

**OCTOBER 16, 2020**

## **HEALTH ADVISORY**

### **COVID-19 Reinfection Assessment and Investigation**

Immune response, including duration of immunity, to SARS-CoV-2 infection is not fully understood. There are limited data about reinfection with SARS-CoV-2 after recovery from COVID-19.<sup>1,2</sup> At this time, it is unclear if susceptibility to reinfection may be high, as with other coronaviruses that cause the common cold, or if immunity may be longer lasting, as observed with MERS-CoV or SARS CoV-1. It is not recommended to test asymptomatic individuals for SARS-CoV-2 during the first three months after their most recent illness or infection (onset date if symptomatic or specimen collection date if asymptomatic).

For persons who previously tested positive for SARS-CoV-2 by RT-PCR, have clinically recovered, and later tests positive again by RT-PCR, please consider the following when assessing for possible COVID-19 reinfection:

#### Individual Remains Asymptomatic

- Positive tests that occur less than 90 days after symptom onset could represent a new infection or a persistently positive test associated with the previous infection.
- If the positive test occurs 90 days or more after a person's symptom onset or specimen collection date, clinicians should consider the possibility of reinfection.
  - Report to the North Dakota Department of Health (NDDoH).
  - Include cycle threshold (CT) values for last and current RT-PCT positive.
  - Report if any recent potential exposures to COVID-19 (i.e., close contact to a confirmed COVID-19 case, associated with an outbreak such as working in a long-term care facility with active COVID-19 cases, or part of another risk cohort associated with an outbreak).
  - Any negative COVID-19 test results between last and current positive.
  - Submit specimen to the NDDoH Laboratory Services for current RT-PCR positive.
- If the positive test is a COVID-19 antigen test, submit another specimen to the NDDoH Laboratory Services for RT-PCR testing. Second specimen must be collected within 48 hours.
- Test for other potential etiologies (i.e., influenza, RSV, strep throat).

### Individual With COVID-like Symptoms

- Positive tests that occur 45 days or more after a person’s symptom onset or specimen collection date, clinicians should consider the possibility of reinfection.
  - Report to the North Dakota Department of Health (NDDoH).
  - Include cycle threshold (CT) values for last and current RT-PCT positive.
  - Report if any recent potential exposures to COVID-19 (i.e., close contact to a confirmed COVID-19 case, associated with an outbreak such as working in a long-term care facility with active COVID-19 cases, or part of another risk cohort associated with an outbreak).
  - Any negative COVID-19 test results between the last and current positive.
  - Submit specimen to the NDDoH Laboratory Services for current RT-PCR positive.
- If the positive test is a COVID-19 antigen test, submit another specimen to the NDDoH Laboratory Services for RT-PCR testing. Second specimen must be collected within 48 hours.
- Test for other potential etiologies (i.e., influenza, RSV, strep throat).
  - Greater suspicion of reinfection for those 45-89 days after their first infection should be considered when there is no obvious alternate etiology for COVID-like symptoms.

Until we have more information, the determination of whether a patient with a positive test in any of these situations represents a possible reinfection should be made on a case-by-case basis. Because reinfection investigation may take some time, public health actions such as isolation, contact tracing, work furlough, and long-term care outbreak testing initiation, may take place immediately. Those determined to be potentially infectious should remain isolated until they again meet criteria for discontinuation of isolation or discontinuation of transmission-based precautions.

Persons who have recovered from COVID-19 and later are identified as a close contact within 3 months of symptom onset or specimen collection date of their most recent infection, do not need to be quarantined or tested for SARS-CoV-2. However, if it has been 3 months or more, they should follow quarantine recommendations for close contacts.

To report a possible COVID-19 reinfection, call the NDDoH Division of Disease Control at 701-328-2378 or 800-472-2180. Questions about laboratory testing or specimen submission should be directed to the NDDoH Laboratory Services at 701-328-6272.

1. To KK, Hung IF, Ip JD, et al. COVID-19 re-infection by a phylogenetically distinct SARS-coronavirus-2 strain confirmed by whole genome sequencing. Clin Infect Dis (August 25, 2020), ciaa1275, <https://doi.org/10.1093/cid/ciaa1275>
2. Tillett R, Sevinsky J, Hartley P, et al. Genomic Evidence for a Case of Reinfection with SARS-CoV-2 (August 27, 2020). Available at SSRN: <https://ssrn.com/abstract=3680955> or <http://dx.doi.org/10.2139/ssrn.3680955>

**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