

Health Advisory: SARS-CoV-2 Variant Surveillance

Minnesota Department of Health, Thu, Mar 25 14:00 CDT 2021

Action Steps

Local and tribal health department: Please forward to hospitals, clinics, urgent care centers, emergency departments, and convenience clinics in your jurisdiction.

Hospitals, clinics and other facilities: Please forward to occupational health and employee health leadership, infection preventionists, infectious disease physicians, emergency department staff, hospitalists, primary care clinicians, and all other health care providers who might see patients with COVID-19.

Health care providers:

- Understand that sequencing provides important insight on population-level surveillance- it is not meant for individual clinical decision making.
- Understand which specimens are needed for surveillance.
- Submit specimens to the MDH Public Health Lab for:
 - All hospitalized patients with a positive SARS-CoV-2 test result, even if on-site PCR or rapid molecular testing has been performed
 - Vaccine breakthrough cases (definition below)
 - Suspected reinfections that meet criteria (definition below),
 - Cases of failure of monoclonal antibody treatment (definition below).

Background

The Minnesota Department of Health (MDH) is working to expand sequencing of SARS-CoV-2 samples to identify and understand emergence and trends of variants circulating in the community.

Although sequencing information is helpful on a population level, individual patient results are of limited value and results on submitted specimens will not be reported back to the provider or submitting laboratory.

MDH is focusing surveillance efforts on SARS-CoV-2 variants in hospitalized patients, potential vaccine breakthrough cases, suspected reinfections, and failures of monoclonal antibody treatment.

Weekly Specimen Submission

MDH requests weekly submission of SARS-CoV-2 positive specimens that meet the following criteria:

Hospitalized Patients

Submit specimens from patients who are hospitalized with a positive SARS-CoV-2 test result. If

your laboratory is performing onsite SARS-CoV-2 testing by PCR and/or rapid molecular testing, MDH is requesting that positive specimens be submitted to MDH-Public Health Laboratory for further characterization.

- Specimens should be submitted within 7 days of collection (preferred). Older specimens can be submitted if frozen within 7 days of collection and shipped frozen to MDH-Public Health Laboratory.
- This can include specimens obtained prior to hospital admission.

Vaccine Breakthrough Cases

Submit specimens from patients with a history of SARS-CoV-2 vaccination with a recent positive SARS-CoV-2 test result for which MDH Epidemiology has requested a specimen(s) be sent to MDH-Public Health Laboratory.

Vaccine breakthrough cases are defined as Minnesota residents who have a respiratory specimen positive for SARS-CoV-2 by RNA or antigen test, with specimen collection date ≥ 14 days after completing the series of an FDA-authorized COVID-19 vaccine.

Suspected Reinfections

For patients with a positive SARS-CoV-2 test result ≥ 90 days after date of initial positive test result, MDH is requesting that positive specimens be submitted to the MDH-Public Health Laboratory for variant testing, if they meet at least one of the following criteria:

1. symptoms consistent with acute infection;
2. cycle threshold (Ct) value ≤ 30 ;
3. domestic or international travel using public means within the preceding 14 days;
4. residing, working, or having visited an area with an identified outbreak consisting of variant strains, or;
5. contact of a known case.

For questions regarding reinfections, including criteria for variant testing, contact Dr. Nick Lehnertz (651-201-5270; email: Nick.Lehnertz@state.mn.us)

Failure of monoclonal antibody treatment

For patients with a positive SARS-CoV-2 tests, MDH is requesting specimens be submitted to the MDH-Public Health laboratory when failure of monoclonal antibody treatment is suspected. Failure of monoclonal antibody treatment is defined as patients who are hospitalized within 2 weeks of treatment with one of the currently authorized monoclonal antibody treatments (bamlanivimab, casirivimab/imdevimab, bamlanivimab/etesevimab).

For questions regarding monoclonal antibody treatment failure, contact Dr. Sarah Lim (651-201-4885, email: Sarah.Lim@state.mn.us).

Variant Tracking

Results for SARS CoV-2 variants circulating in Minnesota will be added to the publicly available NextStrain website showing the genomic epidemiology of SARS-CoV-2 strains in Minnesota.

- [Nextstrain: Genomic epidemiology of novel coronavirus - Minnesota-focused subsampling \(https://nextstrain.org/groups/spheres/ncov/minnesota\)](https://nextstrain.org/groups/spheres/ncov/minnesota)

For More Information

- [MDH: MLS Lab Alerts \(https://www.health.state.mn.us/diseases/idlab/mls/alerts.html\)](https://www.health.state.mn.us/diseases/idlab/mls/alerts.html)
- [CDC: COVID-19 \(https://www.cdc.gov/coronavirus/2019-ncov/index.html\)](https://www.cdc.gov/coronavirus/2019-ncov/index.html)
- Call MDH at 651-201-5414 or 877-676-5414

A copy of this HAN is available at: [MDH Health Alert Network \(https://www.health.state.mn.us/han\)](https://www.health.state.mn.us/han)

The content of this message is intended for public health and health care personnel and response partners who have a need to know the information to perform their duties.