



## Enhanced SARS-CoV-2 Strain Surveillance for Omicron variant

### November 30, 2021

#### Summary and Action Items

- A new SARS-CoV-2 variant that contains a large number of mutations (Pango lineage B.1.1.529, WHO Variant of Concern “Omicron”) has been detected in Africa, Asia, Australasia, Europe and North America.
- As of November 29, 2021, Omicron has not been identified in the United States, but it is likely that cases will be detected in the coming days and weeks.
- Laboratories that submit specimens to CDPH’s Regional Innovative Public Health Laboratory (RIPHL) are usually encouraged to submit at least 15 routine surveillance specimens each week for genomic characterization. **To enhance genomic surveillance, laboratories are temporarily requested to submit 30 routine surveillance specimens each week.**
- Laboratories performing genomic sequencing are encouraged to sequence virus isolates in a timely manner and upload to public databases.

**Background:** The B.1.1.529 variant was reported to the World Health Organization (WHO) on November 24, 2021. On November 26, 2021, WHO [classified B.1.1.529 as a Variant of Concern \(VOC\)](#), named Omicron. Omicron has a large number of mutations, including some with the potential risk of reducing immune protection from prior infection or vaccination, and has [rapidly increased in relative prevalence in some parts of South Africa](#). As of November 29, 2021, [Omicron has not been detected in the United States](#). While travel from certain countries has been restricted, this is unlikely to eliminate the risk of local importations entirely, and the risk of local cases of Omicron is high.

[Much remains to be learned](#) about how transmissible Omicron is compared to Delta (B.1.617.2, the currently dominant lineage in the US); the real world ability of Omicron to evade the immune protection from prior infection or vaccination; and the ability of Omicron to cause more severe disease. Similar to Alpha (B.1.1.7), Omicron has a deletion in the Spike gene ( $\Delta 69/70$  deletion) which can cause some diagnostic assays to have characteristic patterns (e.g. S-gene target failures with TaqPath COVID-19 Combo Kit and Linea COVID-19 kit), but the overall diagnostic performance is not expected to be affected as these assays target multiple genes. [The FDA evaluates the impact of SARS-CoV-2 mutations on diagnostic tests](#).

**Actions:** CDPH continues to operate the Regional Innovative Public Health Laboratory (RIPHL) for SARS-CoV-2 strain surveillance in Chicago, in partnership with Rush University Medical Center.

- Laboratories that submit specimens to RIPHL are usually encouraged to submit at least 15 routine surveillance specimens each week for genomic characterization. **To enhance genomic surveillance, laboratories are temporarily requested to submit 30 routine surveillance specimens each week.** Specimens can be submitted on any week day and results will be returned in the usual manner. Laboratories that would like to participate in RIPHL should email [riphl@rush.edu](mailto:riphl@rush.edu).
  - Given rapidly changing epidemiologic and clinical information, RIPHL is not currently preferentially requesting specimens from patients with particular travel histories or clinical presentations.
  - Healthcare providers with a clinical suspicion for Omicron may request their laboratory colleagues to submit specimens to RIPHL. Laboratories should mark these as “Special Cases”. (Note sequencing results are used solely for public health purposes and are not intended to be used for purposes of an individual’s diagnosis, prevention, treatment, or health assessment.)
- Laboratories performing genomic sequencing independently are encouraged to sequence virus isolates in a timely manner and upload to public databases to identify cases.

The public should continue to follow established public health guidance, such as getting vaccinated and boosted when eligible, wearing a mask in public indoor settings, washing hands frequently, physically distancing from others, and following [CDC](#) and [CDPH](#) recommendations for international and domestic travel.