



Arkansas Department of Health

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Physician and Provider Guidance for SARS-CoV-2 Relapse vs Re-infection.

Information about human infection with the pandemic coronavirus (SARS-CoV-2) continues to accumulate and new questions exist regarding how to manage patients with recurrent positive tests or symptoms.

Based on current observations, it is recognized that patients have multiple immunological and clinical responses to primary infection with SARS-CoV-2. Many patients, regardless of degree of symptoms, can have persistently positive PCR test results, some for months. At the same time, viral cultures document that they are not shedding live transmissible virus. Viral cultures are negative in symptomatic, recovered outpatients by 10 days and in less than 20 days in very ill or immunocompromised hospitalized patients. This has been most notable in elderly patients in long term care facilities but occurs in other populations as well. The Council of State and Territorial Epidemiologists (CSTE, August 5) has arbitrarily defined 3 months post infection as a period during which positive PCR tests are considered a normal finding following a primary infection.

“A repeat positive test for SARS-CoV-2 RNA using a molecular amplification detection test within 3 months of the initial report should not be enumerated as a new case for surveillance purposes. To date, there has been minimal evidence of re-infection among persons with a prior confirmed COVID-19 infection and growing evidence that repeat positive RNA tests do not correlate with active infection when viral culture is performed. Similarly the experience with other coronaviruses is that reinfection is rare within the first year.^{5,6} NOTE: The time period of 3 months will be extended further when more data becomes available to show risk of reinfection remains low within one year of the initial report.”¹

There have been clinical reports of relapsed symptoms during the 90 days following initial infection. Some of these symptoms mimic those seen during the patient’s primary infection

including specific findings such as anosmia. However, because of the overlap with symptoms caused by other circulating viruses, it is more likely that the recurrent symptoms reflect a new infection with another community virus rather than with SARS-CoV-2. Testing may be warranted using other virus detection platforms such as rapid influenza diagnostic tests or multiplex viral PCR tests before performing repeat SARS-CoV-2 PCR testing. The patient's personal physician is best able to conduct a thorough history and examination and determine a clinical plan.

For now, if other viruses are excluded and SARS-CoV-2 testing is positive, the case would still be considered a relapse. Systematic study of these patients has not been conducted to date; it is assumed, but not definitively proven, that they are non-infectious based on a single study from Korea ². Prudence may dictate that in some situations they be isolated and consultation with the health department or an infectious disease specialist may be indicated.

For patients greater than 3 months past their initial COVID-19 infection and who develop new onset of symptoms, it is recommended that they be treated as a possible new infection with isolation and repeat COVID-19 PCR testing. At this time, only rare cases of COVID-19 reinfection have been identified worldwide. The Health Department would like to be notified of these cases for further investigation. In some cases, these individuals are asymptomatic and have been identified as part of testing related to surveillance activities. Regardless, they should be treated as possible new infections and isolated per standard protocols.

The above interim guidance reflects the current state of knowledge and may change with new scientific findings.

- 1) <https://www.cdc.gov/nndss/conditions/coronavirus-disease-2019-covid-19/case-definition/2020/08/05/>
- 2) Korean "Re-Positives" Assessed as Not Infectious.
https://www.cdc.go.kr/board/board.es?mid=a30402000000&bid=0030&act=view&list_no=367267&nPage=1 accessed July 10, 2020