DPH Recommendations to Health Care Providers and Laboratories on COVID-19 Vaccine Breakthrough Cases - February 23, 2021

Background
The Centers for Disease Control and Prevention (CDC) has developed a protocol for the public health investigation of COVID-19 vaccine breakthrough cases (see case definition below). As part of this national effort, the Connecticut Department of Public Health (DPH) will be conducting enhanced investigation of vaccine breakthrough cases and reporting findings to the CDC. The objective is to investigate SARS-CoV-2 infections among people who received COVID-19 vaccine to identify trends or clustering in patient characteristics, the administered vaccine, or the infecting virus.

Case definition
A Connecticut resident who has SARS-CoV-2 RNA or antigen detection in a respiratory specimen collected ≥14 days after completing the primary series (i.e. final dose) of an FDA-authorized COVID-19 vaccine.

Health care provider steps for a possible COVID-19 vaccine breakthrough case
1. Please contact the testing laboratory and request that residual specimens from the positive test (respiratory specimen or RNA extract) be held at the laboratory. This should be done as soon as possible before specimens are discarded.
2. Report the case to CT DPH by filling out the attached COVID-19 Vaccine Breakthrough Case Form and fax to the DPH at 860-629-6962.

Laboratory steps for a possible COVID-19 vaccine breakthrough case
1. Retain (i.e. do not discard) residual specimens on potential vaccine breakthrough cases.
2. When advised to do so by CT DPH, forward specimens from confirmed vaccine breakthrough cases (see case definition above) to the CT DPH State Laboratory (CT SPHL) for further SARS-CoV-2 variant analysis.
   a. Submit >800uL of original clinical specimen (preferred if available)
   b. Store specimen at 2-8°C up to 3 days from date of collection. Transport to the CT SPHL with a frozen ice pack coolant. If there is a delay in shipment expected, store specimens at -70°C or lower until delivered to the CT SPHL on dry ice.
   c. Submit each specimen with a completed CT COVID-19 Clinical Test Requisition. In the comments section, please indicate that specimen is for “Vaccine Breakthrough”.
3. Submitted specimens will be analyzed by RT-PCR and/or genomic sequencing for SARS-CoV-2 variant lineage for public health surveillance purposes only. Data obtained are not intended for patient management and results will not be reported to the submitting laboratory or healthcare provider.

The CT DPH will collect additional information on identified vaccine breakthrough cases which may require follow-up communication with the ordering provider and/or laboratory. We thank you in advance for your collaboration.

If you have questions about reporting COVID-19 vaccine breakthrough cases, please contact the Epidemiology and Emerging Infections Program at DPH.EEIP@ct.gov or 860-509-7994. If you have questions about specimen submission, please contact the CT SPHL by emailing Randy.Downing@ct.gov or calling 860-920-6640.