Influenza Testing Algorithm for 2012–2013 Influenza Season
Michigan Department of Community Health

Questions regarding case and outbreak influenza testing should be directed to the MDCH Division of Communicable Disease at (517) 335-8165 during normal business hours or (517) 335-9030 after hours.

Suspect avian or novel influenza cases (not including 2009 influenza A/H1N1) should be reported immediately to the MDCH Division of Communicable Disease at the numbers listed above; testing is arranged at that time.

MDCH encourages submission of respiratory specimens for influenza and respiratory virus testing for public health surveillance. Specimens can be from any patient type. MDCH highly encourages confirmatory influenza testing for cases of public health interest (ICU hospitalizations, severely ill pregnant or postpartum women, patients with unusual and severe presentations, and deaths) and for congregate setting outbreaks. See the “Influenza Surveillance, Reporting and Testing Guidance” documents for more information on influenza testing and reporting, available on the MIHAN and www.michigan.gov/flu.

Specimen Collection and Submission

- Collect acceptable specimen***
- Complete MDCH lab test request form (“Microbiology/Virology DCH-0583”)
  - Available at www.michigan.gov/mdchlab by clicking on “Test Request Forms” link
  - In the “Indicate Test Requested” section, fill in the circle for “Viral Respiratory Panel”
- Ship specimen to MDCH Bureau of Labs on frozen cold packs, along with MDCH lab test request form

Viral culture or PCR testing, depending on testing volumes (Influenza A & B, Respiratory Syncytial virus, Adenovirus, Parainfluenza)

Positive for Influenza A

- via culture
  - Preliminary influenza A result reported
  - PCR testing to determine influenza A subtype (2009 A/H1N1, A/H3N2, A/H1N1)
  - Final result reported

Positive for Influenza B

- via PCR
  - Equivocal/Indeterminate
  - Sent to CDC for further characterization

Negative for Influenza

- Final result reported

* Acceptable specimens: NP swab in viral transport medium (VTM) or saline (PBS); Dual NP/OP swabs in VTM or PBS; Throat swab in VTM or PBS; Nasal aspirates; Nasal swab in VTM or PBS; Bronchoalveolar lavage, Bronchial wash, sputum (PCR only), lung tissue; viral isolates. DO NOT SUBMIT MULTIPLE SAMPLES ON THE SAME PATIENT unless by special arrangement.

# Swabs used in influenza rapid diagnostic tests cannot be reused for MDCH testing. Consider collecting two swabs so that one may be reserved for MDCH confirmatory testing if needed. Alternatively, an aliquot of the original specimen may be submitted.

Influenza Testing Algorithm for Sentinel Physicians and Sentinel Laboratories for the 2012–2013 Influenza Season  
Michigan Department of Community Health

NOTE: If you are unsure whether you are enrolled as a sentinel physician or laboratory, or if you would like to enroll in this program, please consult your local health department or MDCH (517-335-9104 for physicians; 517-335-8165 for labs).

**Sentinel Physicians:** Collect acceptable specimen*# and ship to MDCH on frozen cold packs along with a sentinel test request form. Please contact Cristi Carlton at 517-335-9104 for test kits and recommended number of submissions

**Sentinel Labs:** Ship representative specimens or isolates*# (up to three per month) to MDCH on frozen cold packs along with sentinel test request forms

Viral culture or PCR testing, depending on testing volumes (Influenza A & B, Respiratory Syncytial virus, Adenovirus, Parainfluenza)

Positive for Influenza A

Positive for Influenza B OR Negative for Influenza

Equivocal/Indeterminate

Final result reported

Subset of positive specimens tested at MDCH or CDC for antiviral resistance testing and antigenic characterization

Equivocal/Indeterminate

Final result reported

Positive for Influenza A via culture

Positive for Influenza A via PCR

Final result reported

Preliminary influenza A result reported

PCRand PCR testing to determine influenza A subtype (2009 A/H1N1, A/H3N2, A/H1N1)

Sent to CDC for further characterization

* Acceptable specimens: NP swab in viral transport medium (VTM) or saline (PBS); Dual NP/OP swabs in VTM or PBS; Throat swab in VTM or PBS; Nasal aspirates; Nasal swab in VTM or PBS; Bronchoeolar lavage, Bronchial wash, sputum (PCR only), lung tissue; viral isolates. **DO NOT** SUBMIT MULTIPLE SAMPLES ON THE SAME PATIENT unless by special arrangement.

*# Swabs used in influenza rapid diagnostic tests **cannot** be reused for MDCH testing. Consider collecting two swabs so that one may be reserved for MDCH confirmatory testing if needed. Alternatively, an aliquot of the original specimen may be submitted.

Revised 9/5/2012. Please visit [www.michigan.gov/flu](http://www.michigan.gov/flu) and [www.michigan.gov/mdchlab](http://www.michigan.gov/mdchlab) for updates.