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April 26, 2009

SWINE INFLUENZA A (H1N1) HEALTH ALERT

Current Situation

- As of today, seven California residents have been diagnosed with confirmed swine influenza A (H1N1) virus infection; there are also currently three probable cases under investigation. All but one of these cases resides in San Diego or Imperial counties. One of the probable cases is a 14 year old boy from Sacramento County who is epi-linked to a classmate with a history of influenza-like illness (ILI) after recent return from Cancun, Mexico. All but two patients have had self-limited ILI; two patients with underlying conditions were hospitalized. All have recovered.
- Because there was a probable case in a Sacramento school with an epi-link to another possible case and evidence of other students with ILI, a decision was made to dismiss school until 7 days after the last day an infectious child attended school.
- CDPH has drafted an interim policy on school dismissal. We will seek input from CCLHO and hope to finalize the interim guidance tomorrow.
- Definitions:
 - Probable case of swine influenza A (H1N1) virus infection: a person with an acute respiratory illness with an influenza test that is positive for influenza A, but human H1 and H3 negative (i.e., unsubtypeable).
 - Influenza-like illness: fever $\geq 37.8^{\circ}\text{C}$ (100°F) and a cough and/or sore throat.

Influenza Surveillance Recommendations

Because of the rapidly evolving situation and in an attempt to focus laboratory resources, revised enhanced surveillance guidance is being issued. At this time, testing at public health laboratories should be focused on:

- Hospitalized patients with ILI
- Outpatients with ILI in the following categories:
 - Patient is a contact of a confirmed swine influenza A (H1N1) case
 - Patient is in a high-risk setting for transmission (e.g., school, prison)

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- Patient is part of a cluster of people with ILI (only one patient needs laboratory confirmation)
- Patient returned from Mexico within 7 days of illness onset or cared for ill household members with this travel history

Influenza sentinel surveillance providers should continue submitting specimens according to protocol to the CDPH Viral and Rickettsial Disease Laboratory (VRDL). Any influenza A non-subtypeable results will be reported to the LHD immediately.

The CDPH VRDL will continue to support those LHDs that do not have access to PCR testing for influenza as well as local public health laboratories that need assistance with their testing as demand increases. Please alert VRDL if you are sending specimens from patients in any of the above listed categories so testing can be prioritized (e-mail cynthia.jean@cdph.ca.gov and david.cottam@cdph.ca.gov)

Case and contact investigation

Case and contact report forms and laboratory report forms are posted on the CDPH swine influenza website at: <http://www.cdph.ca.gov/HealthInfo/discond/Pages/SwineInfluenza.aspx>

Specimen collection and algorithm for testing in public health laboratories (See attachments)

- Specimen collection: Please collect up to 2 respiratory samples from each patient with ILI. Nasopharyngeal swabs and nasal aspirates are preferable; throat swabs are acceptable if an NP swab or nasal aspirate cannot be obtained. The swabs should be placed in a standard container with 2-3 ml of viral transport media. 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 onset of symptoms.
- Specimen storage: The specimens should be kept refrigerated at 4°C and sent on cold packs if they can be received by a public health laboratory within five days of the collection date. If samples will be received by the laboratory in five or more days from collection, they should be frozen at -70 °C or below and shipped on dry ice.
- Nasopharyngeal swab collection
Materials:
 - Dacron-tipped nasopharyngeal swab with flexible wire handle*
 - Viral transport media
 - Mask and gloves

*Cotton or calcium alginate swabs are **not** acceptable. PCR assays may be inhibited by residues present in these materials

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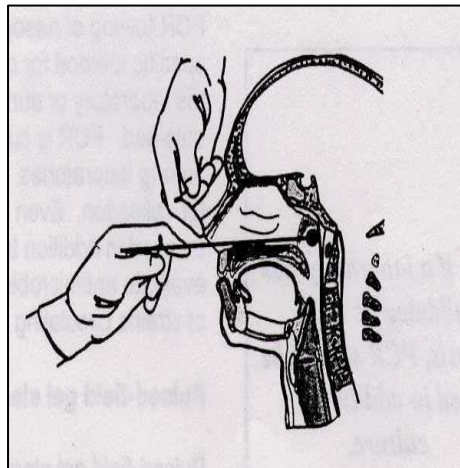
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Procedure:

1. Put on mask and gloves.
2. Have patient sit with head against a wall as patients have a tendency to pull away during this procedure.
3. Insert swab into one nostril **straight back** (not upwards) and continue along the floor of the nasal passage for several centimeters until reaching the nasopharynx (resistance will be met). The distance from the nose to the ear gives an estimate of the distance the swab should be inserted. Do not force swab, if obstruction is encountered before reaching the nasopharynx, remove swab and try the other side.
4. Rotate the swab gently for 5-10 seconds to loosen the epithelial cells.
5. Remove swab and immediately inoculate viral transport media by inserting the swab at least ½ inch below the surface of the media. Bend or clip the wire swab handle to fit the transport medium tube and reattach the cap securely. A dry swab is acceptable for PCR testing.
6. Specimen should be transported at refrigerator temperature and received by laboratory as soon as possible and ≤ 3 days from time of collection.

For a video of NP swab collection, please see:

<http://video.cdc.gov/asxgen/nip/isd/swabdemo.wmv>



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Infection Control Precautions

CDPH concurs with CDC's "Interim Guidance for Infection Control for Care of Patients with Confirmed or Suspected Swine Influenza A (H1N1) Virus Infection in a Healthcare Setting," April 24, 2009, which can be accessed at:

http://www.cdc.gov/swineflu/guidelines_infection_control.htm

Recommendations for antiviral therapy and prophylaxis for swine influenza A (H1N1)

These recommendations are subject to change based on current conditions

CDPH concurs with the Center for Disease Control and Prevention's (CDC's) current "Interim Guidance on Antiviral Recommendations for Patients with Confirmed or Suspected Swine Influenza A (H1N1) Virus Infection and Close Contacts," which can be accessed at:

<http://www.cdc.gov/swineflu/recommendations.htm>

This guidance refers to the current recommended daily dosage of influenza antiviral medications for treatment and chemoprophylaxis.

Higher doses of oseltamivir (e.g., 150 milligrams twice daily) may be considered on a case-by-case basis in severe swine influenza A (H1N1) infections, particularly if there is pneumonic disease at presentation or evidence of clinical progression. There is currently no evidence for enhanced efficacy of high-dose oseltamivir therapy in swine A (H1N1) infections, but this recommendation aligns with [World Health Organization Advice for Avian Influenza A \(H5N1\) infections](#). High-dose therapy appears to offer no additional benefit for the treatment of seasonal influenza.

Other CDC Guidance Documents

Interim Guidance for Swine influenza A (H1N1): Taking Care of a Sick Person in Your Home, April 25, 2009. http://www.cdc.gov/swineflu/guidance_homecare.htm

Interim Recommendations for Facemask and Respirator Use in Certain Community Settings Where Swine Influenza A (H1N1) Virus Transmission Has Been Detected, April 26, 2009.

<http://www.cdc.gov/swineflu/masks.htm>

Swine Influenza A (H1N1) Virus Biosafety Guidelines for Laboratory Workers, April 24, 2009. http://www.cdc.gov/swineflu/guidelines_labworkers.htm

Community Strategy for Pandemic Influenza Mitigation February 2007

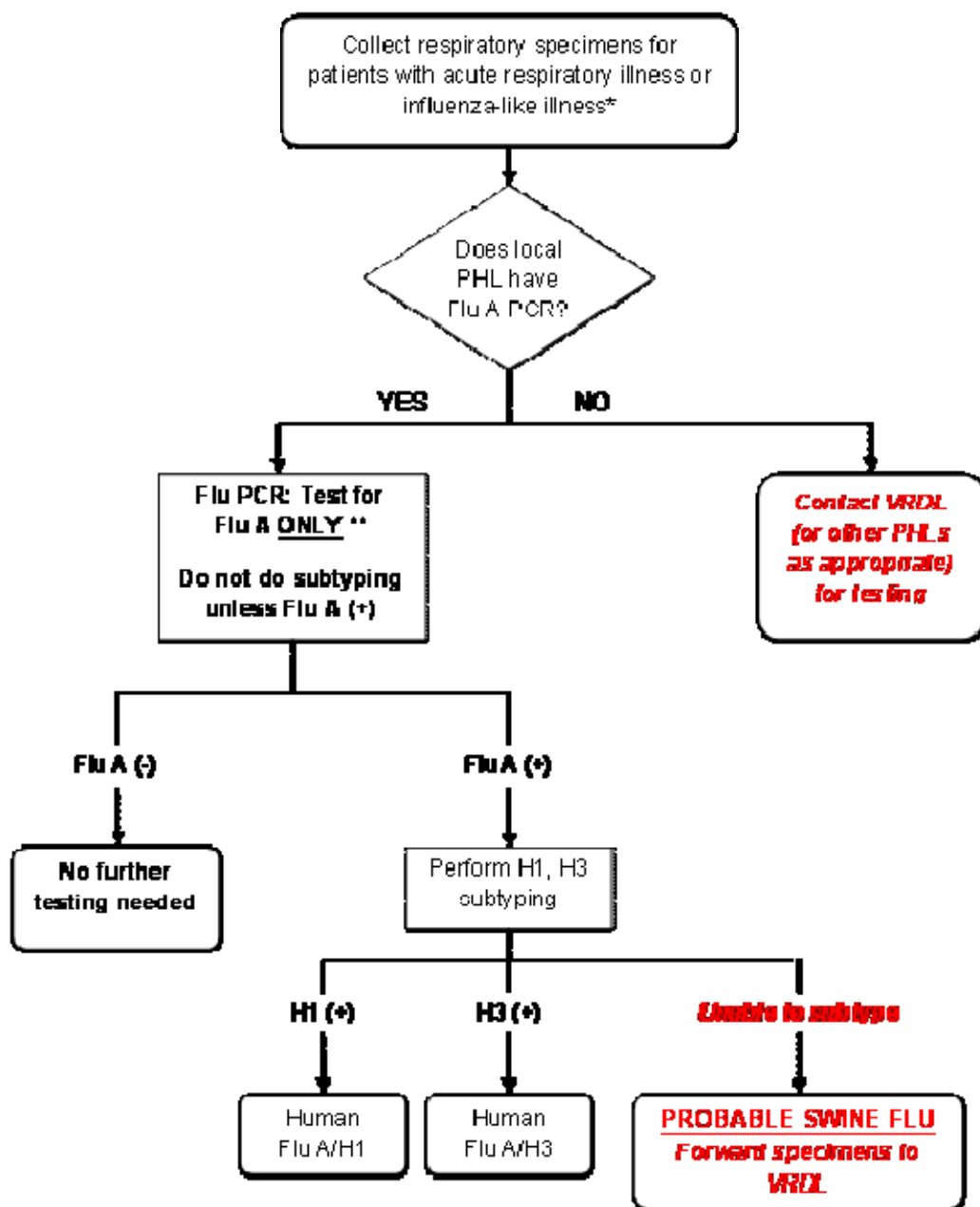
<http://www.pandemicflu.gov/plan/community/commitigation.html>

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**Algorithm for Swine Influenza H1 (SwH1) Testing
in California Public Health Laboratories (PHLs) (rev. 04/26/09)**



* Priorities for testing will likely change

** This will increase the volume of specimens that can be tested

VRDL = Viral and Rickettsial Disease Laboratory, California Department of Public Health

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

Specimen Collection and Submittal Instructions

Attachment 2

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 or weekends unless special arrangements have been made with the laboratory---

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						
1 st	Specimen type and/or specimen source		Date Collected	1 st		
2 nd	Specimen type and/or specimen source		Date Collected	2 nd		
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		

Local Laboratory Results:

Was this specimen tested by a rapid antigen test? [] Yes [] No If yes, result: [] Pos [] Neg
 Was this specimen typed as Influenza A? [] Yes [] No If yes, was subtype identified? [] Yes [] No
If this sample can not be subtyped, please alert VRDL by sending an e-mail to cynthia.jean@cdph.ca.gov and david.cottam@cdph.ca.gov providing the ETA and Tracking # for the package.

Epidemiologic and Clinical Information (Please attach clinic/hospital notes and laboratory data)

Travel to Mexico in past 30 days? [] Yes [] No	[] Fever to _____°F [] Cough
Contact with pigs? [] Yes [] No	[] Sore throat [] Nausea/vomiting/diarrhea
Contact of lab-confirmed swine flu case? [] Yes [] No	[] Altered Mental Status [] Shortness of breath
If yes, what type of contact?	[] Other, please describe:
Household [] HCW [] Other close contact []	Is patient hospitalized? [] Yes [] No
Outbreak setting? [] Yes [] No	Is patient in the ICU? [] Yes [] No
If yes, type of setting (school, LTCF etc):	Antiviral treatment? [] Yes [] No
	If yes, list drug and start date:

Submitting Physician: _____ Phone# (_____) _____

Submitting Facility: _____ Fax# (_____) _____