



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

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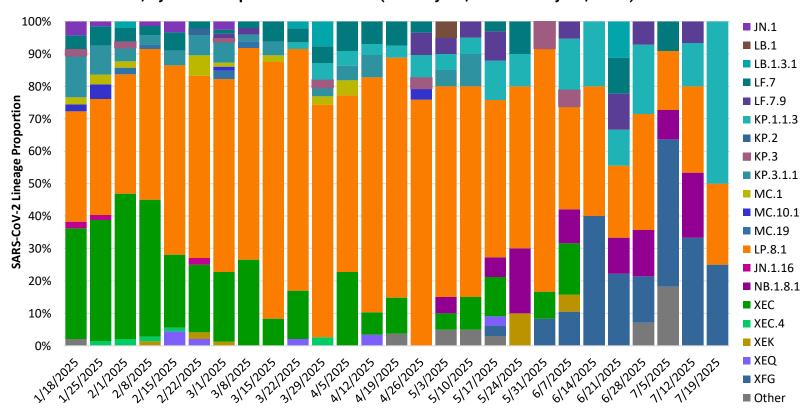
Background

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

LP.8.1 and XFG, both JN.1 sublineages, are the most prevalent SARS-CoV-2 lineages circulating in Chicago. JN.1 is a descendant of Omicron, which is classified as a variant under monitoring (VUM) and is being tracked by the Centers for Disease Control and Prevention (CDC). It was first identified in Chicago in early December of 2021. Although SARS-CoV-2 continutes to evolve, the number of cases in the Chicago area remain low. Figure 1 displays RIPHL's lineage breakdown in Chicago over a six-month period.

Figure 1. SARS-CoV-2 lineage proportions for surveillance specimens received by RIPHL, by week of specimen collection (January 12, 2025 to July 19, 2025).



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 (as of July 19, 2025).

Sublineage	Parent Lineage	Date first detected in RIPHL
LP.8.1	JN.1 (Omicron) / JN.1.11.1	12/2/2024
XFG	JN.1 (Omicron)/ recombinant of LP.8.1.2 and LF.7	5/17/2025

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 sublineages. You can learn more about current vaccine recommendations and where to get vaccinated by visiting COVID-19 Vaccine Recommendations (chicago.gov) and COVID-19 Vaccine Finder (chicago.gov). As always, visit SARS-CoV-2 Variants | COVID-19 (chicago.gov) for updates about SARS-CoV-2 variants circulating in Chicago.