

Respiratory Illness Surveillance and Diagnostic Testing: Influenza, COVID-19, and other Respiratory Pathogens

The North Dakota Department of Health (NDDoH) reminds clinicians to consider influenza, COVID-19, and possibly other pathogens when evaluating patients with respiratory illness. The 2020-2021 influenza season was atypically mild with only 244 cases of influenza reported to the NDDoH in contrast to 12,502 laboratory-identified cases during the 2019-2020 season. It is important for clinicians to consider testing for influenza and possibly other respiratory pathogens in addition to COVID-19 this fall and winter.

Influenza Diagnostic Testing

Influenza signs and symptoms can vary by age and underlying conditions. Common signs and symptoms include fever, non-productive cough, often with headache and myalgias. Fever may not always be present in premature and young infants, immunocompromised and immunosuppressed persons, and in elderly persons. Influenza testing can be used to inform decisions on use of antiviral treatment, antibiotic treatment, the need for additional testing, isolation recommendations, and infection prevention and control practices.

Rapid influenza molecular assays, rapid influenza diagnostic tests, and molecular assays are available for diagnosing influenza. Interpretation of influenza testing results should consider test sensitivity and specificity, prevalence of influenza in the community, time from illness onset to specimen collection, and specimen source. Respiratory specimens should be collected as close to illness onset as possible (ideally <3-4 days). Hospitalized patients with suspected influenza should be tested with high sensitivity and specificity tests such as real-time polymerase chain reaction (RT-PCR) molecular assays since prompt detection is essential to implementing appropriate infection control practices. Antiviral treatment is recommended as soon as possible for hospitalized patients with suspected influenza. Clinicians do not need to wait for influenza testing results. See guidance on [antiviral treatment of influenza](#) recommendations for hospitalized persons and outpatients who are at high-risk for influenza complications or those with progressive illness.

Enhanced Influenza and Respiratory Virus Surveillance

It is essential that influenza specimens are submitted year-round to aid in influenza surveillance and vaccine selection for future influenza seasons. The NDDoH Laboratory

Services Section asks all laboratories to submit positive influenza specimens to the North Dakota Department of Health, Division of Laboratory Services. Specimen submission to public health laboratories also aids in variant influenza surveillance. Variant influenza cases will be identified often through routine specimen submission to public health laboratories since epidemiological investigation of individual cases of influenza is not conducted at state health departments. Specimen shipping to the NDDoH and storage instructions can be found [here](#).

Long-term care, and other congregate living facilities should contact Levi Schlosser at 701-328-3341 for consultation and further investigation for any of the following: a confirmed case of influenza in a resident or healthcare personnel (HCP); a resident with an unknown severe respiratory infection resulting in hospitalization or death; or ≥ 2 residents or HCP with new-onset respiratory symptoms within 72 hours of each other where other respiratory pathogens are suspected besides COVID-19. *Example: There are 5 residents with respiratory illness, but only 2 of the 5 residents have tested positive for COVID-19.* Additional testing may be offered.

Influenza and other respiratory pathogens are expected to circulate this fall and winter in addition to COVID-19. Outpatient surveillance for influenza and COVID-like illness are important to monitor for increases or unusual activity. To better understand what pathogens are contributing to the burden of respiratory illness in the state, the NDDoH is asking providers to participate in enhanced surveillance for COVID-19, influenza, and other respiratory pathogens of public health interest.

Providers are encouraged to send specimens from outpatients with acute respiratory illness to the NDDoH for respiratory multiplex testing. The NDDoH will accept up to two specimens a week for multiplex surveillance testing. Providers participating in this surveillance will not be charged for the multiplex test, however, this may be adjusted in the future depending on the number of specimens received at the lab and available resources.

Specimens will be accepted from patients meeting the following criteria:

- Outpatient with acute respiratory illness
 - No pre-screening (e.g., negative for COVID-19 or influenza) required
- Onset of symptoms within the past 3-4 days

Specimen Requirements:

- Nasopharyngeal (NP) swab in viral transport media (VTM)
 - Collection kits may be requested by completing the supply request form found [here](#).
- Completed [laboratory test request form](#) that includes the ordering provider and ordering facility. Results will be reported to the ordering provider.
 - Must write "Enhanced Respiratory Surveillance" on the other line in the test name request section.

Providers who will be participating in enhanced respiratory surveillance must contact Levi Schlosser at lschlosser@nd.gov or 701-328-3341 to enroll in the program, to receive additional information about program updates, and to ensure specimen submissions will be charged.

Other questions regarding respiratory surveillance during the 2021-2022 season can contact Levi Schlosser at 701-328-3341 or lschlosser@nd.gov.

Diagnostic Testing and Ordering

The NDDoH Laboratory Services offers several respiratory illness diagnostic tests free-of-charge or fee-for-service. SARS-CoV-2 RT-PCR is offered at no charge on NP swabs in VTM. Results are available within 2 days after receipt at the lab. Influenza virus RT-PCR and subtype confirmation is offered at no charge on [acceptable specimens](#) in VTM. Results are available within 2 days after receipt at the lab.

Please refer to the [Directory of Laboratory Services](#) for more information on test ordering and specimen collection and handling.

Influenza and COVID-19 Vaccination

The 2021–22 influenza season is expected to coincide with continued circulation of SARS-CoV-2, the virus that causes COVID-19. Influenza vaccination of individuals ages 6 months and older to reduce prevalence of illness caused by influenza will reduce symptoms that might be confused with those of COVID-19. Prevention of and reduction in the severity of influenza illness and reduction of outpatient visits, hospitalizations, and intensive care unit admissions through influenza vaccination also could alleviate stress on the U.S. health care system. Influenza vaccination is highly recommended by every major medical organization, especially for children ([AAP](#)), pregnant women ([ACOG](#)), and the elderly ([AAFP](#)). Influenza vaccines can and should be administered at the same time as COVID-19 vaccines, irrespective of timing or the dose number, in the COVID-19 series. Influenza vaccines can be given at the same time as COVID-19 vaccine third doses¹ and/or boosters². Individuals who received an influenza or COVID-19 vaccine recently are *not* contraindicated from receiving a COVID-19 or influenza vaccine for any defined period of time. For patients who are due for other routine vaccinations, providers should follow [standard practices for administration and spacing of live vaccines](#), when live attenuated influenza vaccine (LAIV) vaccine is given. The COVID-19 vaccines authorized in the United States are not live vaccines. Providers should follow [best practices for co-administration of vaccines](#), especially when using an adjuvanted influenza vaccine.

For additional information, please see [Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices, United States, 2021–22 Influenza Season | MMWR \(cdc.gov\)](#).

The NDDoH [influenza website](#) is updated weekly during the influenza season.

References

1. A three dose series for mRNA COVID-19 vaccines (Moderna and PfizerBNT) are currently authorized for use in individuals who are moderately to severely immunocompromised, [as defined by the CDC](#).
2. Booster doses of the PfizerBNT COVID-19 vaccine are [authorized](#) for use 6 months after completion of the initial series, in individuals who are 65 and older, as well as individuals 18-64 years of age who are at high risk of severe COVID-19 disease or occupational/institutional exposure.

Categories of Health Alert Network messages:

Health Alert Requires immediate action or attention; highest level of importance

Health Advisory May not require immediate action; provides important information for a specific incident or situation

Health Update Unlikely to require immediate action; provides updated information regarding an incident or situation

HAN Info Service Does not require immediate action; provides general public health information

##This message was distributed to state and local health officers, state and local epidemiologists, state and local laboratory directors, public information officers, HAN coordinators, and clinician organizations##