



**ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY
PUBLIC HEALTH DEPARTMENT**

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HEALTH ALERT UPDATE

April 28, 2009 2:00 A.M.

SWINE INFLUENZA

ACTIONS REQUESTED OF CLINICIANS:

Because of concern about possible human-to-human transmission of swine flu in California, enhanced statewide influenza surveillance is necessary to identify additional cases that may be occurring and would otherwise remain undetected. Given the complexity of obtaining respiratory specimens from a variety of providers throughout the community and transporting these specimens to the County Public Health Lab, we are, for the present, utilizing hospitals and clinics as our sentinel surveillance sites.

- Consider swine influenza in the differential diagnosis of patients presenting with:
Influenza-like illness (ILI): **Fever $\geq 37.8^{\circ}\text{C}$ (100°F) and a cough and/or sore throat**
AND at least one of the following:
 - Contact to a confirmed swine influenza A (H1N1) case
 - Traveled to an affected area including Mexico, other affected states and countries (www.cdc.gov/swineflu/investigation.htm) and specific affected California counties (www.cdph.ca.gov/healthinfo/discond/pages/swineinfluenza.aspx) in the 7 days prior to illness onset
 - Were in contact with persons with ILI who were in affected areas during the 7 days prior to illness onset
 - Hospitalized with ILI or pneumonia (A screening form is attached to this document for reporting to the Alameda County Public Health Department. Please fax to (510) 268-2140. Also attached is a laboratory form which should accompany the specimens to the County Lab).

- Please collect up to 2 nasopharyngeal Dacron swabs from each patient with ILI, placing the swabs in a standard container with 2-3 ml of viral transport media (VTM). If the patient is hospitalized with pneumonia, specimens from the lower respiratory tract (e.g. tracheal aspirate, bronchoalveolar lavage) should also be obtained. Specimens should be collected within the first 24-72 hours of onset of symptoms and no later than 5 days after the onset of symptoms.
- Specimens should be forwarded to the Alameda County Public Health Lab as soon as possible. Specimens may be kept refrigerated at 4°C and sent on cold packs if they can be received by the Alameda County Public Health Laboratory within 5 days of the collection date.
- Ship specimens to Alameda County Public Health Laboratory at **499 – 5th Street, 4th Floor, Oakland, California 94607**, Monday through Friday, 8:30 A.M. to 5:00 P.M. Please call (510) 268-2700 if you have any questions regarding specimen handling/processing. PCR testing will be performed by the State Viral and Rickettsial Disease Lab (VRDL). Turn-around time is anticipated to be 24-48 hours after receipt of the specimen by the State Lab.
- All specimens run for rapid flu-testing, whether positive or negative, should be forwarded to the Alameda County Public Health Laboratory for PCR testing by the State Lab.
- Use appropriate infection control precautions:
 - (1) Healthcare workers providing care for **patients with ILI who are not known contacts of a laboratory-confirmed swine flu case** should use droplet precautions (i.e. surgical mask for close contact), in addition to standard precautions. Standard precautions include hand hygiene and the use of eye protection since splashing or spraying of body fluids may be anticipated when collecting a nasopharyngeal swab.
 - (2) Healthcare workers providing care for an **ill close contact of a laboratory-confirmed swine flu case** should wear a fit-tested N95 respirator, disposable gloves, gown, and eye protection. The patient should be asked to put on a surgical mask and should be roomed promptly in an airborne infection isolation room, if available, or in a single room with a door that closes.

- Swine flu is an endemic respiratory disease of pigs caused by type A influenza virus, typically H1N1 and H3N2 strains.
- Swine flu viruses do not normally infect humans. However, sporadic human infections do occur, mostly in persons with direct exposure to pigs. Since 2005, 12 human cases of swine flu have been detected in other parts of the United States. All patients recovered.
- Although it has been documented, human-to-human transmission of swine flu is rare. However, the current situation in California suggests that human-to-human transmission may be occurring.
- Seasonal human influenza vaccine usually does not protect against swine influenza A H1N1 viruses, which are very different in their antigens from human H1N1 viruses.
- The symptoms of swine flu in humans are similar to the symptoms of seasonal flu and include fever, lethargy, lack of appetite, myalgias, rhinorrhea and coughing. Vomiting and diarrhea can also occur.
- So far, testing has revealed that swine viruses are resistant to amantadine and rimantidine, but are susceptible to oseltamivir and zanamivir.

SITUATION SUMMARY: As of 6:30 pm, Monday, April 27, 2009,

- WHO has elevated its Pandemic Alert Level to 4 (Sustained Human-to-Human Transmission). Phase 4 indicates a significant increase in risk of a pandemic, but does not necessarily mean that a pandemic is a foregone conclusion.
- California cases now number 11 confirmed and 2 probable – 5 confirmed and 2 probable cases in San Diego, 5 confirmed in Imperial County, and 1 confirmed in Sacramento.
- Confirmed cases in Texas (2), Kansas (2), Ohio (1) and New York City (28)
- There are new probable cases in Massachusetts, Michigan, and Indiana
- **No Alameda County cases of swine flu have been identified as of yet.**
- CDC now recommends that U.S. travelers avoid all nonessential travel to Mexico
- Situation remains fluid with new cases being discovered each day.

As regards antiviral treatment, testing thus far revealed that swine viruses are resistant to amantadine and rimantidine, but are susceptible to oseltamivir and zanamivir.

Questions regarding the content of this health alert update should be directed to the Communicable Disease Division at (510) 267-3250.

ADDITIONAL RESOURCES

CDC case definitions: http://www.cdc.gov/flu/swine/casedef_swineflu.htm

CDC general information: http://www.cdc.gov/flu/swine/swineflu_you.htm

CDC latest updates: <http://www.cdc.gov/flu/swine/investigation.htm>

CDPH updates: <http://www.cdph.ca.gov/HealthInfo/discond/Pages/SwineInfluenza.aspx>

ACPHD updates: <http://www.acphd.gov>

Health ALERT: conveys the highest level of importance; warrants immediate action or attention.

Health ADVISORY: provides important information for a specific incident or situation; may not require immediate action.

Swine Influenza Alameda County Preliminary Screening Form

To enhance active surveillance, consider swine influenza in the differential diagnosis of patients with:

- Influenza-like illness (ILI) defined as fever $\geq 37.8^{\circ}\text{C}$ (100°F) and a cough and/or sore throat**

AND at least one of the following (check all that apply):

- Contact to a confirmed swine influenza A (H1N1) case**
- Traveled to an affected area including Mexico [check www.cdc.gov/swineflu/investigation.htm for affected states/countries and www.cdph.ca.gov/healthinfo/discond/pages/swineinfluenza.aspx for specific affected California counties] in the 7 days prior to onset of illness**
- Contact with person(s) with ILI who was/were in affected areas during the 7 days prior to illness Onset**
- Hospitalized with ILI or pneumonia**

Patient Name-Last		First	Middle Initial	Date of birth	Age	Sex
Address- Number, Street, Apt #			City	State	ZIP Code	
Home phone ()		Work phone ()		Cell phone ()		
Race (check one) <input type="checkbox"/> African-American/Black <input type="checkbox"/> Asian/Pacific Islander <input type="checkbox"/> Native American <input type="checkbox"/> White <input type="checkbox"/> Other: _____				Ethnicity (check one) <input type="checkbox"/> Hispanic/Latino <input type="checkbox"/> Non-Hispanic/Non-Latino		
Occupation		Student? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Specify school: _____				

PRESENT ILLNESS							
Onset date	Hospitalized? <input type="checkbox"/> Yes <input type="checkbox"/> No	Admit date	Discharge date	Medical record no.	Hospital or Clinic Name		
Level of medical care (check all that apply): <input type="checkbox"/> Outpatient clinic <input type="checkbox"/> Emergency Room <input type="checkbox"/> Inpatient ward <input type="checkbox"/> Intensive Care Unit <input type="checkbox"/> None				Significant past medical history: No underlying medical conditions <input type="checkbox"/>			
Symptoms that occurred during current illness (check all that apply): <input type="checkbox"/> Fever ($\geq 37.8^{\circ}\text{C}$ / 100°F) <input type="checkbox"/> Nasal Congestion <input type="checkbox"/> Sore throat <input type="checkbox"/> Cough <input type="checkbox"/> Nausea/Vomiting/Diarrhea <input type="checkbox"/> Muscle ache <input type="checkbox"/> Other Specify: _____					Yes	No	Unk
				Cardiac disease.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				Chronic pulmonary disorder (e.g. asthma, cystic fibrosis).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				Immunosuppression (e.g. HIV, malignancy).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				Metabolic disorder (e.g. diabetes mellitus, renal).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Complications that occurred during acute illness(check all that apply): <input type="checkbox"/> Pneumonia/ARDS <input type="checkbox"/> Secondary bacterial pneumonia <input type="checkbox"/> Other Specify: _____				Other conditions..... Specify: _____			
Died? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Date of death: _____							

**If the patient was admitted, please also fax a copy of the admission and discharge notes with this form.
If the patient was seen in an office or clinic, please fax a copy of the medical visit with this form.
The fax number is: (510) 268-2140.**

CONTACT INFORMATION		Date of Report:	
Provider Name	Facility	Pager/Phone number ()	E-mail address

Adapted from the County of Los Angeles "Initial Swine Influenza Case Report Form"

**California Department of Public Health – Viral and Rickettsial Disease Laboratory
Swine Influenza Specimen Submittal Form**

Specimen Collection and Submittal Instructions

Specimens should be collected within the first 24-72 hours of onset of symptoms and no later than 5 days after onset of symptoms. Personnel collecting clinical specimens should wear an N95 respirator, goggles, disposable gown, and disposable gloves.

Respiratory Specimens:

- Each specimen should be labeled with: date of collection, specimen type, and patient name.
- At a minimum, collect a nasopharyngeal swab (nasopharyngeal wash or nasopharyngeal aspirate are also acceptable). Oropharyngeal (throat) swabs are acceptable, but may not have as high yield. If oropharyngeal specimens are collected, they should be accompanied by a specimen from the nasopharynx. Place the swabs in a standard container with 2-3 ml of viral transport media (VTM).
- If the patient is hospitalized with pneumonia, specimens from the lower respiratory tract (e.g., tracheal aspirate, bronchoalveolar lavage) should also be obtained.

Sera:

For cases or contacts of cases with confirmed swine influenza, collect as much blood as possible (recommended volumes 3- 10 cc from children and 10-20 cc from adults) in a serum separator tube (red top or tiger top). If possible, spin to separate sera before packaging.

Specimen Storage and Shipment:

The specimens should be kept refrigerated at 4°C and sent on cold packs if they can be received by the laboratory within five days of the date collected. If samples cannot be received by the laboratory within five days, they should be frozen at -70 °C or below and shipped on dry ice. Specimens should be shipped per usual protocol to either your local public health laboratory or to:

*California Department of Public Health - VRDL Specimen Receiving / Swine Influenza
850 Marina Bay Parkway Richmond, CA 94804 (510) 307-8585*

--Please do not send specimens on a Friday unless special arrangements have been made with the laboratory--

Patient and Sample Information (AT A MINIMUM, PLEASE COMPLETE THE BOLDED BOXES)

Patient's last name, first name				Patient's mailing address (including Zip code)		Route to: [] PCR [] ISOL [] FA
Age	DOB:	Sex (circle): M F	Onset Date:	COUNTY:		
Disease suspected or test requested - Check one: [] Influenza [] other respiratory virus						
1st	Specimen type and/or specimen source		Date Collected	1st		
2nd	Specimen type and/or specimen source		Date Collected	2nd		
Type or print submitter's complete mailing address				Carol Glaser, DVM, MD, Chief Viral and Rickettsial Disease Laboratory 850 Marina Bay Parkway Richmond, CA 94804 Phone (510) 307-8585 Fax (510) 307-8578 Rev 9/17/07		
Local Laboratory Results: Was this specimen tested by a rapid antigen test? [] Yes [] No If yes, the result was: [] positive [] negative Was this specimen typed as Influenza A by DFA or PCR? [] Yes [] No If yes was a subtype identified? [] Yes [] No If this sample could not be subtyped, please alert VRDL by calling (510) 307-8585 and provide the ETA and Tracking # for the shipment						
Clinical Findings				Clinical Information (fill in or check as pertinent)		
[] Fever to _____ °F				Please attach physician summary notes, other clinical findings and/or pertinent laboratory data:		
[] Generalized aches				[] Chills		
[] Malaise				[] Joint aches or stiffness		
[] Cough				[] Lymphadenopathy		
				[] Headache		
				Is patient hospitalized? [] Yes [] No		
				Is patient in the ICU? [] Yes [] No		

Submitting Physician: _____ Phone# (_____) _____

Submitting Facility: _____ Fax# (_____) _____