

## COVID-19 Variants in Chicago (updated December 1, 2021)

### Background

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. Since fall 2020, several concerning variants have emerged and spread around the world. These variants concerned public health officials in part due to their ability to spread more easily among people, to cause more severe disease, or to evade the immune system. The CDC classifies variants based on the potential impact on public health (see below).

One of the variants of concern, called Delta, causes the majority of infections in the United States as of November 2021. Omicron is a newer variant of concern – the first confirmed case of Omicron in the US [was reported on December 1, 2021](#). Much remains to be learned about Omicron - the best way to protect yourself against Omicron and all other variants is to get vaccinated and boosted when you are eligible, get tested when you are sick, wear a mask in public indoor settings, wash your hands frequently, avoid poorly vaccinated spaces, and following [CDC](#) and [CDPH](#) recommendations for international and domestic travel.

#### ***Variant Being Monitored (VBM):***

A variant that might cause more severe illness or spread more easily, but is no longer spreading widely in the US, so it doesn't pose an immediate threat. Examples of VBMs are Alpha, Beta, Gamma, Epsilon, Eta, Iota, Kappa, Mu, Zeta.

#### ***Variant of Interest (VOI):***

A variant that has genetic markers that are likely to cause more severe illness or allow the virus to spread more easily and is increasing or causing outbreaks in the US. Currently, there are no VOIs in the US.

#### ***Variant of Concern (VOC):***

A variant that causes more severe illness or allows the virus to spread more easily or has other concerning features, and is actively spreading in the US. Delta and Omicron are the only VOCs in the US.

#### ***Variant of High Consequence (VOHC):***

A variant that has clear evidence that one or more public health measures - such as vaccinations, diagnostic tests, or clinical treatments - are significantly less effective than previously. There are currently no variants of high consequence in the US.

### Identifying SARS-CoV-2 variants in Chicago

Testing for variants is not like the diagnostic testing you might do at your doctor's office or pharmacy which tells you if you have the virus that causes COVID-19. Variants are identified through specialized laboratory analysis called genomic sequencing, which can only be done in certain advanced laboratories and, can only be performed on some of positive specimens that meet specific technical criteria.

CDPH is part of national efforts to understand the lineages, or variants, of SARS-CoV-2 that are circulating in the US. CDPH works with IDPH to submit specimens to the CDC's National SARS-CoV-2 Strain Surveillance System (NS3). Commercial laboratories in the Chicago area also conduct genomic analyses for variants as part of NS3. You can read more about NS3 here: <https://www.cdc.gov/coronavirus/2019-ncov/variants/cdc-role-surveillance.html>, and see the results here: <https://covid.cdc.gov/covid-data-tracker/#variant-proportions>

In addition, CDPH works closely with various academic centers around the city that are conducting genomic analyses. For example, CDPH has partnered with Rush University Medical Center to form the Regional Innovative Public Health Laboratory (RIPHL). RIPHL accepts specimens from all large hospitals in Chicago, and conducts genomic sequencing to understand the locally circulating variants.



## Omicron

On November 30, 2021, the CDC designated Omicron as a variant of concern. Omicron is a variant that was detected much more recently than Delta – it was first detected in southern Africa in late November 2021. Omicron contains a large number of mutations and appears to have rapidly replaced Delta as the dominant lineage in South Africa, which might be an indication that it can spread more easily among people.

Much is still unknown about Omicron. For example, we do not yet know whether Omicron will outcompete Delta in the US, whether it might partially evade the immune system (for example by making the effects of previous infection or vaccination with currently-available vaccines less protective against future infection with Omicron), or whether Omicron causes more or less severe disease than previous variants. However, researchers and public health officials across the globe, including right here in Chicago, are working together to learn more.

On December 1, 2021, CDC reported [the first confirmed case of Omicron in the US](#) which was found in California. As of December 1, 2021, no confirmed cases have been detected in Illinois, but we are enhancing our genomic surveillance efforts from CDPH through additional engagement with hospitals and laboratories across the city. CDPH is continuously monitoring variants, and we have built a genomic surveillance system that can reliably and rapidly detect new variants. We expect Omicron to be identified quickly, if it emerges in Chicago, and will keep the public updated.

### What can you do?

We know what it takes to prevent the spread of COVID-19. You should continue to follow established public health guidance – get vaccinated and boosted when you are eligible, wear a mask in public indoor settings, avoid poorly ventilated indoor spaces, wash your hands frequently, keep physically distancing from others, and following [CDC](#) and [CDPH](#) recommendations for international and domestic travel.

Visit [www.chi.gov/covidvax](http://www.chi.gov/covidvax) to learn more and to schedule a vaccine.