As of today, California, Guam and North Carolina have been removed from the travel advisory. No new states were added to the advisory.
# Chicago COVID-19 Community Transmission and Risk Matrix

<table>
<thead>
<tr>
<th>Source: Chicago Department of Public Health, data current as of November 30, 2021. These metrics represent general community COVID transmission and should not be applied to individual settings that have mitigation practices in place.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>COVID-19 CASES DIAGNOSED PER DAY</strong></th>
<th><strong>HIGH TRANSMISSION</strong></th>
<th><strong>SUBSTANTIAL TRANSMISSION</strong></th>
<th><strong>LOWER TRANSMISSION</strong></th>
<th><strong>LOW TRANSMISSION</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago residents - 7-day rolling daily average</td>
<td>800+</td>
<td>400 - 799</td>
<td>200 - 399</td>
<td>&lt;20</td>
</tr>
<tr>
<td><strong>COVID-19 TEST POSITIVITY</strong></td>
<td><strong>CURRENT:</strong> 3.5% Increasing</td>
<td><strong>CURRENT:</strong> 2 - 4.9%</td>
<td>2 - 4.9%</td>
<td>&lt;2%</td>
</tr>
<tr>
<td>Chicago residents - 7-day rolling daily average</td>
<td>10%+</td>
<td>6.6 - 9.9%</td>
<td>5.0 - 6.5%</td>
<td>&lt;2%</td>
</tr>
<tr>
<td><strong>HOSPITAL BEDS (NON-ICU) OCCUPIED BY COVID PATIENTS</strong></td>
<td><strong>CURRENT:</strong> 300 Increasing</td>
<td><strong>CURRENT:</strong> 200 - 249</td>
<td>100 - 249</td>
<td>&lt;100</td>
</tr>
<tr>
<td>Chicago hospitals - 7-day rolling daily average</td>
<td>1250+</td>
<td>750 - 1249</td>
<td>250 - 749</td>
<td>&lt;100</td>
</tr>
<tr>
<td><strong>ICU BEDS OCCUPIED BY COVID PATIENTS</strong></td>
<td><strong>CURRENT:</strong> 86 Increasing</td>
<td><strong>CURRENT:</strong> 20 - 99</td>
<td>20 - 99</td>
<td>&lt;20</td>
</tr>
<tr>
<td>Chicago hospitals - 7-day rolling daily average</td>
<td>400+</td>
<td>300 - 399</td>
<td>100 - 299</td>
<td>20 - 99</td>
</tr>
</tbody>
</table>
Chicago: New COVID cases appear to be decreasing, however trends will likely mirror 2020 holiday case rates.

- Nov 22, 2021: 613 diagnosed cases
- Current average case rate: 493
- Nov 27, 2020: 1,386 diagnosed cases
- Dec 3, 2020: 1,747 diagnosed cases
- Dec 25, 2020: 891 diagnosed cases
- Jan 8, 2020: 1,326 diagnosed cases
Chicago: COVID test positivity increases

Nov 27, 2020: 11.4%
Dec 25, 2020: 8.4%
Dec 3, 2020: 13.2%
Jan 3, 2020: 10.7%

Current positivity: 3.5%
But there’s still more work to do!

77% of Chicagoans ages 12 and up have received at least one dose of a COVID-19 vaccine.
Percent of residents 12+ years-old with at least one dose of COVID-19 vaccine by community area

Citywide: 77.2%

Community Area Milestones
• Roseland reached 60%
• Chicago Lawn reached 77%
• Near West Side reached 80%
• West Lawn reached 90%

Data reported to the Illinois Comprehensive Automated Immunization Registry (I-CARE) through 11/20/2021. 2% of people with a first dose had an address that was unable to be geocoded and do not appear on this map.
Percent of residents 12+ years-old with a completed COVID-19 vaccine series by community area

Citywide: 70.9%

Data reported to the Illinois Comprehensive Automated Immunization Registry (I-CARE) through 11/20/2021. 2% of people with a completed series had an address that was unable to be geocoded and do not appear on this map.
### Uptake among 5-11 year-olds continues to rise

#### At least one dose (% vaccinated as of 11/28/2021)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>5-11</th>
<th>12-17</th>
<th>18-29</th>
<th>30-39</th>
<th>40-49</th>
<th>50-59</th>
<th>60-69</th>
<th>70-79</th>
<th>80+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>23.0%</td>
<td>68.7%</td>
<td>69.1%</td>
<td>76.1%</td>
<td>82.4%</td>
<td>88.6%</td>
<td>84.4%</td>
<td>78.2%</td>
<td>69.2%</td>
</tr>
</tbody>
</table>

#### Completed vaccine series (% vaccinated as of 11/28/2021)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>5-11</th>
<th>12-17</th>
<th>18-29</th>
<th>30-39</th>
<th>40-49</th>
<th>50-59</th>
<th>60-69</th>
<th>70-79</th>
<th>80+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>1.3%</td>
<td>59.5%</td>
<td>61.6%</td>
<td>70.1%</td>
<td>76.6%</td>
<td>82.8%</td>
<td>78.9%</td>
<td>72.6%</td>
<td>64.1%</td>
</tr>
</tbody>
</table>

Chi.gov/coviddash
Where to get your child vaccine

- Richard J Daley College – Saturday, 12/4 9am-2pm
- Wilbur Wright College – Sunday, 12/5 9am-2pm
- Protect Chicago At Home
  - Appointments available on weekends starting 12/11
Get vaccinated *now* in time for the holidays:
Omicron (B.1.1.529)

Key updates as of November 30, 2021
Timeline of detection to date

- November 11-14, 2021: specimens collected in Botswana and South Africa that are later identified as Omicron
- November 23, 2021: Discovery of new variant that showed different results in qPCR in South Africa
- November 24, 2021: First news reports from similar variant found in Botswana and China (from traveler from South Africa) from sequences in database
- November 26, 2021: Designated as a Variant of Concern (VOC) by WHO
- November 29, 2021: Detected so far in Africa, Asia, Australasia, Europe, North America

Current Worldwide Distribution

- Local transmission
- Omicron detected in a traveler
Viruses replicate (copy themselves), leading to mutations

• Viruses need a host (YOU!) to survive; they use human/animal cells to copy themselves

• Once a virus enters a human, it starts copying itself millions of times. The human immune system works to fight off the virus, but not before these copies are made. The virus is looking for opportunities to reproduce and spread.

• Mutations are random “errors” in the virus’ genetic code that can be introduced when the virus copies itself

• The more virus that is circulating in a population, the more the virus itself can change

• If a mutation makes it more likely that a virus will survive/replicate, it may out-compete versions of the virus that don’t have that mutation.

• A variant is a version of the virus that has a certain pattern of mutations. Three main levels.
  • Repeated transmission: Variant of interest
  • Repeated transmission that is concerning from a public health standpoint: Variant of concern (e.g. Delta)
    • E.g. this version of the virus may be more contagious, more able to evade our immune system’s lessons from prior infection or vaccine, makes us sicker, makes our treatments less likely to work.
  • Repeated transmission that is highly concerning from a public health standpoint: Variant of high consequence
    • Not had one of these yet (could it be Omicron?)
Why the concern? Laboratory evidence

- Large number of mutations (50 overall and 32 in the spike protein)
- 30 amino acid changes, three small deletions, and one small insertion in the spike protein compared to original virus
- Most divergent variant (most number of mutations) that has been detected thus far
- Changes seen in the sequence coding of the spike protein have been previously associated with increased transmissibility or immune escape

https://covariants.org/variants/21K.Omicron
Why the concern? Epidemiologic evidence

A new variant is spreading rapidly in South Africa, and appears to be out-competing other variants much faster than previous variants of concern did.

Share of all sequenced cases* in South Africa accounted for by each variant, by number of days since it passed 1%

*Growth of B.1.1.529 is modelled from SGTF data rather than full genomic sequences
Source: FT analysis of data from Gisaid and the South African National Health Laboratory Service
© FT

https://www.ft.com/content/42c5ff3d-e676-4076-9b9f-7243a00c8b5e
Why the concern? Laboratory evidence

https://twitter.com/Tuliodna/status/1463911554538160130
Why the concern? Epidemiologic evidence

Figure 9: S-gene dropout (%) of cases with high VL (Ct value<30 for ORF or N gene). The red bars are the number of tests reporting the presence of SARS-CoV-2 (daily) on the TaqPath assay. The solid blue line is the moving median of S-gene dropout (%).

*Current (end of Nov '21) dramatically increasing trend in the proportion of SGTF (Ct value<30 for ORF or N gene)

https://twitter.com/Tuliodna/status/1463911554538160130
Why the concern? Totality of evidence

• **More transmissible?** (More contagious)
  • Likely, based on pattern seen in South Africa

• **More immune escape?** (Humans less likely to be fully protected as a result of vaccination or prior infection)
  • Likely, being investigated
  • Most divergent variant (most mutations) so far\(^1\)
  • Known mutations are concerning (*though some protection against severe disease still likely, T-cell response unclear*)

• **Less effective treatments?**
  • Somewhat likely
  • Monoclonal antibodies may need to be retargeted. Some good news—upcoming antiviral medications likely less affected.

• **More severe disease?**
  • Unclear
  • Early cases in South Africa among the young, relatively mild. Increasing hospitalizations in SA may be related simply to increasing cases (not the variant)

• **Less sensitive diagnostics?** (Tests don’t work as well)
  • Unlikely
  • Some PCR assays may be less sensitive, impact likely minimal given most are multi-target
  • Some theoretical risk to antigen tests given deletion in N gene, but studies ongoing and initial results not concerning

---

1. [https://www.nature.com/articles/s41586-021-04005-0](https://www.nature.com/articles/s41586-021-04005-0). 20 spike mutations in a synthetic variant meant “near complete” resistance to neutralizing antibodies
International policy responses (Omicron and EU surge)

- **Poland**: ban flights to seven African countries, extend the quarantine period for some travellers and reduce limits on numbers allowed into places like restaurants.
- **Germany**: Considering toughening restrictions.
- **Australia**: reversed plans to reopen its international borders to skilled workers and students.
- **Japan**: shut its borders to foreigners to prevent the spread of the Omicron variant, joining Israel in imposing some of the strictest border controls since the variant's discovery in South Africa.
- **The Netherlands**: partial lockdown from Saturday, restaurants and shops to close early, spectators barred from major sporting events. Bars and restaurants to close at 8 pm; partial lockdown to last three weeks; social distancing reimposed immediately.
National actions on travel

- As of November 29, 2021, the US announced travel restrictions from eight countries: Malawi, Mozambique, Zimbabwe, Botswana, Eswatini, Lesotho, South Africa, and Namibia.

- May see increased testing and quarantine requirements for all international travelers.

- Expected amendment of Nov 8 travel order by Dec 2 to include for all international travelers — regardless of vax status:
  - Viral test within 1 day pre-departure
  - Self-attestation to:
    - Receive a PCR test at 3-5 days post arrival AND
    - Quarantine 7 days (even if test neg) or Q10 days w/o testing.
    - Isolate if test positive

Local CDPH/laboratory responses

- Increase Chicago-wide sampling for genetic sequencing to ensure the sample is representative of the city population.
- In the laboratory, add a pre-screening PCR step to identify possible Omicron variant rather than batching testing.
- Continue to increase local wastewater sampling for COVID, including adding capacity at ORD international terminal.
  - Argonne National Laboratory (subcontractors of UIC) should have primers for Omicron this week.
Next steps

- We are well placed to *detect* Omicron and likely will soon. The question is *response*.
  - **Vaccinate!!!**
  - **Boosters!**
    - **All** Chicagoans 18+ should get a booster 6 months after Pfizer/Moderna, 2 months after J/J.
- **Masks indoors!**
- **Staying home if you’re sick, handwashing, distancing, etc.**