: PANDEMIC PERIOD

WHO Phase 6

- Widespread illness in the population throughout the world
- Sustained human to human transmission

MANAGEMENT

1. Implement internal emergency operations procedures.
2. Implement adjusted staffing patterns.
3. Implement essential staffing and services only.
4. Limit the number of responders to the minimum necessary.
5. Maintain a 3 foot separation of all staff in sleeping quarters.
6. Monitor the health of staff.
7. Implement plan to evaluate symptomatic personnel before they report for duty. This may include taking temperatures on all staff prior to coming to work or inside the station/building. Consider sending febrile staff home.
8. Reassess staffing and consider redistribution of resources.
9. Decontaminate ambulances using standard operating procedures. Implement procedures for post-transport management of the contaminated vehicle. The objective is to safely clean vehicles used for transport of influenza patients to prevent pandemic influenza transmission to staff and future patients.
10. Follow LEMSA guidelines for patient transport, as available.
11. Follow Public Health guidelines for vaccine and/or antivirals, as available.

RESPONDERS

1. Continue to use universal precautions for every patient encounter until otherwise instructed.
2. Consider placing masks on all patients transported with flu-like symptoms. Screen patients requiring emergency transport for symptoms of influenza. If possible, place a surgical mask on the patient to contain droplets expelled during coughing. If this is not possible (i.e., would further compromise respiratory status, difficult for the patient to wear), have the patient cover the mouth/nose with tissue when coughing.
3. Ventilate ambulances if possible.
 - When possible, use vehicles that have separate driver and patient compartments that can provide separate ventilation to each area. Close the door/window between these compartments before bringing the patient on board. Set the vehicle's ventilation system to the non-recirculating mode to maximize the volume of outside air brought into the vehicle. If the vehicle has a rear exhaust fan, use it to draw air away from the cab, toward the patient-care area, and out the back end of the vehicle. Some vehicles are equipped with a

supplemental recirculating ventilation unit that passes air through HEPA filters before returning it to the vehicle. Such a unit can be used to increase the number of air changes per hour (NIOSH HETA report 95-0031-2601, www.cdc.gov/niosh/hhe/reports/pdfs/1995-0031-2601.pdf).

- If a vehicle without separate compartments and ventilation must be used, open the outside air vents in the driver area and turn on the rear exhaust ventilation fans to the highest setting. This will create a negative pressure gradient in the patient area.
 - Oxygen delivery with a non-rebreather face mask may be used to provide oxygen support during transport. If needed, positive-pressure ventilation should be performed using a resuscitation bag-valve mask, preferably one equipped to provide HEPA or equivalent filtration of expired air.
 - If a patient has been mechanically ventilated before transport, HEPA or equivalent filtration of airflow exhaust should be available. (EMS organizations should consult their ventilator equipment manufacturer to confirm appropriate filtration capability and the effect of filtration on positive-pressure ventilation.)
 - Cough-generating procedures (e.g., intubation, nebulizer treatment) should be avoided during prehospital care.
4. Notify the receiving facility that the patient has flu-like symptoms.
 5. Implement internal emergency operations plans.
 6. Load ambulances with more than one patient with like symptoms.
 7. Limit the number of responders to the minimal necessary. In addition, family members and other contacts of influenza patients should not ride in the ambulance if possible. If necessary, they should be evaluated for fever and respiratory symptoms and, if either is present, asked to wear a surgical or procedure mask when riding in the vehicle.
 8. Maintain a 3 foot separation of all staff in sleeping quarters.
 9. Decontaminate ambulances using standard operating procedures.
 - Follow standard operating procedures for the containment and disposal of regulated medical waste.
 - Follow standard operating procedures for containing and reprocessing used linen. Wear appropriate PPE when removing soiled linen from the vehicle. Avoid shaking the linen.
 - Clean and disinfect the vehicle in accordance with standard operating procedures. Personnel performing the cleaning should wear a disposable gown and gloves (a respirator should not be needed) during the clean-up process; the PPE should be discarded after use. All surfaces that may have come in contact with the patient or materials contaminated during patient care (e.g., stretcher, rails, control panels, floors, walls, work surfaces) should be thoroughly cleaned and disinfected using an EPA-registered hospital disinfectant in accordance with manufacturer's recommendations.

- Clean and disinfect reusable patient-care equipment according to manufacturer's instructions.
10. Follow LEMSA guidelines for patient transport, as available.
 11. Follow Public Health guidelines for vaccine and/or antivirals, as available.

RECOMMENDED ACTIONS: POST-PANDEMIC PERIOD

Return to WHO Interpandemic Period

- End of first pandemic wave
- Next wave may occur within several months

MANAGEMENT

Prepare for a possible next wave:

1. Conduct staff debriefings on what went well and what needs improvement.
2. Implement appropriate changes based on debriefing and other analysis.
3. Replenish supplies.
4. Continue to monitor the health of staff. Ensure appropriate follow-up and care of staff who transported influenza patients.

RESPONDERS

Prepare for a possible next wave:

1. Participate in debriefings on what went well and what needs improvement.

COMMUNITY WIDE COORDINATION AND CONTROL

Declaration of an Influenza Pandemic Emergency

Responsible for declaring when an outbreak of a novel virus has reached the pandemic stage:

- Globally: World Health Organization (WHO)
- United States: U.S. Centers for Disease Control and Prevention (CDC)
- Los Angeles County: The LAC Health Officer, as Incident Manager for the county's public health response, will determine when the novel virus has reached LAC.

Once the novel virus has been identified locally, the Health Officer does following:

- Activates the operational aspects of LAC's Pandemic Influenza Preparedness and Response Planning Guidelines
- Notifies the members of the LAC Emergency Management Council
- Notifies the LAC Board of Supervisors
- May declare a local Public Health Emergency and enact legislated public health powers detailed in the State Health and Safety Code, but the Board of Supervisors must approve the declaration of a local emergency
- If the county's Emergency Operations Center (EOC) is activated to manage the county's response effort, the Health Officer will designate personnel to staff the county EOC and represent the Department at the Operational Area level

Coordination of the LAC Health Response

The coordination of the LAC's health response will be a collaborative effort between the LAC Department of Health Services (DHS) and LACDPH. The DHS Department Head will activate the DHS Department Operations Center (DOC) to assist with the management of the public health and emergency medical services response. The DOC is organized according to the Incident Command System.

Coordination of the LAC EMS Response

As part of an overall preparedness plan for dealing with periods of excess demand on emergency medical services, the Department of Health Services, in cooperation with EMS Provider Agencies and hospitals, may implement the following actions:

1. Initiate a tracking system for trending the impact of the pandemic on EMS providers and hospitals.
2. The EMS Agency may permit BLS ambulances to honor emergency department diversion and transport patients to the next closest facility.
3. If the trend indicates a region-wide crisis and there is no value in diverting ambulances away from emergency departments, the Director of the EMS Agency may require all hospitals to maintain an

“open” emergency department and no emergency department diversions will be honored. Re-evaluation of this policy would take place every 24 hours until the pandemic is over.

4. Public Health may issue advisories to the public regarding the pandemic and the appropriate use of 9-1-1 services and emergency departments versus clinics, urgent care and/or alternate care centers.
5. EMS Agency, EMS Provider Agencies, Public Health, Los Angeles County Medical Association, Los Angeles County Emergency Medical Directors Association, Community Clinic Association of Los Angeles County and other stakeholders may participate in ongoing conference calls to assist in the development of appropriate coordination and response planning to the pandemic.

Pandemic Response Guidance

During the pandemic, the Department of Public Health will provide guidance on infection control (including PPE), altered standards of care, alternate care sites, vaccine, antiviral medications, and community containment measures. The guidance will be based on information and best practices from WHO, CDC, CA Dept of Health Services, and other jurisdictions affected by the pandemic.

Contact Information

LA County Department of Health Services Medical Alert Center

- 24/7: 323-887-5310

Los Angeles Department of Public Health Acute Communicable Disease Control, Biological Incident Reporting

- Business hours: 213-240-7941
- After hours: 213-974-1234

CONCLUSION

It has been decades since Los Angeles County has experienced an influenza pandemic. Unfortunately, the capacity within the healthcare delivery system has declined to the point where it often seems like a crisis despite the absence of a true event. Should a pandemic occur, all stakeholders will have to collaborate to assure the best achievable coordination and outcome for patients, staff and their families.

ADDITIONAL RESOURCES: WEBSITES

International

World Health Organization

- Pandemic and Pandemic Alert and Response, Avian Influenza:
http://www.who.int/csr/disease/avian_influenza/en/
- Global Influenza Preparedness Plan:
http://www.who.int/csr/resources/publications/influenza/WHO_CDS_CSR_GIP_2005_5/en/index.html

Federal

Department of Health and Human Services: <http://www.pandemicflu.gov/>

- Provides one-stop access to U.S. Government avian and pandemic flu information
- EMS Planning Checklist: <http://www.pandemicflu.gov/plan/healthcare/emgncymedical.html>
- Business and Industry Checklist: <http://pandemicflu.gov/plan/business/businesschecklist.html>
- Interim Guidance on Planning for the Use of Surgical Masks and Respirators in Health Care Settings during an Influenza Pandemic:
<http://pandemicflu.gov/plan/healthcare/maskguidancehc.html>

Centers for Disease Control and Prevention (CDC): <http://www.cdc.gov/flu/>

- Stopping the Spread of Germs at Work: <http://www.cdc.gov/germstopper/work.htm>
- Cover Your Cough: <http://www.cdc.gov/flu/protect/covercough.htm>
- Community Strategy for Pandemic Influenza Mitigation:
http://pandemicflu.gov/plan/community/community_mitigation.pdf

Department of Homeland Security

- Pandemic Influenza Preparedness, Response and Recovery Guide for Critical Infrastructure and Key Resources: <http://www.pandemicflu.gov/plan/pdf/cikrpandemicinfluenzaguide.pdf>

OSHA Guidance on Preparing Workplaces for an Influenza Pandemic:

http://www.osha.gov/Publications/influenza_pandemic.html

California

Department of Health Services Division of Communicable Disease Control:

<http://www.dhs.ca.gov/ps/dcdc/dcdcindex.htm>

Los Angeles County

Department of Health Services Emergency Medical Services Agency: <http://ladhs.org/ems/index.htm>

Department of Public Health Acute Communicable Disease Control Pandemic Influenza:

<http://lapublichealth.org/acd/Pandemicflu.htm>

COMPARISON OF SEASONAL AND PANDEMIC INFLUENZA (FLU)

Adapted from: Los Angeles County Department of Public Health Pandemic Influenza Preparedness and Response Planning Guidelines, Chapter 1, Table 1, Draft 1-29-07.

	Seasonal Flu	Pandemic Flu	IMPLICATIONS
Cause	Known circulating flu viruses	A novel virus	Since no previous exposure, humans will have little or no pre-existing immunity
Transmission	Large droplet and fomites	Large droplet and fomites	
Infectious Period	<ul style="list-style-type: none"> ▪ Adults: 1 day prior to symptom onset, 5 days post illness ▪ Children: 10 days ▪ Immune-compromised shed for weeks to months 	<ul style="list-style-type: none"> ▪ Unknown ▪ Likely similar to seasonal flu, but unknown. 	Complicates the use of quarantine, isolation and masks for protection.
Prevention & Treatment	<ul style="list-style-type: none"> ▪ Annual vaccination ▪ Respiratory hygiene ▪ Four antivirals for treatment and prophylaxis ▪ However, viral strains are becoming resistant 	<ul style="list-style-type: none"> ▪ Unknown ▪ No vaccine currently exists ▪ Antiviral effectiveness is unknown. 	<ul style="list-style-type: none"> ▪ Still using a 1950s model for vaccine production. ▪ Availability and effectiveness of antivirals for pandemic flu is uncertain.
When occur and how spread?	Winter seasons in the Northern and Southern Hemispheres	<ul style="list-style-type: none"> ▪ Unknown ▪ Year-round without warning ▪ Rapid worldwide spread. 	Most important differentiating factor.
Who seriously affected?	<ul style="list-style-type: none"> ▪ Elderly ▪ Young children ▪ Chronic conditions 	Everyone including the young and healthy.	Could greatly impact community infrastructure.
How many affected?	In US...varies each season, on average: <ul style="list-style-type: none"> ▪ 36,000 deaths ▪ 200,000 hospitalizations 	In US*... <ul style="list-style-type: none"> ▪ 314,000–734,000 hospitalizations ▪ 89,000–207,000 deaths 	Can have a devastating impact on hospitals, funeral homes, etc.

* A wide range of estimates exists. This is a midrange estimate provided by the Centers for Disease Control and Prevention.

USE OF MASKS DURING A PANDEMIC

Adapted from: Los Angeles County Department of Public Health Pandemic Influenza Plan, Guidelines for Acute Care Hospital Settings, 3-1-06, available at <http://search.lapublichealth.org/acd/Pandemicflu.htm>.

Part A, Section 2.6: Use of Masks During a Pandemic

WHEN TO WEAR A MASK *

- **Early phase of a pandemic**, it may be prudent for healthcare workers to wear masks when interacting in close face-to-face contact with coughing individuals to minimize influenza transmission
 - This use of masks is advised when immunization and antivirals are not yet available.
- Masks should be worn by healthcare workers to prevent transmission of other organisms from patients with undiagnosed cough
- When the **virus is circulating widely in the community**, there is no evidence that the use of masks in general public settings will be protective

USING SURGICAL MASKS

- Use only once and change if wet (masks become ineffective when wet)
- Cover both the nose and the mouth
- Avoid touching the mask while it is being worn
- Do not dangle around the neck
- Discard masks into an appropriate receptacle

SPECIAL MASKS

- I.e., high-efficiency dust/mist masks
- Required for patients with infectious tuberculosis and for non-immune healthcare workers entering the room of a patient with measles or disseminated varicella.

* The *term mask refers to surgical masks, not to special masks or respirators.*

Additional mask information can be found at:

- OSHA Guidance on Preparing Workplaces for an Influenza Pandemic:
http://www.osha.gov/Publications/influenza_pandemic.html#mask_respirator_difference
- US DHHS Interim Guidance on Planning for the Use of Surgical Masks and Respirators in Health Care Settings during an Influenza Pandemic:
<http://pandemicflu.gov/plan/healthcare/maskguidancehc.html>



INFLUENZA (FLU)

STOPPING THE SPREAD OF GERMS AT WORK

To download this in PDF, Spanish, Chinese, Vietnamese, or Tagalog, visit the CDC site <http://www.cdc.gov/germstopper/work.htm>

How Germs Spread

Illnesses like the flu (influenza) and colds are caused by viruses that infect the nose, throat, and lungs. The flu and colds usually spread from person to person when an infected person coughs or sneezes.

How to Help Stop the Spread of Germs

Take care to:

- Cover your mouth and nose when you sneeze or cough
- Clean your hands often
- Avoid touching your eyes, nose or mouth
- Stay home when you are sick and check with a health care provider when needed
- Practice other good health habits.

Cover your mouth and nose when you sneeze or cough

Cough or sneeze into a tissue and then throw it away. Cover your cough or sneeze if you do not have a tissue. Then, clean your hands, and do so every time you cough or sneeze.

Clean your hands often

When available, wash your hands -- with soap and warm water -- then rub your hands vigorously together and scrub all surfaces. Wash for 15 to 20 seconds. It is the soap combined with the scrubbing action that helps dislodge and remove germs.

When soap and water are not available, alcohol-based disposable hand wipes or gel sanitizers may be used. You can find them in most supermarkets and drugstores. If using a gel, rub the gel in your hands until they are dry. The gel doesn't need water to work; the alcohol in the gel kills germs that cause colds and the flu.*

*Source: FDA/CFSAN Food Safety A to Z Reference Guide, Sept 2001: Handwashing, www.cfsan.fda.gov/%7Edms/handwashing

Avoid touching your eyes, nose, or mouth

Germs are often spread when a person touches something that is contaminated with germs and

then touches their eyes, nose, or mouth. Germs can live for a long time (some can live for 2 hours or more) on surfaces like doorknobs, desks, and tables.

Stay home when you are sick and check with a health care provider when needed

When you are sick or have flu symptoms, stay home, get plenty of rest, and check with a health care provider as needed. Your employer may need a doctor's note for an excused absence. Remember: Keeping your distance from others may protect them from getting sick. Common symptoms of the flu include:

- fever (usually high)
- headache
- extreme tiredness
- cough
- sore throat
- runny or stuffy nose
- muscle aches, and
- nausea, vomiting, and diarrhea, (much more common among children than adults).

Practice other good health habits

Get plenty of sleep, be physically active, manage your stress, drink plenty of fluids, and eat nutritious food. Practicing healthy habits will help you stay healthy during flu season and all year long.

More Facts, Figures, and How-To Ideas

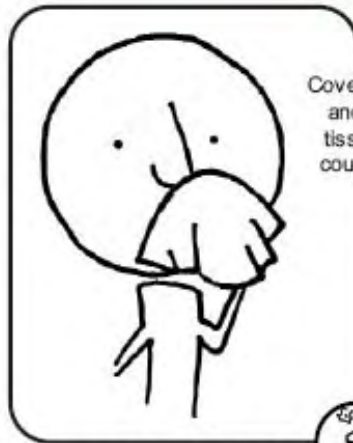
CDC and its partner agencies and organizations offer a great deal of information about handwashing and other things you can do to stay healthy and avoid the germs that cause flu, the common cold, and other illnesses. See Other Resources (<http://www.cdc.gov/germstopper/resources.htm>) and Posters (<http://www.cdc.gov/germstopper/materials.htm>) on this Stop the Spread of Germs site for a select listing of Web sites, materials, and contact information.

COVER YOUR COUGH

To download this in PDF, Spanish, Portuguese, French, Chinese, Vietnamese, Hmong, Khmer or Tagalog, or to get a poster size version, visit the CDC site <http://www.cdc.gov/flu/protect/covercough.htm>

Stop the spread of germs that make you and others sick!

Cover your Cough



Cover your mouth and nose with a tissue when you cough or sneeze or cough or sneeze into your upper sleeve, not your hands.



Put your used tissue in the waste basket.



You may be asked to put on a surgical mask to protect others.

Clean your Hands

after coughing or sneezing.



Wash hands with soap and warm water for 20 seconds or



clean with alcohol-based hand cleaner.



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American
Public Health
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US DHHS EMS AND NON-EMERGENT (MEDICAL) TRANSPORT ORGANIZATIONS PANDEMIC INFLUENZA PLANNING CHECKLIST

This checklist is available at <http://www.pandemicflu.gov/plan/healthcare/emgncymedical.html>, or for PDF download at <http://www.pandemicflu.gov/plan/pdf/ems.pdf>.

Planning for pandemic influenza is critical for ensuring a sustainable health care response. The Department of Health and Human Services (HHS) and the Centers for Disease Control and Prevention (CDC) have developed the following checklist to help emergency medical services (EMS) and non-emergent (medical) transport organizations assess and improve their preparedness for responding to pandemic influenza. EMS organizations will be involved in the transport of acutely ill patients with known or suspected pandemic influenza to emergency departments; some of these patients might require mechanical ventilation for life support and/or other lifesaving interventions. Non-emergent (medical) transport organizations will be called upon to transport recovering pandemic influenza patients to their home, residential care facility, or possibly to alternate care sites set up by state or local health departments.

This checklist is modeled after one included in the HHS Pandemic Influenza Plan. The list is comprehensive but not complete; each organization will have unique and unanticipated concerns that also will need to be addressed as part of a pandemic planning exercise. Also, some items on the checklist might not be applicable to all organizations. Collaborations among hospital, public health and public safety personnel are encouraged for the overall safety and care of the public.

This checklist identifies key areas for pandemic influenza planning. EMS and non-emergent (medical) transport organizations can use this tool to self-assess and identify the strengths and weakness of current planning. Links to websites with information are provided throughout the document. However, actively seeking information that is available locally or at the state level will be necessary to complete the development of the plan. Also, for some elements of the plan (e.g., education and training programs), information may not be immediately available and monitoring of selected websites for new and updated information will be necessary.

Checklist Sections

1. Structure for planning and decision making
 2. Development of a written pandemic influenza plan
 3. Elements of an influenza pandemic plan
-

1. Structure for planning and decision making.

Completed	In Progress	Not Started	Tasks
			Pandemic influenza has been incorporated into emergency management planning and exercises for the organization.
			A planning committee has been created to specifically address pandemic influenza preparedness.
			A person has been assigned responsibility for coordinating pandemic influenza preparedness planning (hereafter referred to as the pandemic response coordinator) for the organization. (Insert name, title, and contact information.) _____ _____ _____
			Members of the planning committee include the following: (Insert below or attach a list with name title and contact information for each.) Administration: _____ Medical staff: _____ EMS providers: _____ Phone triage personnel/dispatch center: _____ Emergency management officer: _____ State/local health official: _____ _____ Law enforcement official (for quarantine/security): _____ _____ Other member: _____ _____
			A point of contact (e.g., internal staff member assigned infection control responsibility for the organization or an outside consultant) for questions/consultation on infection control has been identified. (Insert name, title, and contact information.) _____ _____ _____ _____

2. Development of a written pandemic influenza plan.

Completed	In Progress	Not Started	Tasks
			Copies of relevant sections of the Department of Health and Human Services Pandemic Influenza Plan have been obtained. www.hhs.gov/pandemicflu/plan .
			Copies of available community and state pandemic plans have been obtained.
			A written plan has been completed or is in progress that includes the elements listed in #3 below.

2. Development of a written pandemic influenza plan.

Completed	In Progress	Not Started	Tasks
			The plan describes the organizational structure (i.e., lines of authority) that will be used to operationalize the plan.
			The plan complements or is part of the community response plan.

3. Elements of an influenza pandemic plan.

Completed	In Progress	Not Started	Tasks
			A plan is in place for surveillance and detection of pandemic influenza in the population served and the appropriate organizational response:
			<ul style="list-style-type: none"> ▪ Responsibility has been assigned for monitoring national and state public health advisories (e.g., www.cdc.gov/flu/weekly/fluactivity.htm) and informing the pandemic response coordinator and members of the pandemic influenza planning committee when cases of pandemic influenza have been reported in the United States and when they are nearing the geographic area (e.g., state or city). (Insert name, title, and contact information of person responsible.) _____
			<ul style="list-style-type: none"> ▪ A system has been created to track influenza-like illness in patients transported to hospitals and among EMS staff and to report this information to the pandemic response coordinator (i.e., weekly or daily number of patients with influenza-like illness). For more information see www.cdc.gov/flu/professionals/diagnosis/. (Having a system for tracking illness trends in patients and staff during seasonal influenza will ensure that organizations can detect stressors that may affect operating capacity, such as staffing and supply needs, and hospital and emergency department capacity during a pandemic.) _____
			A communication plan has been developed: (Insert below or attach a list with the name, title, and contact information for each.)
			<ul style="list-style-type: none"> ▪ Key public health points of contact for pandemic influenza have been identified. ▪ Local health department contact: _____ ▪ State health department contact: _____

3. Elements of an influenza pandemic plan.

Completed	In Progress	Not Started	Tasks
			<ul style="list-style-type: none"> ▪ Local emergency management contact: _____ _____ ▪ State emergency management contact: _____ _____ ▪ Federal health emergency contact(s): _____ _____
			<ul style="list-style-type: none"> ▪ The organization's point person for external communication has been assigned. (Insert name, title, and contact information.) _____ _____ (Having one person who speaks with the health department, and if necessary, media, local politicians, etc., will help ensure consistent communication is provided by the organization.)
			<ul style="list-style-type: none"> ▪ A list of healthcare entities and their points of contact (e.g., other local EMS and non-emergent [medical] transport organizations, local hospitals and their emergency departments, community health centers, residential care facilities has been created. (Insert location of or attach copy of contact list.) _____
			<ul style="list-style-type: none"> ▪ A list of healthcare entities and their points of contact (e.g., other local EMS and non-emergent [medical] transport organizations, local hospitals and their emergency departments, community health centers, residential care facilities has been created. (Insert location of or attach copy of contact list.) _____
			<ul style="list-style-type: none"> ▪ The pandemic response coordinator has contacted local or regional pandemic influenza planning groups to obtain information on communication and coordination plans, including how EMS will be represented in the planning process. (For more information on state and local planning, see www.hhs.gov/pandemicflu/plan/part2.html#overview.)
			<ul style="list-style-type: none"> ▪ The pandemic response coordinator has contacted other EMS and non-emergent (medical) transport organizations regarding pandemic influenza planning and coordination of services.
			<p>A plan is in place to ensure that education and training on pandemic influenza is provided to ensure that all personnel understand the implications of, and control measures for, pandemic influenza and the current organization and community response plans:</p>

3. Elements of an influenza pandemic plan.

Completed	In Progress	Not Started	Tasks
			<ul style="list-style-type: none"> ▪ A person has been designated to coordinate education and training (e.g., identify and facilitate access to education and training programs, ensure that staff attend, and maintain a record of attendance at education and training programs). (Insert name, title, and contact information.) <hr/>
			<ul style="list-style-type: none"> ▪ Current and potential opportunities for long-distance (e.g., web-based) and local (e.g., health department or hospital sponsored programs, programs offered by professional organizations or federal agencies) education of EMS and medical transport personnel have been identified. (For more information see www.cdc.gov/flu/professionals/training/.)
			<ul style="list-style-type: none"> ▪ Language and reading-level-appropriate materials for professional and non-professional personnel on pandemic influenza (e.g., available through state and federal public health agencies and professional organizations) have been identified and a plan is in place for obtaining these materials
			<ul style="list-style-type: none"> ▪ Education and training include information on infection control measures to prevent the spread of pandemic influenza.
			<ul style="list-style-type: none"> ▪ Differences between responding to pandemic influenza and a mass casualty event have been incorporated into education and training programs.
			<p>A plan has been developed for triage and management of patients during a pandemic that includes the following:</p>
			<ul style="list-style-type: none"> ▪ A system for phone triage of patients calling 911 or other emergency numbers that might be used (provide/post list of appropriate numbers) that includes pre-established criteria and coordination protocols to determine who needs emergency transport. The system includes points of referral for patients who do not need emergency transport.
			<ul style="list-style-type: none"> ▪ A plan for coordination with receiving facilities (e.g., hospital emergency departments), other EMS and non-emergent (medical) transport organizations, and local planning groups to manage the transportation of large numbers of patients at the height of the pandemic.
			<ul style="list-style-type: none"> ▪ A policy and procedure for transporting multiple patients with pandemic influenza during a single ambulance run.
			<ul style="list-style-type: none"> ▪ The plan considers the possible necessity of sharing transportation resources or using vehicles other than those designed for emergency or medical transport (e.g., buses).

3. Elements of an influenza pandemic plan.

Completed	In Progress	Not Started	Tasks
			<p>An infection control plan is in place and includes the following: (For information on infection control recommendations for pandemic influenza, see www.hhs.gov/pandemicflu/plan/sup4.html).</p>
			<ul style="list-style-type: none"> ▪ A plan for implementing Respiratory Hygiene/Cough Etiquette for patients with a possible respiratory illness.
			<ul style="list-style-type: none"> ▪ The plan includes distributing masks ³ to symptomatic patients who are able to wear them (adult and pediatric sizes should be available), providing facial tissues and receptacles for their disposal, and hand hygiene materials in EMS and medical transport vehicles.
			<ul style="list-style-type: none"> ▪ Implementation of Respiratory Hygiene/Cough Etiquette has been exercised during seasons when seasonal influenza and other respiratory viruses (e.g., respiratory syncytial virus, parainfluenza virus) are circulating in communities.
			<ul style="list-style-type: none"> ▪ A policy that requires healthcare personnel to use Standard Precautions (www.cdc.gov/ncidod/dhqp/gl_isolation_standard.html) and Droplet Precautions (i.e., mask for close contact) (www.cdc.gov/ncidod/dhqp/gl_isolation_droplet.html) with symptomatic patients.
			<p>An occupational health plan has been developed that includes the following:</p>
			<ul style="list-style-type: none"> ▪ A liberal/non-punitive sick leave policy for managing EMS and non-emergent (medical) transport personnel who have symptoms of, or documented illness with, pandemic influenza.
			<ul style="list-style-type: none"> ▪ The policy considers the following: <ul style="list-style-type: none"> ○ Handling of staff who become ill at work. ○ When personnel may return to work after recovering from pandemic influenza. ○ When personnel who are symptomatic but well enough to work will be permitted to continue working. ○ Personnel who need to care for their ill family members.
			<ul style="list-style-type: none"> ▪ A system for evaluating symptomatic personnel before they report for duty that has been tested during a non-pandemic influenza period.
			<ul style="list-style-type: none"> ▪ A list of mental health and faith-based resources available to provide counseling to personnel during a pandemic.
			<ul style="list-style-type: none"> ▪ Management of personnel who are at increased risk for influenza complications (e.g., pregnant women, immunocompromised healthcare workers) by placing them on administrative leave or altering their work locations.
			<ul style="list-style-type: none"> ▪ The ability to monitor seasonal influenza vaccination of personnel.

3. Elements of an influenza pandemic plan.

Completed	In Progress	Not Started	Tasks
			<ul style="list-style-type: none"> ▪ Offering annual influenza vaccine to personnel.
			<p>A vaccine and antiviral use plan has been developed:</p>
			<ul style="list-style-type: none"> ▪ Websites containing current CDC and state health department recommendations for the use and availability of vaccines and antiviral medications have been identified. (For more information, see www.hhs.gov/pandemicflu/plan/sup6.html and www.hhs.gov/pandemicflu/plan/sup7.html.)
			<ul style="list-style-type: none"> ▪ An estimate has been made of the number of personnel who will be targeted as first and second priority for receipt of pandemic influenza vaccine and antiviral prophylaxis, based on HHS guidance for use. (For more information, see www.hhs.gov/pandemicflu/plan/appendixd.html.)
			<ul style="list-style-type: none"> ▪ Discussions have been held with the local and/or state health department regarding the role of the organization in a large-scale program to distribute vaccine and antivirals to the general population.
			<p>Concerns related to surge capacity during a pandemic have been addressed:</p>
			<ul style="list-style-type: none"> ▪ A plan is in place for managing a staffing shortage within the organization because of illness in personnel or their family members.
			<ul style="list-style-type: none"> ▪ The minimum number and categories of personnel necessary to sustain EMS and non-emergent (medical) transport services on a day-to-day basis have been determined
			<ul style="list-style-type: none"> ▪ Contingency staffing plans have been developed in collaboration with other local EMS and non-emergent (medical) transport providers.
			<ul style="list-style-type: none"> ▪ Hospitals and regional planning groups have been consulted regarding contingency staffing resources.
			<ul style="list-style-type: none"> ▪ Anticipated consumable resource needs (e.g., masks, gloves, hand hygiene products) have been estimated.
			<ul style="list-style-type: none"> ▪ A primary plan and contingency plan to address supply shortages have been developed. These include detailed procedures for the acquisition of supplies through normal channels and requesting resources for replenishing supplies when normal channels have been exhausted.
			<ul style="list-style-type: none"> ▪ Plans include stockpiling at least a week's supply of resources when evidence exists that pandemic influenza has reached the United States.
			<ul style="list-style-type: none"> ▪ An understanding of the process exists for requesting and obtaining assets for the organization made available through the community response plan.

US DHHS PANDEMIC INFLUENZA PLAN, SUPPLEMENT 11 WORKFORCE SUPPORT: PSYCHOSOCIAL CONSIDERATIONS AND INFORMATION NEEDS, EXCERPT – IMPACT OF PANDEMIC INFLUENZA ON HEALTHCARE WORKERS AND CHECKLIST FOR WORKFORCE SUPPORT SERVICES/RESOURCES

This excerpt has been adapted from the US DHHS site <http://www.hhs.gov/pandemicflu/plan/sup11.html>

Rationale

The response to an influenza pandemic will pose substantial physical, personal, social, and emotional challenges to healthcare providers, public health officials, and other emergency responders and essential service workers. Experience with disaster relief efforts suggests that enhanced workforce support activities can help responders remain effective during emergencies.

During an influenza pandemic, however, the occupational stresses experienced by healthcare providers and other responders are likely to differ from those faced by relief workers in the aftermath of a natural disaster. Globally and nationally, a pandemic might last for more than a year, while disease outbreaks in local communities may last 5 to 10 weeks. Medical and public health responders and their families will be at personal risk for as long as the pandemic continues in their community. Special planning is therefore needed to ensure that hospitals, public health agencies, first-responder organizations, and employers of essential service workers are prepared to help employees maximize personal resilience and professional performance. An essential part of this planning effort involves the creation of alliances with community-based organizations and nongovernmental organizations with expertise in and resources for psychosocial support services or training.

Impact of Pandemic Influenza on Healthcare Workers

In addition to the issues faced by all response workers, healthcare workers may experience:

- Increased risk of exposure to pandemic influenza
- Constant need to take special precautions to avoid exposure to the pandemic virus
- Illness and death among patients, as well as among colleagues and family members
- Stigmatization and discrimination associated with being perceived as a source of contagion
- Ethical dilemmas, such as conflicts between one's roles as healthcare provider and parent/spouse, or concern about receiving vaccines or antiviral drugs before other people
- Increased difficulty in performing crucial tasks and functions as the number of severely ill patients increases, the healthcare staff decreases, and medical and infection control resources are depleted
- Frustration regarding the need/expectation to maintain business as usual
- Physical isolation associated with use of infection control measures that limit interpersonal contact

CHECKLIST FOR WORKFORCE SUPPORT SERVICES/RESOURCES

INTERPANDEMIC AND PANDEMIC ALERT PERIODS			
Completed	In Progress	Not Started	Tasks
			Include psychosocial issues in planning:
			<ul style="list-style-type: none"> ▪ Incorporate psychosocial support services into emergency preparedness planning for an influenza pandemic.
			<ul style="list-style-type: none"> ▪ Coordinate with business, corporations and other private sector interests in planning for behavioral health response and consequences.
			<ul style="list-style-type: none"> ▪ Develop a demographic picture of your staff (e.g., ethnic, racial, and religious groups; most vulnerable; special needs; language minorities) and plan for how they might be reached in a disaster.
			<ul style="list-style-type: none"> ▪ Identify rest and recuperation sites for staff. These sites can be stocked with healthy snacks and relaxation materials (e.g., music, relaxation tapes, movies), as well as pamphlets or notices about workforce support services.
			<ul style="list-style-type: none"> ▪ Develop confidential telephone support lines to be staffed by behavioral health professionals.
			<ul style="list-style-type: none"> ▪ Use behavioral health expertise to train staff on the psychological impact of the use of personal protective equipment (PPE), and conduct other relevant activities.
			Identify and access existing resources:
			<ul style="list-style-type: none"> ▪ Work with community-based organizations and to determine the types of psychological and social support services and training courses available in your area.
			<ul style="list-style-type: none"> ▪ Establish links with public and private mental health resources such as Red Cross.
			<ul style="list-style-type: none"> ▪ Develop a plan to manage offers of assistance and invited/uninvited volunteers.
			Train behavioral health and related professionals in disaster response strategies:
			<ul style="list-style-type: none"> ▪ Train nonbehavioral health professionals in basic psychological support services.
			<ul style="list-style-type: none"> ▪ Establish links to health and medical entities for purposes of assisting in screening potential victims for mental disorders and psychogenic symptomatology, functional impairment, substance abuse, etc.
			Develop resources and materials:
			<ul style="list-style-type: none"> ▪ Prepare educational and training materials on psychosocial issues for distribution to workers during an influenza pandemic.

CHECKLIST FOR WORKFORCE SUPPORT SERVICES/RESOURCES

PANDEMIC PERIOD			
Completed	In Progress	Not Started	Tasks
			During the first 4 weeks:
			<ul style="list-style-type: none"> ▪ Meet basic needs such as food, shelter, and clothing.
			<ul style="list-style-type: none"> ▪ Provide basic psychological support (psychological first aid).
			<ul style="list-style-type: none"> ▪ Provide outreach and information to staff.
			<ul style="list-style-type: none"> ▪ Foster resilience, coping, and recovery.
			<ul style="list-style-type: none"> ▪ Provide psychological and social support services for staff and their families.
			<ul style="list-style-type: none"> ▪ Address stigmatization issues that might be associated with being a first responder.
			<ul style="list-style-type: none"> ▪ Address stigmatization issues that might be associated with participation in such services.
			<ul style="list-style-type: none"> ▪ Implement workforce resilience programs.
			<ul style="list-style-type: none"> ▪ Work with communications experts to shape messages that reduce the psychological impact of the pandemic.
			<ul style="list-style-type: none"> ▪ Receive educational and training materials from public health.
			During subsequent weeks:
			<ul style="list-style-type: none"> ▪ Provide continued outreach, triage, and services.
			<ul style="list-style-type: none"> ▪ Monitor staff for signs of chronic or severe psychological distress.
			<ul style="list-style-type: none"> ▪ Provide assistance in reintegration for staff who were deployed or isolated from work and family.

INFLUENZA-LIKE ILLNESS (ILI) ASSESSMENT TOOL

Adapted from: Los Angeles County Department of Public Health Pandemic Influenza Plan, Guidelines for Acute Care Hospital Settings, 3-1-06, available at <http://search.lapublichealth.org/acd/Pandemicflu.htm>.

An ILI assessment tool is to be used for immediate triage of patients or staff, and for accommodation or cohort of patients *prior* to further clinical management. This is not intended to be used as a clinical management tool.

ILI in the general population is determined by the presence of 1, 2, 3 and any of 4 (a–f) which could be due to influenza virus:

Please check the following.

- 1. Acute onset of respiratory illness
- 2. Fever (>38 C)*
- 3. Cough
- 4. One or more of the following:
 - a. sore throat
 - b. arthralgia
 - c. myalgia or prostration
 - d. diarrhea**
 - e. vomiting**
 - f. abdominal pain*

* May not be present in elderly people

** May be present in children

US DHHS PANDEMIC INFLUENZA PLAN, SUPPLEMENT 4 INFECTION CONTROL, PRE-HOSPITAL EXCERPT

This excerpt has been adapted from the US DHHS site <http://www.hhs.gov/pandemicflu/plan/sup4.html#prehosp>

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 (Box 1) during patient care in healthcare settings (e.g., hospitals, nursing homes, outpatient offices, emergency transport vehicles).

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 vehicle. Follow current recommendations for cleaning and disinfection or sterilization of reusable patient-care equipment.
- Wipe external surfaces of portable equipment with an EPA-approved hospital disinfectant upon removal from the patient's room.

Prehospital care (emergency medical services)

Patients with severe pandemic influenza or disease complications are likely to require emergency transport to the hospital. The following information is designed to protect EMS personnel during transport.

- Screen patients requiring emergency transport for symptoms of influenza.
- Follow standard and droplet precautions when transporting symptomatic patients.
- Consider routine use of surgical or procedure masks for all patient transport when pandemic influenza is in the community.
- If possible, place a procedure or surgical mask on the patient to contain droplets expelled during coughing. If this is not possible (i.e., would further compromise respiratory status, difficult for the patient to wear), have the patient cover the mouth/nose with tissue when coughing, or use the most practical alternative to contain respiratory secretions.
- Oxygen delivery with a non-rebreather face mask can be used to provide oxygen support during transport. If needed, positive-pressure ventilation should be performed using a resuscitation bag-valve mask.
- Unless medically necessary to support life, aerosol-generating procedures (e.g., mechanical ventilation) should be avoided during prehospital care.
- Optimize the vehicle's ventilation to increase the volume of air exchange during transport. When possible, use vehicles that have separate driver and patient compartments that can provide separate ventilation to each area.

- Notify the receiving facility that a patient with possible pandemic influenza is being transported.
- Follow standard operating procedures for routine cleaning of the emergency vehicle and reusable patient care equipment.

Box 1. Summary of Infection Control Recommendations for Care of Patients with Pandemic Influenza

Component	Recommendations
Standard Precautions	See www.cdc.gov/ncidod/hip/ISOLAT/std_prec_excerpt.htm
Hand hygiene	Perform hand hygiene after touching blood, body fluids, secretions, excretions, and contaminated items; after removing gloves; and between patient contacts. Hand hygiene includes both handwashing with either plain or antimicrobial soap and water or use of alcohol-based products (gels, rinses, foams) that contain an emollient and do not require the use of water. If hands are visibly soiled or contaminated with respiratory secretions, they should be washed with soap (either non-antimicrobial or antimicrobial) and water. In the absence of visible soiling of hands, approved alcohol-based products for hand disinfection are preferred over antimicrobial or plain soap and water because of their superior microbicidal activity, reduced drying of the skin, and convenience.
Personal protective equipment (PPE) <ul style="list-style-type: none"> ▪ Gloves ▪ Gown ▪ Face/eye protection (e.g., surgical or procedure mask and goggles or a face shield) 	<ul style="list-style-type: none"> ▪ For touching blood, body fluids, secretions, excretions, and contaminated items; for touching mucous membranes and nonintact skin ▪ During procedures and patient-care activities when contact of clothing/exposed skin with blood/body fluids, secretions, and excretions is anticipated ▪ During procedures and patient care activities likely to generate splash or spray of blood, body fluids, secretions, excretions
Safe work practices	Avoid touching eyes, nose, mouth, or exposed skin with contaminated hands (gloved or ungloved); avoid touching surfaces with contaminated gloves and other PPE that are not directly related to patient care (e.g., door knobs, keys, light switches).
Patient resuscitation	Avoid unnecessary mouth-to-mouth contact; use mouthpiece, resuscitation bag, or other ventilation devices to prevent contact with mouth and oral secretions.
Soiled patient care equipment	Handle in a manner that prevents transfer of microorganisms to oneself, others, and environmental surfaces; wear gloves if visibly contaminated; perform hand hygiene after handling equipment.
Soiled linen and laundry	Handle in a manner that prevents transfer of microorganisms to oneself, others, and to environmental surfaces; wear gloves (gown if necessary) when handling and transporting soiled linen and laundry; and perform hand hygiene.
Needles and other sharps	Use devices with safety features when available; do not recap, bend, break or hand-manipulate used needles; if recapping is necessary, use a one-handed scoop technique; place used sharps in a puncture-resistant container.

Component	Recommendations
Environmental cleaning and disinfection	Use EPA-registered hospital detergent-disinfectant; follow standard facility procedures for cleaning and disinfection of environmental surfaces; emphasize cleaning/disinfection of frequently touched surfaces (e.g., bed rails, phones, lavatory surfaces).
Disposal of solid waste	Contain and dispose of solid waste (medical and non-medical) in accordance with facility procedures and/or local or state regulations; wear gloves when handling waste; wear gloves when handling waste containers; perform hand hygiene.
Respiratory hygiene/cough etiquette Source control measures for persons with symptoms of a respiratory infection; implement at first point of encounter (e.g., triage/reception areas) within a healthcare setting.	Cover the mouth/nose when sneezing/coughing; use tissues and dispose in no-touch receptacles; perform hand hygiene after contact with respiratory secretions; wear a mask (procedure or surgical) if tolerated; sit or stand as far away as possible (more than 3 feet) from persons who are not ill.
Droplet Precautions	www.cdc.gov/ncidod/hip/ISOLAT/droplet_prec_excerpt.htm
Patient placement	Place patients with influenza in a private room or cohort with other patients with influenza.* Keep door closed or slightly ajar; maintain room assignments of patients in nursing homes and other residential settings; and apply droplet precautions to all persons in the room. *During the early stages of a pandemic, infection with influenza should be laboratory-confirmed, if possible. Personal protective equipment - Wear a surgical or procedure mask for entry into patient room; wear other PPE as recommended for standard precautions.
Patient transport	Limit patient movement outside of room to medically necessary purposes; have patient wear a procedure or surgical mask when outside the room.
Other	Follow standard precautions and facility procedures for handling linen and laundry and dishes and eating utensils, and for cleaning/disinfection of environmental surfaces and patient care equipment, disposal of solid waste, and postmortem care.
Aerosol-Generating Procedures	During procedures that may generate small particles of respiratory secretions (e.g., endotracheal intubation, bronchoscopy, nebulizer treatment, suctioning), healthcare personnel should wear gloves, gown, face/eye protection, and a fit-tested N95 respirator or other appropriate particulate respirator.

Box 2. Respiratory Hygiene/Cough Etiquette

Concern	Recommendation
To contain respiratory secretions, all persons with signs and symptoms of a respiratory infection, regardless of presumed cause, should be instructed to:	<ul style="list-style-type: none">▪ Cover the nose/mouth when coughing or sneezing.▪ Use tissues to contain respiratory secretions.▪ Dispose of tissues in the nearest waste receptacle after use.▪ Perform hand hygiene after contact with respiratory secretions and contaminated objects/materials.
Healthcare facilities should ensure the availability of materials for adhering to respiratory hygiene/cough etiquette in waiting areas for patients and visitors:	<ul style="list-style-type: none">▪ Provide tissues and no-touch receptacles for used tissue disposal.▪ Provide conveniently located dispensers of alcohol-based hand rub.▪ Provide soap and disposable towels for handwashing where sinks are available.

OCCUPATIONAL HEALTH MANAGEMENT OF HEALTH CARE WORKERS DURING AN INFLUENZA PANDEMIC

Adapted from: Los Angeles County Department of Public Health Pandemic Influenza Plan, Guidelines for Acute Care Hospital Settings, 3-1-06, available at <http://search.lapublichealth.org/acd/Pandemicflu.htm>.

Part A, Section 3.5: Occupational Health Management of Health Care Workers During an Influenza Pandemic

The phrases “fit for work,” “unfit for work” and “fit to work with restrictions” are used by Occupational Health to communicate a worker’s ability to remain at or return to work depending upon their susceptibility to influenza, immunization status and agreement to use antivirals.

FIT FOR WORK

(a) Ideally, healthcare workers are **fit to work when one** of the following conditions applies:

- **Recovered** from an influenza-like-illness during earlier phases of the pandemic
- **Immunized** against the pandemic strain of influenza
- Taking appropriate **antivirals**

Scope: May work with all patients

(b) **Healthy, unexposed healthcare workers**

Scope: Should work in non-influenza areas

(c) **Asymptomatic healthcare workers** may work even if influenza vaccine & antivirals are unavailable

Scope: Meticulous attention to hand hygiene; avoid touching mucous membranes of the eye and mouth to prevent exposure to the influenza virus and other infective organisms.

UNFIT FOR WORK

Ideally, **staff with an influenza like illness** should be considered “unfit for work” and should not work; nonetheless, due to limited resources, these healthcare workers may be asked to work if they are well enough to do so (see below).

FIT TO WORK WITH RESTRICTIONS

Symptomatic healthcare workers who are well enough to work

Scope:

- Should only work with patients with an influenza-like-illness
- If they must work with non-exposed patients (non-influenza areas), they should be required to wear a mask if they are coughing and pay meticulous attention to hand hygiene.
- Should not be redeployed to intensive care areas, nurseries or units with severely immuno-compromised patients