

Data Report: Monitoring SARS-CoV-2 Variants in Chicago

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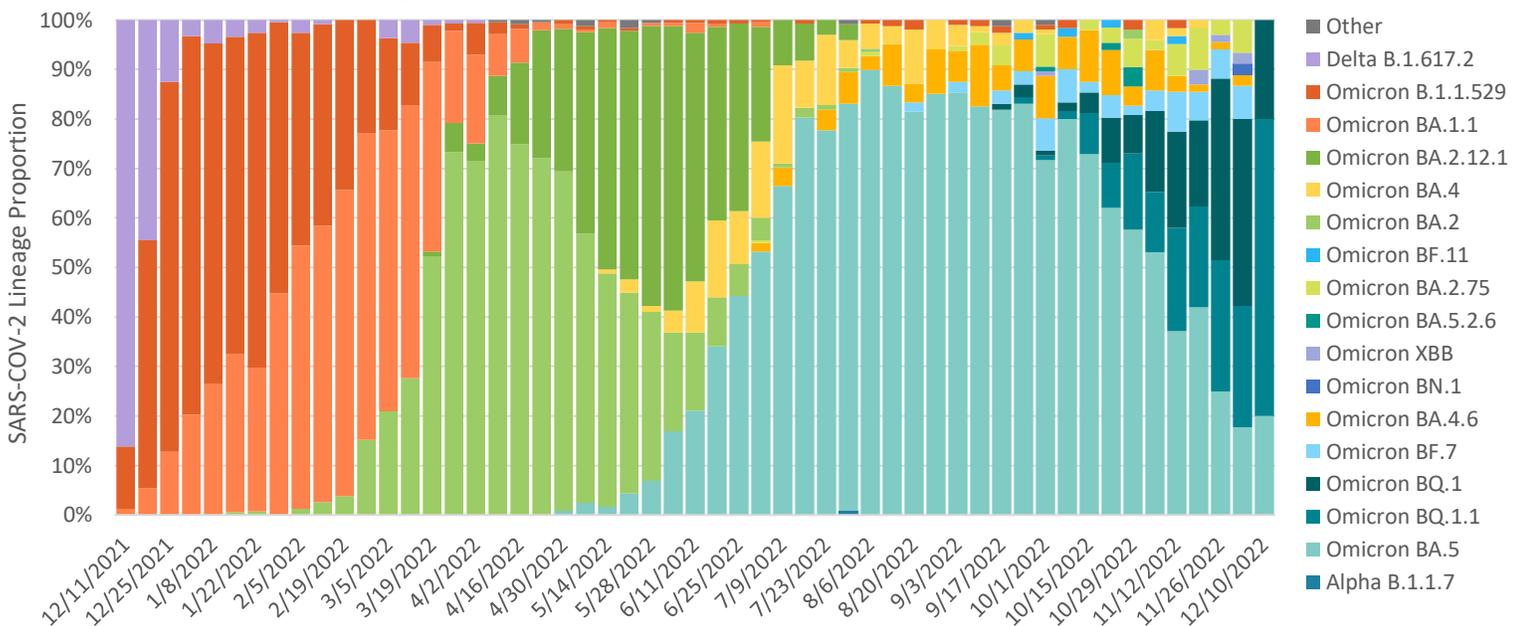
Background

The Chicago Department of Public Health (CDPH) monitors SARS-CoV-2 variants of concern like Omicron and its sublineages through the Regional Innovative Public Health Laboratory (RIPHL), a partnership with Rush University Medical Center. Like all viruses, SARS-CoV-2 – the virus that causes COVID-19 – constantly changes through genetic mutation. These genetic mutations can lead to the emergence of SARS-CoV-2 variants. In late 2021, the Omicron variant of concern emerged, and various sub-lineages of the Omicron variant have continued to emerge since. Monitoring SARS-CoV-2 variants helps public health officials gather important information and prepare to respond to any future change in COVID-19 transmission in Chicago.

Variant Prevalence in Chicago

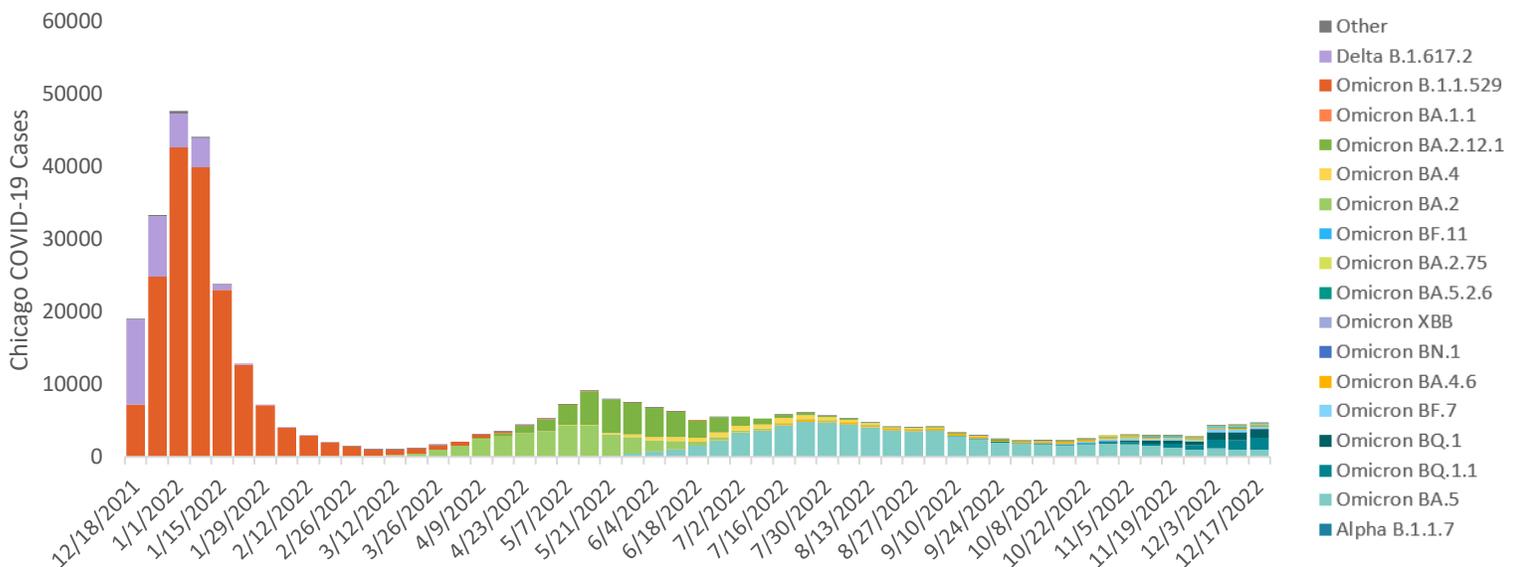
Currently, Omicron is the only variant of concern being monitored by the Centers for Disease Control and Prevention (CDC). Figure 1 displays RIPHL’s lineage breakdown in Chicago over a one-year period.

Figure 1. SARS-CoV-2 lineage proportions for surveillance specimens received by RIPHL, by week of specimen collection (December 11, 2021 to December 10, 2022).



Although SARS-CoV-2 variants continue to evolve, the number of cases in the Chicago area remain low. Figure 2 shows SARS-CoV-2 variant proportions from NS3 (HHS Region 5*) applied to the number of Chicago Department of Public Health COVID-19 cases.

Figure 2. SARS-CoV-2 lineage proportions from NS3 (HHS Region 5) applied to Chicago COVID-19 cases (December 11, 2021 to December 10, 2022).



*HHS Region 5 data includes Illinois, Indiana, Michigan, Minnesota, Ohio, & Wisconsin

City of Chicago COVID-19 Community Levels

The City of Chicago has implemented COVID-19 Community Levels, designed by the CDC to help communities decide what prevention steps to take based on the latest local COVID-19 data. Levels are determined each week for each county in the U.S. A county's risk level can be low, medium, or high based on a combination of three metrics: the number of new local COVID-19 cases; the number of new local COVID-19 hospital admissions; and the proportion of local hospital beds occupied by patients with COVID. As of January 6, 2023 the Chicago's community risk level is **medium**. More information on this metric can be found here: [Community Transmission and Risk | COVID 19 \(chicago.gov\)](https://www.chicago.gov/Community-Transmission-and-Risk-19)

Chicago Early Variant Alert Signal

CDPH also monitors the growth rate of new variants of concern (VOC) or variants of high concern (VOHC) as designated by the CDC. Logistic growth rate is used to measure how quickly a variant is growing in the population; quickly expanding variants likely have a large fitness advantage over existing variants.

This early alert signal also recognizes variants increasing in prevalence, displayed below in Table 1. RIPHL will continue to monitor these variants and provide updates as needed.

Table 1. SARS-CoV-2 variants currently increasing in prevalence in the Chicago area.

Sublineage	Parent Lineage	Date first detected in RIPHL
BF.7	BA.5 (Omicron)	8/15/2022
BQ.1	BA.5 (Omicron)	9/20/2022
BQ.1.1	BA.5 (Omicron)	9/27/2022
XBB	Recombinant of BA.2.10.1.1 and BA.2.75	9/27/2022
BN.1	BA.2.75.5 (Omicron)	10/23/2022
XBB.1.5	XBB (Omicron)	12/5/2022

Conclusions

SARS-CoV-2 continues to evolve. Getting vaccinated remains the best way to protect yourself and others from all variants of COVID-19, including Omicron and its sub-lineages. You can learn more about current vaccine recommendations and where to get vaccinated by visiting [COVID-19 Vaccine Recommendations \(chicago.gov\)](https://www.chicago.gov/city/en/depts/dph/svcs/prevention_and_wellness/vaccines_and_immunizations/covid19_vaccine_recommendations.html) and [COVID-19 Vaccine Finder \(chicago.gov\)](https://www.chicago.gov/city/en/depts/dph/svcs/prevention_and_wellness/vaccines_and_immunizations/covid19_vaccine_finder.html). As always, visit [SARS-CoV-2 Variants | COVID 19 \(chicago.gov\)](https://www.chicago.gov/city/en/depts/dph/svcs/prevention_and_wellness/vaccines_and_immunizations/sars_cov_2_variants.html) for updates about SARS-CoV-2 variants circulating in Chicago.