



To: CAHAN San Diego Participants
Date: December 2, 2021
From: Public Health Services

Health Advisory Update #44: SARS-CoV-2 virus variant of concern B.1.1.529 (Omicron)

Key Messages

- On Dec 1, 2021, the San Francisco Department of Health, and the California Department of Public Health [confirmed](#) the first U.S. case with Omicron has been identified in San Francisco, CA.
- The Omicron variant was first identified in South Africa and Botswana, but has already been identified in multiple additional countries in returning travelers.
- On Dec 1, 2021, the Centers for Disease Control and Prevention (CDC) classified [Omicron a variant of concern](#) (VOC) for the U.S.
- Whole genome sequencing (WGS) of SARS-CoV-2 is critical to better understand the emergence and clinical significance of this new variant. Indications for specimen referral for WGS are provided in this advisory.

Situation

On November 26, 2021, the World Health Organization [designated a new variant, B.1.1.529 \(Omicron\), as a variant of concern \(VOC\)](#). In addition, today the Centers for Disease Control and Prevention (CDC) named [Omicron a VOC](#) in the United States.

The Omicron variant was first identified by in Botswana and South Africa but has now been reported in at least 14 countries including Hong Kong, Israel, the United Kingdom, Belgium, Germany, Netherlands, Italy, Australia, Spain, and Canada. On November 29, 2021, the California Department of Health (CDPH) issued the attached health alert providing more details on the Omicron variant and recommendations. On Dec 1, 2021, the San Francisco Department of Health and CDPH [confirmed](#) the first U.S. case with Omicron has been identified in San Francisco. The individual was a traveler who returned from South Africa on November 22, 2021. This person, who is believed to be vaccinated, had mild symptoms that are improving and is self-quarantining. All close contacts have been contacted and have tested negative.

The Omicron variant has approximately 50 mutations when compared to the original SARS-CoV-2 virus, and over 30 mutations are within the spike (S) protein of the virus. At this time, information about the epidemiologic, diagnostic, and clinical impacts of these of mutations is limited. One of the mutations in the Omicron variant results in S gene target failure (SGTF) in the ThermoFisher TaqPath SARS-CoV-2 Combo RT-PCR assay. The Delta lineage does not have SGTF with this assay. SGTF may be indicative of the Omicron variant but whole genome sequencing must be performed to definitively identify the Omicron variant. All specimens with SGTF should be sent for sequencing as soon as possible.

Actions Requested

1. Providers are requested to submit specimens for WGS from individuals with SARS-CoV-2 virus infection confirmed by nucleic acid testing who meet at least one of the following criteria:
 - Persons or exposure to persons with recent international travel and especially to those countries in which the Omicron variant has been detected; or
 - Marked differences in real-time RT-PCR viral target(s) cycle threshold (Ct) values (e.g., ORF1ab target detected, N target detected, and S target **not detected**); or
 - Possible re-infection (e.g., recurrence of symptoms with positive molecular testing or positive molecular testing at least 90 days after initial infection); or
 - Infection >14 days of completing a COVID-19 primary vaccination series (i.e., two doses for the Pfizer or Moderna vaccines, one dose for the Johnson & Johnson vaccine).
2. Providers can contact the County Epidemiology Unit for assistance in both evaluation and specimen submission during business hours Monday through Friday by calling 619-692-8499. San Diego providers should not directly contact CDPH to request WGS and requests should not be made after hours.
3. Providers should report any receipt of sequence data identifying a variant of concern to the County Epidemiology Unit within one working day using a [Confidential Morbidity Report](#) faxed to 858-715-6458 or sent by secure email to epi-cdreporting.hhsa@sdcounty.ca.gov.

Resources

[First Confirmed Case of Omicron Variant Detected in the United States | CDC Online Newsroom | CDC Fact Sheet: Omicron Variant \(ca.gov\)](#)

Thank you for your participation.

CAHAN San Diego

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Health Alert

SARS-CoV-2 virus variant of concern B.1.1.529 (Omicron) November 29, 2021

On November 26, 2021, the World Health Organization designated a new variant, B.1.1.529 (Omicron) as a variant of concern (VOC). The Omicron variant was first identified by health authorities in Botswana and South Africa, and it has now been reported in at least 14 countries. Most isolates have been found in Botswana and South Africa, and travel-associated cases have been identified in Hong Kong, Israel, the United Kingdom, Belgium, Germany, Netherlands, Italy, Australia, Spain, and Canada. The Omicron variant has not yet been identified in the United States, including California. On November 26, the U.S. Government issued a proclamation imposing [new travel restrictions](#) for persons who are not U.S. citizens or legal permanent residents coming to the U.S. from eight countries: the Kingdoms of Eswatini and Lesotho; and Republics of Botswana, Malawi, Mozambique, Namibia, South Africa, and Zimbabwe. Travelers who have been in one of the above eight countries within the last 14 days must follow the Centers for Disease Control and Prevention (CDC) recommendations¹ to get tested 3-5 days after arrival and quarantine for 7 days even if testing negative. Because there may be increased risk for post-vaccination infection, individuals should follow the CDC guidance for unvaccinated travelers even if vaccinated or previously infected with COVID-19. If COVID-19 testing is positive or symptoms develop, individuals should follow CDC guidance and isolate for 10 days². Contacts of cases due to the Omicron variant should be quarantined for 10 days, monitored for quarantine adherence, and tested at least once during the quarantine period, optimally at day 5-7.

The Omicron variant has approximately 50 mutations when compared to the original SARS-CoV-2 virus, and over 30 mutations are within the spike protein of the virus. At this time, information about the epidemiologic, diagnostic, and clinical impacts of these mutations is limited. However, some mutations present in the Omicron variant have been associated with an increase in infectiousness and immune escape which could result in lower vaccine effectiveness. Anecdotal reports from South Africa have indicated that patients may present with symptoms that are atypical from those associated with infection due to other SARS-CoV-2 variants, such as no loss of smell/taste or extreme fatigue. However, it is yet unclear if the Omicron variant has any impact on severity of disease or the effectiveness of currently available treatments.

One of the mutations in the Omicron variant results in S gene target failure (SGTF) in the ThermoFisher TaqPath SARS-CoV-2 Combo RT-PCR assay. More than 99% of strains currently circulating in the U.S. are from the Delta lineage, which does not have SGTF with this assay. Thus, SGTF with this assay may be indicative of the Omicron variant. However, whole genome sequencing must be performed to definitively identify the Omicron variant, and all

¹ <https://www.cdc.gov/coronavirus/2019-ncov/travelers/international-travel-during-covid19.html>

² <https://www.cdc.gov/coronavirus/2019-ncov/your-health/quarantine-isolation.html>

specimens with SGTF should be sent for sequencing as soon as possible.

The California Department of Public Health (CDPH) is taking several measures in response to the Omicron variant including:

- Monitoring for detection of the Omicron variant and other VOCs through the California SARS-CoV-2 Whole Genome Sequencing Initiative called COVIDNet. COVIDNet is a public-private partnership to provide California with genomic sequencing data for epidemiological efforts to control the spread of COVID-19.
- Recommending international travelers follow the CDC guidance to test for COVID-19 within 3-5 days after arrival, quarantine for 7 days, and isolate and repeat testing if COVID-19 symptoms develop.
- Emphasizing the importance of COVID-19 vaccination and booster efforts for all persons aged five years and older. COVID-19 vaccination remains the most important strategy to prevent serious illness and death from COVID-19.
- Reminding the public to mask in indoor places regardless of vaccination status, and optimize mask fit and filtration. [Get the Most out of Masking \(ca.gov\)](#)

The CDPH would like to remind health care providers to please ask patients about travel history especially during this winter respiratory virus season. Additionally, the CDPH requests that health care providers collect and submit specimens for whole genome sequencing from individuals with SARS-CoV-2 virus infection who meet at least one the following criteria:

- Recent international travel especially to those countries in which the Omicron variant has been detected;
- Exposure to persons with recent international travel especially to countries in which the Omicron variant has been detected;
- Specimens that show S gene target failure/dropout (also called SGTF) by polymerase chain reaction;
- Possible re-infection (i.e., recurrence of symptoms with positive molecular testing at least 90 days after initial infection); or
- Infection >14 days after completing a vaccination series (i.e., two doses of a mRNA Pfizer or Moderna vaccines or one dose of the Johnson and Johnson vaccine).

CDPH encourages continued vigilance for rapid increase in cases or outbreaks that have high attack rates. Specimens can be submitted to local public health laboratories and the CDPH Viral and Rickettsial Disease Laboratory (VRDL) for whole genome sequencing and analysis. Please contact your local health department (LHD) for assistance in both evaluation and specimen submission. Cases of COVID-19 suspected or due to the Omicron variant should be reported to the LHD immediately.

CDPH also recommends that LHDs prioritize COVID-19 cases due to the Omicron variant for case investigation and contact tracing to assess the degree of transmission and limit spread as much as possible. Guidance regarding isolation for cases and quarantine for contacts including the importance of adherence to non-pharmaceutical interventions including masking and physical distancing should be provided. COVID-19 cases due to the Omicron variant should be monitored for isolation adherence.

CDPH will continue to issue and post updates and guidance during this rapidly evolving situation here: [Main Page \(ca.gov\)](#)