NOTE: MDCH performs routine year round surveillance for influenza. Please visit the MDCH website at www.michigan.gov/flu and MIHAN for updates.

Routine Influenza Algorithm
Michigan Department of Community Health
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Routine Influenza Testing:
Routine surveillance through laboratories and physicians enrolled in Sentinel Surveillance Program. See page 2 of this algorithm if patient meets criteria for testing‡ for novel influenza.⁸

Collect acceptable specimen * or isolate and ship to MDCH immediately with frozen cold packs.

Negative
- Result reported via MDCH Laboratory Information Management System (LIMS).

Positive
- Further viral characterization, i.e., Influenza A subtyping, performed at MDCH. If results indicate novel/avian strain isolate will be sent to CDC.
- Result reported via MDCH LIMS.

* Acceptable specimens for routine seasonal flu: NP wash, bronchial lavage, NP swab, throat swab.

Postmortem specimens: paraffin-embedded or formalin-fixed respiratory tissue. Consult MDCH Bureau of Epidemiology at (517) 335-8165 prior to submitting samples.

‡ Criteria for novel/avian influenza testing include signs and symptoms suggestive of influenza (fever, headache, tiredness, cough, sore throat, muscle aches, and radiograph evidence of pneumonia) and travel to an area with confirmed human cases of avian influenza and direct or unprotected exposure to infected birds (including feathers, feces and under-cooked meat and egg products). For a current listing of affected areas, go to www.pandemicflu.gov

⁸ A novel Influenza subtype is one that has not previously been circulating in the human population, resulting in a population that is immunologically naïve to the virus.
NOTE: This algorithm will be updated as necessary. Please visit the MDCH website at www.michigan.gov/flu and MIHAN for updates and for BioSafety Guidelines in collecting and handling of specimens.

**Novel/Avian Influenza Suspect Case:**

Patient risk assessment (see ‡) and pre-approval for Novel/Avian Influenza testing required from Bureau of Epidemiology (BOE), 517-335-8165 or 517-335-9030 after hours.

Collect specimens (see ‡) and ship to MDCH immediately with frozen cold packs. The submitting lab should not set-up or order viral cultures but may continue with routine culture testing for alternative non-viral agents. Samples should be submitted to MDCH for novel influenza testing **regardless** of results of other influenza tests (i.e., even if rapid flu tests are negative).

**PCR at MDCH for Flu A (H1, H3 and H5 subtypes), And Flu B**

Flu A +, H1 or H3+, OR B +, and **H5 -**

BOL to telephone BOE. Result reported via MDCH LIMS. Viral culture or further viral characterization may proceed at MDCH or submitter laboratory depending on resources. (Sputum specimens are unacceptable for viral culture.)

**BOL to telephone BOE/OPHP.**
Local health department (LHD) and submitter notification by BOE. **DO NOT PERFORM VIRAL CULTURE.** Result reported via MDCH LIMS. Specimens sent to CDC for confirmation.

**Flu A+ but H1-, H3-, H5-**

Viral culture result reported via MDCH LIMS.

BOL will report CDC result upon receipt.

**BOL to telephone BOE. DO NOT PERFORM VIRAL CULTURE.** Result reported via MDCH LIMS. Specimens sent to CDC for confirmation.

**Flu A+ and H5 +**

BOL will report CDC result upon receipt.
Pandemic Influenza Algorithm
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NOTE: This algorithm is to be used once sustained human-to-human transmission has occurred. It will be updated as necessary. Testing beyond H5 will depend on resources and surveillance needs. Please visit the MDCH website at www.michigan.gov/flu and MIHAN for updates.

Pandemic Influenza Suspect Case – H5 Screen:

Ship acceptable specimens (see #) to MDCH immediately with frozen cold packs. Submitter should retain an aliquot and proceed with additional viral testing only after notification of negative H5 results. Consider H5 testing regardless of results of other influenza tests (i.e., even if rapid flu tests are negative).

H5 PCR by MDCH\^ lab or a lab specified by MDCH.

H5 Negative

H5 PCR result reported via MDCH LIMS.

Further viral characterization may proceed at MDCH, submitting lab or reference lab, depending upon resources.

H5 Positive

H5 PCR result reported via MDCH LIMS.

Results confirmed at CDC upon request of CDC.

\^ Bureaus of Laboratories and of Epidemiology will jointly determine when routine H5 testing is no longer indicated. Testing for surveillance purposes will continue as needed. Further guidance on testing will be provided at that time.