

Avian Influenza H5N1 Case Criteria and Testing Guidelines

Michigan Department of Community Health

Updated January 15, 2014

1. CLINICAL CRITERIA NECESSARY FOR REQUESTING TESTING ⁽¹⁾

A new-onset acute illness with the following:

- Radiographically confirmed pneumonia, acute respiratory distress syndrome (ARDS), or other severe respiratory illness for which an alternate diagnosis has not been established, **AND**
- Requires hospitalization or is fatal; or non-hospitalized with epidemiological link

AND

2. EPIDEMIOLOGICAL CRITERIA NECESSARY FOR TESTING

The clinician should ask the patient about the following **within 10 days** of symptom onset:

- History of travel to a country⁽²⁾ with avian influenza H5N1 documented in poultry, wild birds, and/or humans
- Close contact (approach within 6 ft) of an ill person who was confirmed or suspected to have H5N1
- Worked with live influenza H5N1 virus or samples suspected of containing H5N1 virus in a laboratory

If the patient has any of the above exposures, then the epidemiological criteria necessary for testing are met.

- Also ask about the following potential exposures during travel:
 - Direct contact with (e.g., handling, slaughtering, defeathering, butchering, preparing for consumption) well-appearing, sick or dead domestic poultry or wild birds
 - Direct contact with surfaces contaminated with poultry feces or poultry parts (carcasses, internal organs)
 - Consumption of raw or incompletely cooked poultry or poultry products
 - Close contact (within 6 ft) with a confirmed H5N1-infected animal besides poultry or wild birds (e.g. cat or dog)
 - Close contact (within 6 ft) of a person hospitalized or dead due to a severe unexplained respiratory illness
 - Visiting a market where live poultry are sold or slaughtered

If YES to the criteria in both Boxes 1 and 2 above

1. Initiate full barrier infection control precautions, including airborne, standard, contact and eye precautions.⁽³⁾
2. For persons hospitalized with suspected avian influenza H5N1 infection, clinicians should start empiric treatment with oseltamivir as soon as possible, without waiting for laboratory confirmation.⁽⁴⁾
3. Report suspect cases immediately to your local health department and contact the MDCH Bureau of Epidemiology (BOE) to request approval for Avian Influenza A(H5N1) testing and specimen collection protocols.
 - BOE can be contacted M-F 8am - 5pm at (517) 335-8165 or after hours and weekends at (517) 335-9030.
 - If approved, collect and send specimens for novel influenza virus testing to MDCH Laboratory.
 - Oropharyngeal swab and lower respiratory specimens (bronchoalveolar lavage, tracheal aspirates) are preferred.⁽⁵⁾
 - Specimens should be sent immediately via courier or other rapid means of transport.
 - Serologic testing for influenza H5N1-specific antibody is not available at the MDCH Laboratory.⁽⁶⁾

1. Testing can be considered for patients with mild or atypical disease, such as respiratory illness and fever not requiring hospitalization or significant neurologic or gastrointestinal symptoms in the absence of respiratory disease, or if a patient has a severe or fatal respiratory disease whose epidemiological information is uncertain, unavailable or otherwise suspicious but does not meet the criteria in Box 2. Please contact your local health department and MDCH BOE at the numbers listed above for further consultation.
2. For a listing of influenza H5N1-affected countries, visit the OIE website at http://www.oie.int/fileadmin/Home/eng/Animal_Health_in_the_World/docs/pdf/graph_avian_influenza/graphs_HPAI_02_01_2014.pdf; and the WHO website at http://www.who.int/influenza/human_animal_interface/EN_GIP_20131210CumulativeNumberH5N1cases.pdf.
3. View infection control guidance at http://michigan.gov/documents/mdch/HCIInfectionControlAlinHumansWHOInterimGuidelinesfor_412508_7.pdf
4. For the current recommendations, visit the CDC website <http://www.cdc.gov/flu/avianflu/healthprofessionals.htm> and the WHO website <http://www.who.int/influenza/resources/documents/ClinicalManagement07.pdf>.
5. Oropharyngeal swabs and lower respiratory specimens (e.g., bronchoalveolar lavage or tracheal aspirates) are preferred because they appear to contain the highest quantity of H5N1 virus. Nasal or nasopharyngeal swab specimens are acceptable, but may contain less virus and are not optimal. Bronchoalveolar lavage is a high-risk aerosol-generating procedure; infection control precautions should include gloves, gown, goggles or face shield, and a fit-tested respirator with an N-95 or higher rated filter. A loose-fitting powered air-purifying respirator (PAPR) may be used if fit-testing is not possible. Detection of influenza H5N1 is more likely from specimens collected within the first 3 days of illness onset. If possible, collect serial specimens over several days from the same patient. Collection swabs should have a Dacron tip and an aluminum or plastic shaft. Swabs with calcium alginate or cotton tips and wooden shafts are not recommended. Place specimens at 4°C immediately after collection. Commercial rapid influenza tests are not recommended for detecting H5N1 infection.
6. Serologic testing for influenza H5N1-specific antibody, using appropriately timed specimens, can be considered if other influenza H5N1 diagnostic testing methods are unsuccessful. Paired serum specimens from the same patient are required: one sample should be tested within the first week of illness. and a second sample should be tested 2-4 weeks later.