



HEALTH ALERT SWINE INFLUENZA (H1N1) DIAGNOSIS, TESTING, AND TREATMENT

July 2, 2009

TO: Solano County Healthcare Providers

As of today there are 11 confirmed cases of H1N1 and one death in Solano County. The confirmed Solano cases are only the “tip of the iceberg” as there is clear evidence for the spread of flu across California, the United States, and at least 80 countries. Influenza activity is increasing. Additional hospitalizations and deaths are anticipated. Clinicians should expect visits from significant numbers of patients with influenza-like illness (ILI) over the upcoming days and weeks. Early empiric antiviral treatment is strongly recommended for all hospitalized patients with acute febrile respiratory illness. Currently, most influenza A infections in Solano County are due to novel Influenza A H1N1 virus. A vaccine for H1N1 is in production and will be available this Fall.

Increasing cases of Influenza A during the summer is unheard of, and is distinctive of a pandemic. On June 11, 2009 the World Health Organization (WHO) declared a phase 6 pandemic reinforcing what we all knew; H1N1 had spread worldwide. In addition, WHO has stated the pandemic is moderate in severity which means that the majority of cases are mild. Unfortunately, under rare circumstances, Influenza can be severe and there are over 300 reported deaths worldwide.

The California CD Brief of June 3, 2009 reported the patient characteristics of 62 hospitalized H1N1 cases. Nearly half of the cases were 19 years or younger. Only six cases were over 60 years old. High risk categories were identified as the majority of cases had underlying chronic diseases such as lung disease, immunosuppression, or cardiac disease. Eight percent of the patients were pregnant. Ninety-seven percent of the cases had a fever and 79% had a cough.

The following groups are considered high risk:

- Pregnant women
- Under 5 years of age
- 65 years or older
- Patient with chronic medical condition
- Younger than 19 years old receiving long term aspirin treatment
- Residents of nursing homes and other chronic-care facilities
- Health care workers

DIAGNOSIS and TESTING

The diagnosis of H1N1 is no different than diagnosing Influenza A during the Winter. A patient presenting during the pandemic with Influenza-like illness: Fever $\geq 37.8^{\circ}\text{C}$ (100°F) and a cough and/or sore throat is likely to have H1N1. In general, confirmation with laboratory testing is **NOT** needed in patients with mild illness. Patients with mild illness are recommended to stay home. Laboratory

275 Beck Avenue, P.O. Box 4090, MS 5-240, Fairfield, CA 94533-6804, tel 707 784 8600, fax 707 421 6618

confirmation is recommended in hospitalized patients with Influenza-like illness or patients in high risk categories who would be considered for treatment.

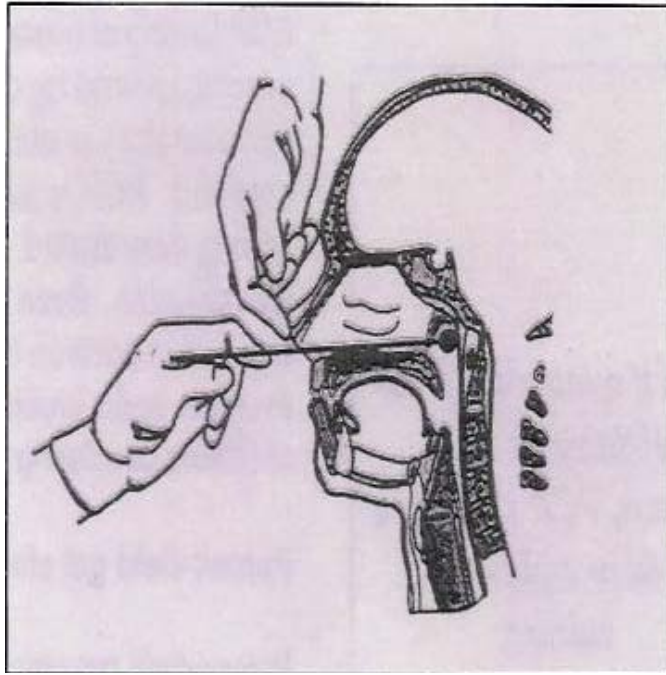
Specimens collection

- Wear appropriate personal protective equipment to protect from spraying of respiratory secretions during specimen collection. Please collect one to two respiratory samples (depending on specimen collection resources) from each patient with ILI. Nasopharyngeal (NP) swabs and nasal aspirates are preferable; throat swabs are acceptable if NP swab or nasal aspirate cannot be obtained. 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.
- Nasopharyngeal swab collection
 - Materials:
 - Dacron-tipped (polyester or rayon) with flexible wire or plastic handle (not wood)*
 - Viral transport media (i.e. M4)
 - Mask and gloves

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

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 (or plastic) swab handle to fit the transport medium tube and reattach the cap securely. A dry swab is not acceptable for PCR testing.



Specimen storage

- The specimens should be kept refrigerated at 4°C for up to 5 days until received by the Napa-Solano Public Health Laboratory. If samples need to be stored for more than 5 days they should be frozen at – 70 C or below and transported on dry ice.
- The Napa-Solano Public Health Laboratory will be accepting and processing specimens. The lab can be contacted at (707) 553-5029 Monday – Friday 8 am and 5 pm.
- 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 should be reported to Solano County Public Health immediately by calling (707) 553-5555.

TREATMENT

CDC recommends that influenza antiviral treatment be given to all hospitalized patients with confirmed, probable, or suspected Influenza A H1N1 and non-hospitalized patients who are confirmed, probable, or suspected to be positive for H1N1 and is at high risk for complications. (History of Asthma, Pregnancy, etc. Please see current CDC Guidelines.) The drugs recommended for treatment are either oseltamivir or zanamivir. The novel H1N1 virus is resistant to amantadine and rimantidine. Treatment is most effective if started as early as possible, preferably within 48 hours of illness onset. Since H1N1 laboratory confirmation can take several days this means the clinician must make a decision regarding treatment largely based upon the patients risk status and presenting severity of illness. The CDC has published “Interim Guidance on Antiviral Recommendations for Patients with Confirmed or Suspected Swine Influenza A (H1N1) Virus Infection and Close Contacts” May 6, 2009, which can be accessed at <http://www.cdc.gov/h1n1flu/recommendations.htm>.

Other CDC Guidance Documents

<http://www.cdc.gov/swineflu/guidance/>

Please do not hesitate to contact Solano County Public Health (707) 784-8600 if you have questions or concerns. Additional information is available at the following websites:

Solano County Public Health: <http://www.solanocounty.com/depts/ph/default.asp>

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

CDC: <http://www.cdc.gov/flu/swine/>