**New Mexico Medical Advisory Team (MAT) Assessment**

**MAT Workgroup Name:** Clinical Care

**Date:** May 28, 2020

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<th>Question or request:</th>
<th>How should the state define COVID-19 recovered cases?</th>
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| Recommendation/s in bullet form: | Given the availability of testing supplies and the significant number of individuals that have been infected with SARS-CoV-2, the MAT recommends defining recovered cases utilizing symptom or time-based methods whenever practicable. |

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**For persons with confirmed COVID-19 and were symptomatic:**

- **(Preferred) Symptom-based Method:** At least 3 days (72 hours) have passed since resolution of fever without the use of fever-reducing medications; **AND** improvement in respiratory symptoms; **AND** at least 10 days have passed since symptoms first appeared.

  OR

- Test-based Method: Resolution of fever without the use of fever-reducing medications; **AND** improvement in respiratory symptoms (e.g., cough, shortness of breath); **AND** negative results of an FDA Emergency Use Authorized molecular assay for COVID-19 from at least two consecutive nasopharyngeal swab specimens collected ≥24 hours apart (total of two negative specimens).

**For persons with laboratory-confirmed COVID-19 who have not had any symptoms:**

- **(Preferred) Time-based Method:** 10 days have passed since the collection date of their most recent positive COVID-19 diagnostic test assuming they have not subsequently developed symptoms since their positive test. If they develop symptoms, then the test-based or symptom-based strategy should be used based on the date of symptom onset.

  OR

- Test-based Method: Negative results of an FDA Emergency Use Authorized molecular assay for COVID-19 from at least two consecutive nasopharyngeal swab specimens collected ≥24 hours apart (total of two negative specimens).

**Additionally, in instances where a person with confirmed COVID-19 re-tests positive during or after the completion of the symptom-based or time-based isolation period, recommend the following:**

1. The full test-based method and continue to isolate until the case has two negative results of an FDA Emergency Use Authorized molecular assay for COVID-19 from at least two consecutive nasopharyngeal swab specimens collected at least 24 hours apart, **OR**

2. Restart the symptom-based or time-based method, extending at least 10 more days for isolation from the collection date of the last positive result.

**Caveat – Nursing Homes and Homeless Shelters:** Discontinuation of isolation practices for nursing homes and return to homeless shelters have been relying on the test-based method. To simplify this requirement, we are proposing to extend the minimum duration of isolation from 10 days to 14 days in these specific populations in lieu of the test-based method.

NMDOH Epidemiology has been using the CDC guidance (sometimes modified to be slightly more stringent) and recommending the use of the symptom-based (for symptomatic cases) or time-based (for asymptomatic cases) methods over the use of test-based methods because of the current evidence not showing infectiousness past 10
days from symptom onset and the regularity of positive molecular tests following recovery based on symptoms and time.

Re-testing is occurring after the discontinuation of isolation based on symptoms and time (i.e., recovery established without testing) and it is not uncommon for repeat tests among persons recovered to continue to be positive by PCR for weeks. While evidence is growing that persons who test positive following symptomatic recovery do not appear infectious, the evidence is still limited and NMDOH and CDC continue to recommend that a positive result be considered potentially infectious and that isolation of cases and quarantine for contacts be implemented.

Two recent reports from Korea and New York describe prolonged PCR positivity in COVID-19 patients. In the NY study of 1,343 COVID-19 patients, 19% of people continued to have nasopharyngeal PCR positivity two or more weeks after symptom resolution; PCR positivity was detected up to 28 days from symptom resolution. Almost all participants in this cohort with confirmed SARS-CoV-2 infection mounted an IgG immune response to the disease.

The South Korean study examined 285 of 447 identified “re-positive cases” (i.e. cases testing positive after being discharged from isolation). Based on active monitoring, epidemiological investigation, and laboratory testing of re-positive cases and their contacts, no evidence was found that indicated infectivity of re-positive cases. From monitoring of 790 contacts of the 285 re-positive cases, no case was found that was newly infected solely from contact with re-positive cases during re-positive period. Attempts at virus isolation in cell culture of respiratory samples of 108 re-positive cases, yielded all negative results (i.e. virus not isolated). Of the 23 re-positive cases from which the first and the second serum samples were obtained, 96% were positive for neutralizing antibodies. These results prompted the Korean CDC to significantly reduce the management requirements for re-positive cases after discharge from isolation.

There have been reports of prolonged detection of RNA without direct correlation to viral culture. The detection of viral RNA by PCR does not necessarily mean that infectious virus is present, however, to minimize risk of transmission, NMDOH/CDC does consider a positive PCR test result to present a risk of transmission.

Red flags and concerns: Symptoms cannot be used to determine where these individuals are in the course of their illness. While it is possible that the duration of viral shedding could be longer than 10 days after their first positive test, the risk is presumed to be extremely low.

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Resources/Reference:

- (MedRxiv) Humoral immune response and prolonged PCR positivity in a cohort of 1343 SARS-CoV 2 patients in the New York City region: https://www.medrxiv.org/content/10.1101/2020.04.30.20085613v1
- KCDC Findings from investigation and analysis of re-positive cases: https://www.cdc.go.kr/board/board.es?mid=a30402000000&bid=0030&act=view&list_no=367267&nPage=1