Protecting Chicago: Phase IV Re-Opening Metrics Update

November 21, 2020
(Data current through 11/18/2020)
<table>
<thead>
<tr>
<th></th>
<th>Stop: May need to delay moving ahead</th>
<th>Caution: Pause and monitor</th>
<th>Go: Cautious progress</th>
<th>Go: Continued progress</th>
<th>Go: Advanced progress</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cases</strong> 7-day rolling daily average</td>
<td>Any sustained increase &gt;14 days within the past 28 days</td>
<td>Increase 0-14 days (in most recent 14-day period)</td>
<td>Stable or decrease 0-13 days (w/o increase in most recent 14-day period)</td>
<td>Stable or decrease 14-28 days</td>
<td>Stable or decrease &gt;28 days and/or sustained &lt;200 new cases per day (~100 cases per 100,000 persons)</td>
</tr>
<tr>
<td><strong>Hospitalizations</strong> 7-day rolling daily average</td>
<td>Cases</td>
<td>7-day rolling daily average</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Deaths</strong> 7-day rolling daily average</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>COVID Emergency department visits</strong> 7-day rolling daily average</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Positivity rate</strong> 7-day rolling daily average</td>
<td>&gt;10%</td>
<td>5% - 10%</td>
<td>3% - 5% of all daily tests are confirmed positive</td>
<td>&lt;3% of all daily tests are confirmed positive</td>
<td>&lt;=1% of all daily tests are confirmed positive</td>
</tr>
<tr>
<td><strong>Hospital system capacity</strong> 7-day rolling daily average</td>
<td>&gt;1200 non-ICU beds &gt;250 ICU beds &gt;300 ventilators</td>
<td>&gt;1000 non-ICU beds &gt;150 ICU beds &gt;150 ventilators</td>
<td>&lt;1000 non-ICU beds occupied by COVID patients &lt;150 ICU beds occupied by COVID patients &lt;150 ventilators occupied by COVID patients</td>
<td>&lt;500 non-ICU beds occupied by COVID patients &lt;75 ICU beds occupied by COVID patients &lt;75 ventilators occupied by COVID patients</td>
<td>&lt;250 non-ICU beds occupied by COVID patients</td>
</tr>
<tr>
<td><strong>Testing capacity</strong> 7-day rolling daily average</td>
<td>Unexplained decline in testing &lt;4500 total tests/day</td>
<td>Explained decline in testing &lt;4500 total tests/day</td>
<td>Stable testing &gt;4500 total tests/day</td>
<td>Stable testing &gt;6750 total tests/day</td>
<td>Stable testing &gt;9,000 total tests/day</td>
</tr>
<tr>
<td><strong>Response capacity</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>Assign case for investigation within 24h for 50% of cases</td>
<td>Assign case for investigation within 24h for 75% of cases</td>
<td>Assign case for investigation within 24h for 100% of cases</td>
</tr>
</tbody>
</table>

**CDPH COVID-19 Phase IV** starting June 26 2020
COVID-19 case incidence
The doubling time is currently 14.7 days as of 11/14/20

Doubling time is a logarithmic calculation of the speed of 7-day average daily incidence of new confirmed COVID-19 cases in Chicago during the 2nd surge (October 4 to present) Answers the question: **At the current rate of growth, how many days from today will it take to double the number of people infected since the start of the surge?** The longer it takes to double, the slower the growth of the epidemic. Case counts are based on lab results with known specimen collection date. (Source: INEDSS)
COVID-19 Confirmed Cases
COVID-19 case incidence reaches plateau on 10/11 at very high level (7X greater than 6 weeks prior). Data reported through 11/19.

Recent Trend
Increase 11 days (10/4-10/15) 29 C/D
Increase 10 days (10/15-10/25) 36 C/D
Increase 16 (10/25-11/10) 85 C/D
Stable 4 days (11/10-11/14)

14-day Incidence
HIGH
(2,196 avg. daily cases*)

14-day slope
GROWTH
+64.8 cases per day

Surge 2 cumulative
56,000 incident cases
From 10/4 through 11/19

Daily COVID-19 cases with known specimen report date. *14-day incidence is calculated by summing all new cases in the most recent 14-day period and dividing by 14 days to find an average daily count. Incidence gating rank is determined using 14-day cumulative incidence/100,000 population. The gating rank categories are defined as: LOW (1-10); MODERATELY LOW (11-25); MODERATE (11-50); MODERATELY HIGH (51-99); HIGH (100+) and presented as corresponding daily counts color-coded to gating category. Daily counts for most recent dates displayed are likely incomplete.
COVID-19 case incidence in Chicago set new peaks for counts and speed of increase.

COVID-19 cases, daily counts and rolling 7-day average, specimen date
Surge 2 cumulative case counts by race/ethnicity (since 10/4/2020)

COVID-19 cases among Chicago residents by race/ethnicity, rolling 7-day average, specimen collection date

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Surge 2 Cumulative Count (since 10/4/2020)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latinx</td>
<td>18,778 (2.4% of pop.)</td>
</tr>
<tr>
<td>Black, non-Latinx</td>
<td>7,569 (1.0% of pop.)</td>
</tr>
<tr>
<td>Asian, non-Latinx</td>
<td>1,208 (0.7% of pop.)</td>
</tr>
<tr>
<td>White, non-Latinx</td>
<td>11,262 (1.3% of pop.)</td>
</tr>
<tr>
<td>Native American/AN, non-Latinx</td>
<td>55</td>
</tr>
</tbody>
</table>

Daily COVID-19 cases with known specimen report date and race/ethnicity information.
COVID-19 case incidence is very high and growing among all race/ethnicities.

COVID-19 cases among Chicago residents by race/ethnicity, rolling 7-day average, specimen collection date

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>14-day incidence</th>
<th>14-day slope</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latinx</td>
<td>HIGH 697 avg. daily cases</td>
<td>GROWTH +16.4 cases per day</td>
</tr>
<tr>
<td>Black, non-Latinx</td>
<td>HIGH 273 avg. daily cases</td>
<td>GROWTH +7.8 cases per day</td>
</tr>
<tr>
<td>Asian, non-Latinx</td>
<td>HIGH 45 avg. daily cases</td>
<td>GROWTH +0.9 cases per day</td>
</tr>
<tr>
<td>White, non-Latinx</td>
<td>HIGH 409 avg. daily cases</td>
<td>GROWTH +12.8 cases per day</td>
</tr>
</tbody>
</table>

Daily COVID-19 cases with known specimen report date and race/ethnicity information. Approximately 30% of cases used to calculate 14-day incidence are missing race/ethnicity information, therefore the reported 14-day incidence represents an undercount of true incidence.
Black, non-Latinx case incidence is very high and growing. Incidence has been stable for 3 days.

COVID-19 cases among Black, non-Latinx residents, daily counts and rolling 7-day average, specimen collection date

<table>
<thead>
<tr>
<th>Recent Trend</th>
<th>14-day incidence</th>
<th>14-day slope</th>
<th>Surge 2 cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase 13 days (10/15-10/28) 1 C/D</td>
<td>HIGH (273 avg. daily cases*)</td>
<td>GROWTH +7.8 cases per day</td>
<td>7,569 incident cases From 10/4 through 11/18</td>
</tr>
<tr>
<td>Increase 6 days (10/28-11/3) 4 C/D</td>
<td>Increase 7 days (11/3-11/10) 15 C/D</td>
<td>Stable 3 days (11/10-11/13)</td>
<td></td>
</tr>
</tbody>
</table>

Daily COVID-19 cases with known specimen report date and race/ethnicity information. Approximately 30% of cases used to calculate 14-day incidence are missing race/ethnicity information, therefore the reported 14-day incidence represents an undercount of true incidence. Daily counts for most recent dates displayed are likely incomplete. *14-day incidence is calculated by summing all new cases in the most recent 14-day period and dividing by 14 days to find an average daily count. Incidence gating rank is determined using 14-day cumulative incidence/100,000 population. The gating rank categories are defined as follows. LOW (1-10); MODERATELY LOW (11-25); MODERATE (26-50); MODERATELY HIGH (51-99); HIGH (100+) and presented as corresponding daily counts color-coded to gating category.
Latinx case incidence is very high and growing. Incidence has decreased for 3 days.

COVID-19 cases among Latinx residents, daily counts and rolling 7-day average, specimen collection date

Daily COVID-19 cases with known specimen report date and race/ethnicity information. Approximately 30% of cases used to calculate 14-day incidence are missing race/ethnicity information, therefore the reported 14-day incidence represents an undercount of true incidence. Daily counts for most recent dates displayed are likely incomplete. *14-day incidence is calculated by summing all new cases in the most recent 14-day period and dividing by 14 days to find an average daily count. Incidence gating rank is determined using 14-day cumulative incidence/100,000 population. The gating rank categories are defined as follows. LOW (1-10); MODERATELY LOW (11-25); MODERATE (26-50); MODERATELY HIGH (51-99); HIGH (100+) and presented as corresponding daily counts color-coded to gating category.
Asian, non-Latinx case incidence is high and growing. Incidence has been stable for 4 days.

COVID-19 cases among Asian, non-Latinx residents, daily counts and rolling 7-day average, specimen collection date

<table>
<thead>
<tr>
<th>Recent Trend</th>
<th>Increase 25 days (10/15-11/9) 1 C/D</th>
<th>Stable 4 days (11/9-11/13)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14-day incidence</td>
<td>HIGH (45 avg. daily cases*)</td>
<td></td>
</tr>
<tr>
<td>14-day slope</td>
<td>GROWTH +0.9 cases per day</td>
<td></td>
</tr>
<tr>
<td>Surge 2 cumulative</td>
<td>1,208 incident cases From 10/4 through 11/18</td>
<td></td>
</tr>
</tbody>
</table>

Daily COVID-19 cases with known specimen report date and race/ethnicity information. Approximately 30% of cases used to calculate 14-day incidence are missing race/ethnicity information, therefore the reported 14-day incidence represents an undercount of true incidence. Daily counts for most recent dates displayed are likely incomplete. *14-day incidence is calculated by summing all new cases in the most recent 14-day period and dividing by 14 days to find an average daily count. Incidence gating rank is determined using 14-day cumulative incidence/100,000 population. The gating rank categories are defined as follows. LOW (1-10); MODERATELY LOW (11-25); MODERATE (26-50); MODERATELY HIGH (51-99); HIGH (100+) and presented as corresponding daily counts color-coded to gating category.
White, non-Latinx case incidence is very high and growing. Incidence has been stable for 3 days.

COVID-19 cases among white, non-Latinx residents, daily counts and rolling 7-day average, specimen collection date

Daily COVID-19 cases with known specimen report date and race/ethnicity information. Approximately 30% of cases used to calculate 14-day incidence are missing race/ethnicity information, therefore the reported 14-day incidence represents an undercount of true incidence. Daily counts for most recent dates displayed are likely incomplete. *14-day incidence is calculated by summing all new cases in the most recent 14-day period and dividing by 14 days to find an average daily count. Incidence gating rank is determined using 14-day cumulative incidence/100,000 population. The gating rank categories are defined as follows. LOW (1-10); MODERATELY LOW (11-25); MODERATE (26-50); MODERATELY HIGH (51-99); HIGH (100+) and presented as corresponding daily counts color-coded to gating category.
COVID-19 cases among Native American/Alaska Native, non-Latinx residents, daily counts and rolling 7-day average, specimen collection date

**Recent Trend**

<table>
<thead>
<tr>
<th>Cases at low incidence for &gt;28 days.</th>
</tr>
</thead>
<tbody>
<tr>
<td>14-day incidence</td>
</tr>
<tr>
<td>2 avg. daily cases*</td>
</tr>
<tr>
<td>14-day slope</td>
</tr>
<tr>
<td>+0.1 cases per day</td>
</tr>
<tr>
<td>Surge 2 cumulative</td>
</tr>
<tr>
<td>55 incident cases</td>
</tr>
<tr>
<td>From 10/4 through 11/18</td>
</tr>
</tbody>
</table>

Daily COVID-19 cases with known specimen report date and race/ethnicity information. Approximately 30% of cases used to calculate 14-day incidence are missing race/ethnicity information, therefore the reported 14-day incidence represents an undercount of true incidence. Daily counts for most recent dates displayed are likely incomplete. *14-day incidence is calculated by summing all new cases in the most recent 14-day period and dividing by 14 days to find an average daily count. Due to the citywide population size of 8,086, gating ranks are not applied here.
COVID-19 Severe Outcomes
Daily COVID-19 hospital admission is up 3X over 4 weeks.

COVID-19 Hospital admissions, daily counts and rolling 7-day average, first known hospital admit date

Recent Trend
- Admissions tripled since 10/13
- Peak 7-day rolling average: 173 avg. daily admissions (4/12/2020)
- Cumulative hospital admits by surge:
  - Current surge: 2,143 (10/11-11/10)
  - First surge: 4,016 (3/14-4/14)

Data reporting is delayed

Hospitalizations are reported to CDPH by hospitals into I-NEDSS and ESSENCE and self-reported by patients via an online survey. Daily counts for most recent dates displayed are likely incomplete. Cases who are not indicated to have been hospitalized across any of the three data sources are assumed to not have been hospitalized. Six records with hospital admit dates from January and February 2020 are excluded from this chart. Peak daily admissions based on rolling 7-day average.
Daily COVID-19 hospital admissions are much higher than recent months and rising quickly.

COVID-19 hospital admissions, daily counts and rolling 7-day average, first known hospital admit date

<table>
<thead>
<tr>
<th>Peak 7-day rolling average</th>
<th>173 avg. daily admissions 4/12/2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumulative hospital admits by surge</td>
<td>Current surge: 2,143 (10/11-11/10)</td>
</tr>
<tr>
<td></td>
<td>First surge: 4,016 (3/14-4/14)</td>
</tr>
</tbody>
</table>

Hospitalizations are reported to CDPH by hospitals into I-NEDSS and ESSENCE and self-reported by patients via an online survey. Daily counts for most recent dates displayed are likely incomplete. Cases who are not indicated to have been hospitalized across any of the three data sources are assumed to not have been hospitalized. Six records with hospital admit dates from January and February 2020 are excluded from this chart. Peak daily admissions based on rolling 7-day average.
Daily COVID-19 hospital admissions are rising for every race/ethnicity yet fastest for Black, non-Latinx.

Hospitalizations are reported to CDPH by hospitals into I-NEDSS and ESSENCE and self-reported by patients via an online survey. Daily counts for most recent dates displayed are likely incomplete. Cases who are not indicated to have been hospitalized across any of the three data sources are assumed to not have been hospitalized. Six records with hospital admit dates from January and February 2020 are excluded from this chart. Peak daily admissions based on rolling 7-day average.
Black, non-Latinx hospital admission are rising.

COVID-19 hospital admissions among Black, non-Latinx residents, daily counts and rolling 7-day average, first known hospital admit date

<table>
<thead>
<tr>
<th>Recent Trend</th>
<th>Admissions tripled since 10/13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak 7-day rolling average</td>
<td>97 avg. daily admissions 4/6/2020</td>
</tr>
</tbody>
</table>

Data reporting is delayed

Hospitalizations are reported to CDPH by hospitals into I-NEDSS and ESSENCE and self-reported by patients via an online survey. Daily counts for most recent dates displayed are likely incomplete. Cases who are not indicated to have been hospitalized across any of the three data sources are assumed to not have been hospitalized. Six records with hospital admit dates from January and February 2020 are excluded from this chart. Peak daily admissions based on rolling 7-day average.
Latinx hospital admissions are rising.

COVID-19 hospital admissions among Latinx residents, daily counts and rolling 7-day average, first known hospital admit date

<table>
<thead>
<tr>
<th>Recent Trend</th>
<th>Admissions tripled since 10/13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak 7-day rolling average</td>
<td>57 avg. daily admissions 4/28/2020</td>
</tr>
</tbody>
</table>

Data reporting is delayed

Hospitalizations are reported to CDPH by hospitals into I-NEDSS and ESSENCE and self-reported by patients via an online survey. Daily counts for most recent dates displayed are likely incomplete. Cases who are not indicated to have been hospitalized across any of the three data sources are assumed to not have been hospitalized. Six records with hospital admit dates from January and February 2020 are excluded from this chart. Peak daily admissions based on rolling 7-day average.
Asian non-Latinx hospital admissions.

COVID-19 hospital admissions among Asian, non-Latinx residents, daily counts and rolling 7-day average, first known hospital admit date

Hospitalizations are reported to CDPH by hospitals into I-NEDSS and ESSENCE and self-reported by patients via an online survey. Daily counts for most recent dates displayed are likely incomplete. Cases who are not indicated to have been hospitalized across any of the three data sources are assumed to not have been hospitalized. Six records with hospital admit dates from January and February 2020 are excluded from this chart. Peak daily admissions based on rolling 7-day average.

Data reporting is delayed.
White, non-Latinx hospital admissions are rising.

COVID-19 hospital admissions among white, non-Latinx residents, daily counts and rolling 7-day average, first known hospital admit date

<table>
<thead>
<tr>
<th>Recent Trend</th>
<th>Admissions doubled since 10/13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak 7-day rolling average</td>
<td>27 avg. daily admissions 5/6/2020</td>
</tr>
</tbody>
</table>

Hospitalizations are reported to CDPH by hospitals into I-NEDSS and ESSENCE and self-reported by patients via an online survey. Daily counts for most recent dates displayed are likely incomplete. Cases who are not indicated to have been hospitalized across any of the three data sources are assumed to not have been hospitalized. Six records with hospital admit dates from January and February 2020 are excluded from this chart. Peak daily admissions based on rolling 7-day average.
COVID-19 deaths have risen 3X since 10/19. Data reported 11/19.

COVID-19 deaths, daily counts and rolling 7-day average, deceased date

Recent Trend
- Stable 3 days (10/16-10/19)
- Increase 7 days (10/19-10/26)
- Increase 13 days (10/26-11/8)
- Stable 6 days (11/8-11/14)

Cumulative deaths by surge
- Current surge: 159 (10/25-11/13)
- First surge: 416 (3/25-4/13)

Data reporting is delayed

Daily COVID-19 deaths reported for Chicago residents with known death date. Data source: INEDSS. Daily counts for most recent dates displayed are likely incomplete.
COVID-19 deaths are 5X fewer now when compared to the peak in May yet 3X greater than September.

Daily COVID-19 deaths reported for Chicago residents with known death date. Data source: INEDSS. Daily counts for most recent dates displayed are likely incomplete.
Emergency Department Visits
Proportion of ED visits for influenza-like illnesses has stable for 14 days after increasing for 15 days.

ILI: Influenza-like illness. Percentage of all emergency department visits reported with influenza-like illness symptoms among Chicago residents.

Data Source: Illinois Hospital Emergency Departments reporting to CDPH through the National Syndromic Surveillance Project.
ED visits for COVID-like illness reached the highest peaked in early May at 318 and is currently almost 3X higher compared to 10/17.

Percentage of all emergency department visits reported with COVID-like symptoms among Chicago residents.

Data Source: Illinois Hospital Emergency Departments reporting to CDPH through the National Syndromic Surveillance Project.
ED visits for COVID-like illness has been stable for 5 days after being increasing for 22 days.

Recent Trend
- Stable 2 days (10/17/-10/19)
- Increase 22 days (10/19-11/10)
- Stable 5 days (11/10-11/15)

Percentage of all emergency department visits reported with COVID-like symptoms among Chicago residents.

Data Source: Illinois Hospital Emergency Departments reporting to CDPH through the National Syndromic Surveillance Project.
Test Positivity
Test positivity is 15.5%. Testing and test positivity are at plateau.

As of 7/30/2020, test positivity is being reported rather than percent positivity. Test positivity is the number of positive tests divided by all tests performed in contrast to percent positivity which is the number of individuals tested positive divided by the total number of individuals tested. (Source: INEDSS). For positivity rates among demographic subgroups and zip codes CDPH will continue reporting by individuals tested.
Test positivity and testing count have varied greatly over the entire duration of the epidemic.

Test positivity is the number of positive tests divided by all tests performed (Source: INEDSS).
Hospital System Capacity
Non-ICU bed occupancy from COVID-19 has increased 285% since trough (9/22); Go: Cautious Progress.

COVID-19 acute/non-ICU beds occupied, daily counts, 7 day average and reopening threshold, daily occupancy census (04/03/2020-11/18/2020)

Includes all Chicago hospitals. Hospitals report daily to CDPH via EMResource, beginning April 3 (acute non-ICU occupancy). Acute non-ICU bed counts include burn, emergency department, med/surg, other, pediatrics and psychiatry beds in Chicago hospitals. Includes Chicago and non-Chicago residents. Includes confirmed and suspected COVID-19 cases.
Non-ICU bed occupancy from COVID-19 is increasing at an average of net +27 non-ICU admissions per day; Go: Cautious Progress.

Includes all Chicago hospitals. Hospitals report daily to CDPH via EMResource, beginning April 3 (acute non-ICU occupancy). Acute non-ICU bed counts include burn, emergency department, med/surg, other, pediatrics and psychiatry beds in Chicago hospitals. Includes Chicago and non-Chicago residents. Includes confirmed and suspected COVID-19 cases.
ICU occupancy from COVID-19 has increased 245% since trough (10/1); Stop: May need to delay moving ahead

COVID-19 ICU beds occupied, daily counts, 7 day average and progress threshold, daily occupancy census (03/13/2020 - 11/18/2020)
ICU occupancy from COVID-19 is increasing at an average rate of net +6 ICU admissions per day; Stop: May need to delay moving ahead

COVID-19 ICU beds occupied, daily counts, 7 day average and progress threshold, daily occupancy census (09/15/2020 - 11/18/2020)

Includes all Chicago hospitals. Hospitals report daily to CDPH via EMResource, beginning March 19. ICU bed count includes all adult and pediatric ICU beds in Chicago hospitals.

Includes Chicago and non-Chicago residents. Includes confirmed and suspected COVID-19 cases. Beginning 4/24/2020, the definition of ICU status changed as requested by HHS.
Ventilator utilization from COVID-19 has increased 342% since its trough (10/8); Go: Cautious Progress.

COVID-19 ventilators in use, daily counts, 7 day average and reopening threshold, daily utilization census (3/19/2020-11/18/2020)

Includes all Chicago hospitals. Hospitals report daily to CDPH via EMResource, beginning March 19. Includes Chicago and non-Chicago residents. Includes confirmed and suspected COVID-19 cases. Beginning 4/24/2020, ventilator counts include all full-functioning mechanical ventilators, BiPAP, anesthesia machines and portable/transport ventilators.
 Ventilator utilization from COVID-19 is increasing at an average rate of net +5 per day; Go: Cautious Progress.

COVID-19 ventilators in use, daily counts, 7 day average and reopening threshold, daily utilization census (9/15/2020-11/18/2020)
Diagnostic Testing Capacity
COVID-19 testing above 9,000 tests per day for 43 straight days. Now at all time high.

All COVID-19 tests performed on Chicago residents per day as reported by electronic lab reporting from IDPH. 9000 tests per day represents the capacity to test 10% of Chicago residents per month. Daily counts for most recent dates displayed are likely incomplete.