SARS-CoV-2 Positive Specimens Requested from Long-Term Care Facilities when Vaccine Failure is Suspected

Date: July 12, 2021

Public Health Message Type: ☐ Alert ☒ Advisory ☐ Update ☐ Information

Intended Audience: ☐ All public health partners ☒ Healthcare providers ☒ Infection preventionists ☒ Long-Term Care Facilities ☒ Local health departments ☐ Schools/childcare ☐ ACOs ☐ Animal health professionals ☐ Other: Clinical Laboratories

Key Points or Updates:

(1) NJDOH encourages healthcare providers to send SARS-CoV-2 positive respiratory specimens to the N.J. Public Health and Environmental Laboratories (PHEL) when vaccine failure is suspected so that genomic sequencing can be performed.

(2) Because most commercial laboratories retain respiratory specimens only a couple days, once public health officials identify a possible vaccine breakthrough case (VBTC), the specimen may no longer be available.

(3) It is important for VBTCs to be sequenced so that NJDOH can identify unusual patterns of breakthrough infection associated with one or more SARS-CoV-2 variant strains.

(4) Sequencing is conducted for public health surveillance; results do not change infection control recommendations or public health actions.

(5) All healthcare providers and laboratories performing sequencing should report all sequencing results to NJDOH via secure email to CDS.COV.DM@doh.nj.gov or fax to (609) 826-5972.

Action Items:

(1) NJDOH requests that post-acute care/long-term care facilities (LTCFs) submit to PHEL (or ask commercial laboratory to submit) all SARS-CoV-2 positive (molecular or antigen) respiratory specimens in residents where vaccine failure and/or reinfection is suspected.

(2) LTCFs should also send when possible all SARS-CoV-2 positive (molecular or antigen) staff specimens where vaccine failure and/or reinfection is suspected to PHEL for sequencing.

(3) Notes:

a. A vaccine breakthrough case is defined as a U.S. resident who has SARS-CoV-2 RNA or antigen detected on a respiratory specimen collected ≥14 days after completing the primary series of an FDA-authorized COVID-19 vaccine.

b. Suspected reinfection is defined as a recurrence of symptoms and a positive viral test result (molecular or antigen) ≥90 days after an initial RT-PCR positive test result.

c. No public health approval is needed before specimen submission, but LTCFs are encouraged to report details on vaccine breakthrough or infection when reporting

COVID-19 cases to their local health department. A directory of local health departments is available at www.localhealth.nj.gov.

How to submit specimens to PHEL:

(1) Refer to the PHEL Technical Bulletin for general guidance on specimen submission.
(2) Store respiratory specimens at 2-8°C for up to 72 hours after collection. If a delay in shipping is expected, specimens must be stored at -70°C or below and shipped on dry ice. If samples have been refrigerated for greater than 72 hours after time of collection, consider collecting a new specimen for submission. Samples not on dry ice received more than 72 hours after collection will be rejected.
(3) Fill out an SRD-1 form for each specimen submitted.
    a. Ensure the patient name and DOB matches the specimen label exactly.
    b. Include LTCF name and use LTCF address in Patient Address field.
    c. Include symptoms, "vaccine breakthrough" or "reinfection," date of prior positive viral test if known, and whether the individual is a resident or staff member in the Pertinent Clinical Information field.
    d. Include date(s) of COVID-19 vaccination in Relevant Immunizations field.
    e. Record date and time of positive specimen collection and specimen type.
    f. Make sure all facility/laboratory and physician contact information are accurate.
    g. To request genomic sequencing, check 'other' (bottom of middle column) and write/type-in "SARS-CoV-2 RNA Sequencing" for the test requested.
(4) Email SARS.sequencing@doh.nj.gov upon shipping a specimen for sequencing with the number of samples being shipped, reason for shipping and estimated date/time of delivery.
(5) Note: Federal regulations do not authorize PHEL to report variant identification to submitting facilities. Sequencing results will be used for epidemiological and surveillance purposes. If a variant of concern is identified, additional guidance will be provided as appropriate.

Contact Information:

- Local health departments: www.localhealth.nj.gov
- The Communicable Disease Service at (609) 826-5964 during business hours

References and Resources:

- NJDOH Weekly Variant Surveillance Reports https://www.nj.gov/health/cd/statistics/covid/
- PHEL Technical Bulletin https://www.nj.gov/health/phel/documents/Bulletins/Supplemental%20Bulletin%2021.1.1%20SARS-CoV-2%20Testing%20at%20PHEL%20V3.pdf
- PHEL SRD-1 Form https://www.nj.gov/health/forms/srd-1.pdf
- CDC information on variant strains https://www.cdc.gov/coronavirus/2019-ncov/transmission/variant.html
- U.S. Variant Cases https://www.cdc.gov/coronavirus/2019-ncov/transmission/variant-cases.html