Harris County COVID-19 Data Landscape

August 31, 2020

More information available at ReadyHarris.org

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Harris County
Public Health
Building a Healthy Community

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Key Takeaways

- The 14-day average of new cases in Harris County is 965 new cases per day. This number is below its maximum of 1505 on August 4, but it has been trending up in recent days. The threshold for Orange is 400 new cases per day.

- The 14-day average of positive tests is 10%, down from recent highs. Our goal to reach before moving to Orange is 5%.

- The 14-day average of COVID-19 ICU population is 21% of capacity. The population is trending down, but we have yet to reach the threshold for moving to Orange of less than 15% of ICU capacity.

- The 7 and 14-day trends for both COVID General Population and ICU Population are all negative, meaning that more COVID-19 patients are leaving the ICU and general hospital population than are going in.

Additional Information

- The total number of COVID-19 deaths in Harris County is 2188, according to the Department of State Health Services (DSHS). The death rate per 100k population is 46.4, which is higher than the overall state death rate and higher than 33 states.

Threat Levels

The Harris County COVID-19 Threat Level system advises four levels of tranmission: Level 1 severe (red), Level 2 significant (orange), Level 3 moderate (yellow), and Level 4 minimal (green). Along with the level of transmission are actions residents should follow: Stay home (red); minimize all contacts (orange); stay vigilant (yellow); and resume normal contacts (green).
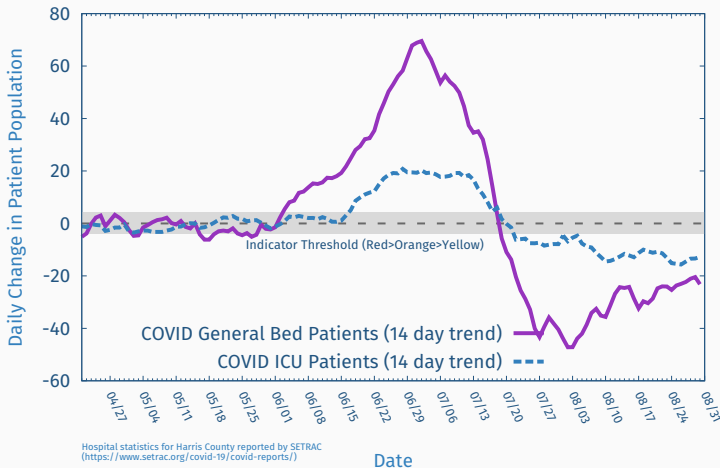
Changing Levels

The indicators in this document are not on/off switches for threat levels, but will be used by the County in conjunction with health experts to make decisions about policy changes at each level. To move down the ladder of the threat level system, all of the thresholds for these key health indicators must be met.

Harris County COVID-19 Risk Level Indicator Summary

Indicator	Status
Hospital Population Trends Negative 14-day trends for COVID-19 hospital population	**Indicator Met** COVID-19 ICU and general population 14-day trends are negative
Hospital Usage 14-day average of COVID-19 hospital population below 15%	**Indicator Not Met** COVID-19 ICU 14-day average population is 21% of capacity
New Cases: Trend 14-day trend for new COVID-19 cases is negative	**Indicator Not Met** 14-day trend of new cases is increasing by 31 cases per day
New Cases: Total 14-day average of new cases in Harris County below 400	**Indicator Not Met** 14-day average of new cases is 965 cases per day
Positivity Rate 14-day average of COVID-19 test positivity rate below 5%	**Indicator Not Met** 14-day average of COVID-19 test positivity is 10%

COVID-19 Indicator: Hospital Population Trends

Harris County Hospital Population Trends as of Mon Aug 31 2020

Hospital statistics for Harris County reported by SETRAC (https://www.setrac.org/covid-19/covid-reports/)
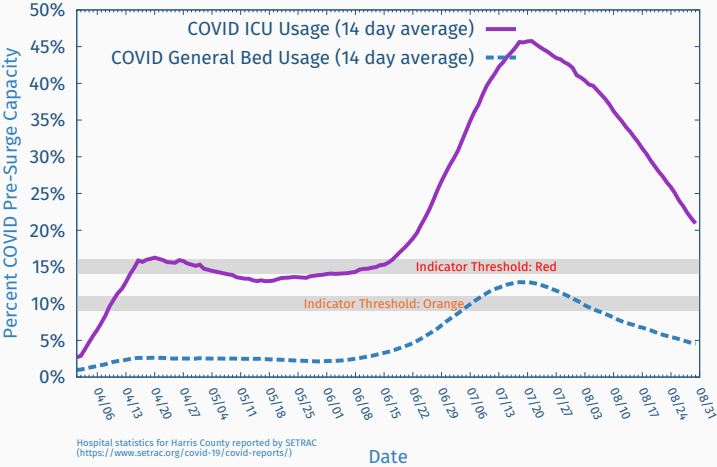
Indicator Met

COVID-19 ICU and general population 14-day trends are negative

Why it Matters

We must ensure our healthcare system has adequate capacity to treat all cases of COVID-19, including the most severe cases. We will continue to monitor the daily total of hospital patients in Harris County using data from SETRAC, a regional medical coordinating body, and analyze daily changes in the COVID patient population to see what direction we are heading. As Harris County monitors day-over-day trends, a 14-day flat or decreasing trend will indicate we are moving in the right direction. (If a threat level is moved, this measure will be restarted at zero days.)

Indicator Threshold: Negative 14-day trends for ICU and general hospital population in Harris County, including the City of Houston (same threshold for all levels). 14-day period resets after changing levels. Data from SETRAC.

COVID-19 Indicator: Hospital Usage

Harris County Hospital Usage as of Mon Aug 31 2020

Hospital statistics for Harris County reported by SETRAC (https://www.setrac.org/covid-19/covid-reports/)

Indicator Not Met

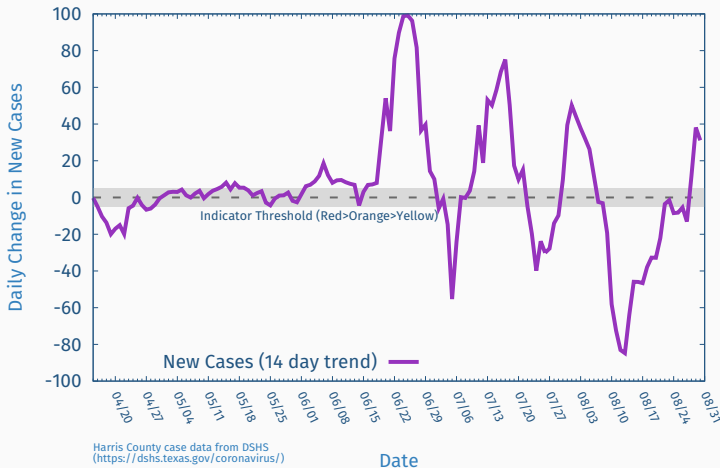COVID-19 ICU 14-day average population is 21% of capacity

Why it Matters

At the height of the COVID-19 pandemic in Harris County, nearly 50 percent of ICU beds were used by COVID patients. In order to ensure that hospitals have adequate capacity to treat the most critically ill COVID patients while caring for patients experiencing a life-threatening crisis or needing critical surgery, the percentage of beds being used for COVID patients must decrease and remain at a manageable level.

Indicator Thresholds: 14-day average of ICU and general population hospital beds in use in Harris County, including the City of Houston: Greater than 15%: Red, Greater than 10%: Orange, Greater than 5%: Yellow. Data from SETRAC.

Harris County COVID-19 Case Trends as of Mon Aug 31 2020

Daily Change in New Cases (y-axis, range -100 to 100)

New Cases (14 day trend)

Indicator Threshold (Red>Orange>Yellow)

Date (x-axis: 04/20 through 08/31)

Harris County case data from DSHS
(https://dshs.texas.gov/coronavirus/)

Indicator Threshold: 14-day flat or decreasing trend in new COVID-19 cases in Harris County, including the City of Houston (same threshold for all levels). 14-day period resets after changing levels. Data from DSHS.
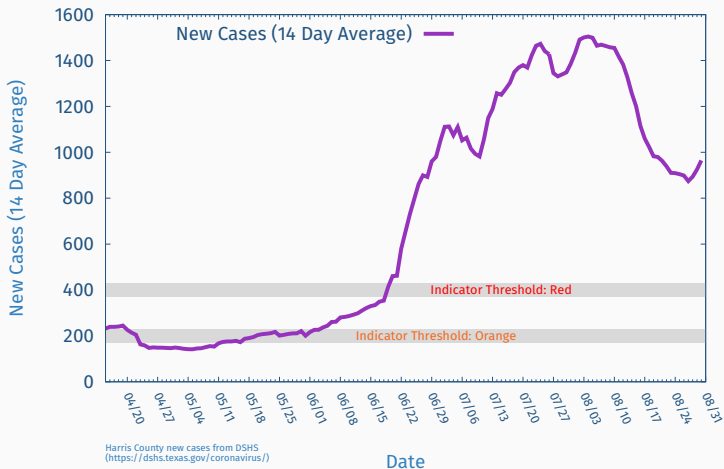
Indicator Not Met

14-day trend of new cases is increasing by 31 cases per day

Why it Matters

Controlling the rate of COVID-19 transmission will be key to reopening. The number of daily new cases is an important indicator of the success of stay-at-home measures, social distancing, the avoidance of gatherings, and an adherence to wearing face coverings. Testing availability can affect the reliability of new case information, but it is still considered an early indicator of the degree of disease transmission. A decreasing trend will indicate the spread of the disease is slowing. (As with other measures, a change in the threat level will trigger a reset of this measure.)

COVID-19 Indicator: New Cases: Total

Harris County New COVID-19 Cases as of Mon Aug 31 2020

New Cases (14 Day Average)

Indicator Threshold: Red

Indicator Threshold: Orange

Harris County new cases from DSHS
(https://dshs.texas.gov/coronavirus/)

Date

Indicator Not Met

14-day average of new cases is 965 cases per day

Why it Matters

The CDC and WHO recommend that contact tracing programs be in place before local governments consider easing restrictions. In order to use contract tracing as a tool to control the spread of the virus, a total number of daily new cases must be at a level that allows contact tracers to quickly trace all cases and contacts.

Indicator Thresholds: Greater than 400 new cases/day: Red, Greater than 200 new cases/day in Harris County, including the City of Houston: Orange, Greater than 100 new cases/day: Yellow. Data from DSHS.
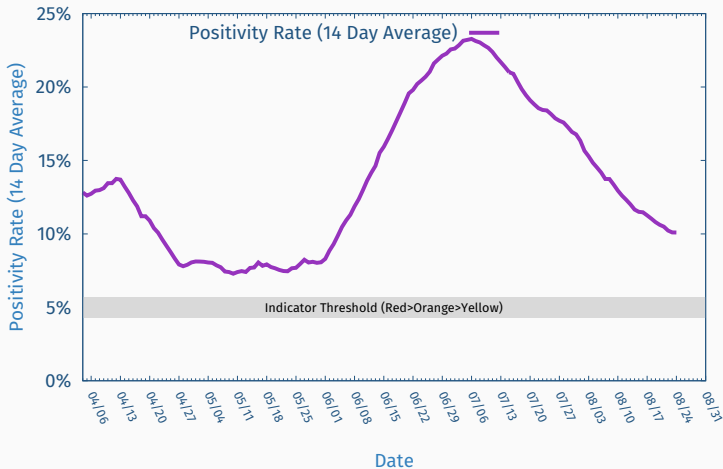
COVID-19 Indicator: Testing Positivity Rate

Harris County COVID-19 Test Positivity Rate as of Mon Aug 31 2020

Indicator Not Met

14-day average of COVID-19 test positivity is 10%

Why it Matters

On May 12, 2020, the World Health Organization (WHO) advised governments that before reopening, rates of positivity in testing should remain at 5 percent or lower for at least 14 days.

Positivity rate is a reliable measure for whether or not our testing capacity is sufficient enough to detect a significant number of new cases. If positivity is high, it can indicate uncontrolled community spread, that we are only testing the sick, or a combination of both.

Indicator Threshold: 14-day average positivity rate less than 5% (same threshold for all levels). Data from Harris County Public Health.
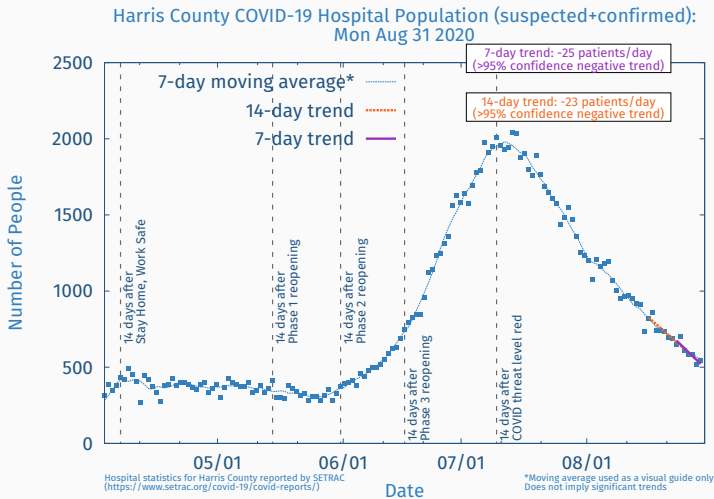
COVID-19 Hospital Population: General Beds

Harris County COVID-19 Hospital Population (suspected+confirmed): Mon Aug 31 2020

7-day trend: -25 patients/day (>95% confidence negative trend)

14-day trend: -23 patients/day (>95% confidence negative trend)

Legend:
- 7-day moving average*
- 14-day trend
- 7-day trend

Vertical line labels:
- 14 days after Stay Home, Work Safe
- 14 days after Phase 1 reopening
- 14 days after Phase 2 reopening
- 14 days after Phase 3 reopening
- 14 days after COVID threat level red

Y-axis: Number of People
X-axis: Date

Hospital statistics for Harris County reported by SETRAC (https://www.setrac.org/covid-19/covid-reports/)

*Moving average used as a visual guide only
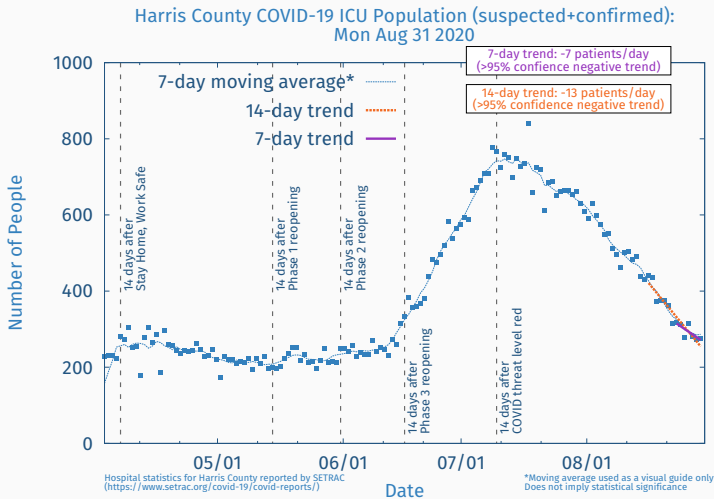Does not imply significant trends

What does this graph show?

- This graph shows the daily COVID-positive Harris County (including the City of Houston) hospital general population (blue points, 7-day average shown as a visual guide).
- It shows the 14-day and 7-day trends of patient populations (red and purple lines).
- Significant dates are noted with vertical lines.

How is it calculated?

- 7-day and 14-day trends are significant if their slope is positive or negative with greater than 95% confidence.
- Hospital statistics for Harris County are reported by SETRAC.

COVID-19 Hospital Population: ICU Beds

**Harris County COVID-19 ICU Population (suspected+confirmed):
Mon Aug 31 2020**

7-day moving average*
14-day trend
7-day trend

7-day trend: -7 patients/day
(>95% confience negative trend)

14-day trend: -13 patients/day
(>95% confidence negative trend)

Number of People

14 days after
Stay Home, Work Safe

14 days after
Phase 1 reopening

14 days after
Phase 2 reopening

14 days after
Phase 3 reopening

14 days after
COVID threat level red

Date

Hospital statistics for Harris County reported by SETRAC
(https://www.setrac.org/covid-19/covid-reports/)

*Moving average used as a visual guide only
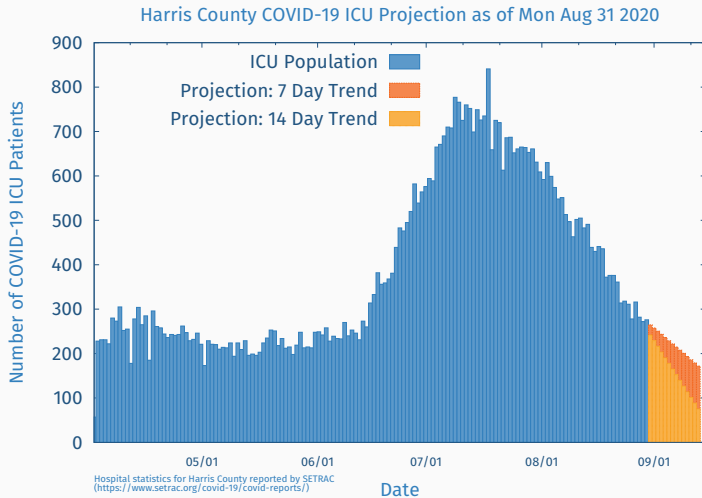Does not imply statistical significance

What does this graph show?

- This graph shows the COVID-positive Harris County (including the City of Houston) ICU population (blue points, 7-day average shown as a visual guide).

- It shows the 14-day and 7-day trends of patient populations (red and purple lines).

- Significant dates are noted with vertical lines.

How is it calculated?

- 7-day and 14-day trends are significant if their slope is positive or negative with greater than 95% confidence.

- Hospital statistics for Harris County are reported by SETRAC.

COVID-19 ICU Population Projection

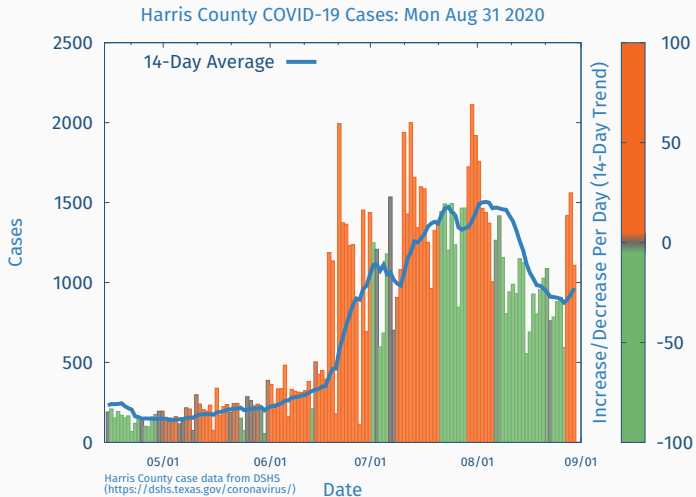Harris County COVID-19 ICU Projection as of Mon Aug 31 2020

What does this graph show?

- This graph shows a projection for Harris County (including the City of Houston) COVID-19 ICU population for the next 14 days.

How is it calculated?

- Projections are created using the current 7-day and 14-day trends in ICU COVID-19 population.

- Hospital statistics for Harris County are reported by SETRAC.

Harris County COVID-19 Cases

Harris County COVID-19 Cases: Mon Aug 31 2020

What does this graph show?

- This graph shows the total number of new cases reported in Harris County (including the City of Houston) over time.
- The color of the graph indicates whether the 14-day trend of cases is increasing or decreasing.
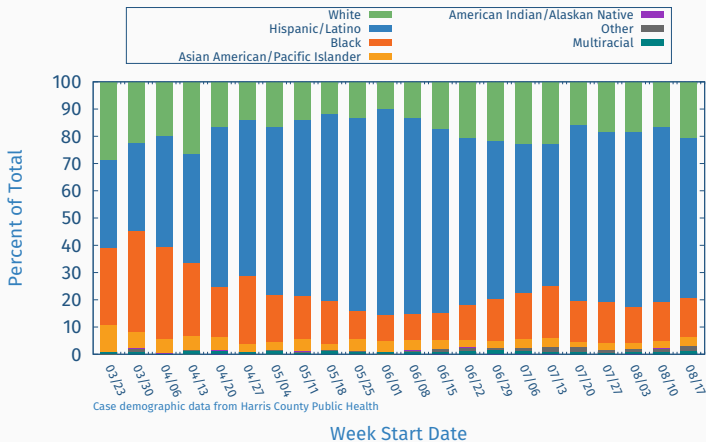
How is it calculated?

- Case trends for each date are calculated using the 14-day period ending on the date.
- The moving average (blue line) is drawn as a visual guide and does not represent significant trends.
- Harris County case data taken from DSHS.

Demographics of Harris County COVID-19 Cases: Race/Ethnicity

Data updated weekly, last updated on 8/25/2020.

Percent of Weekly Total COVID-19 Cases by Race/Ethnicity: As of Tue Aug 25 2020

Legend:
- White
- Hispanic/Latino
- Black
- Asian American/Pacific Islander
- American Indian/Alaskan Native
- Other
- Multiracial

Percent of Total (y-axis: 0 to 100)

Week Start Date (x-axis): 03/23, 03/30, 04/06, 04/13, 04/20, 04/27, 05/04, 05/11, 05/18, 05/25, 06/01, 06/08, 06/15, 06/22, 06/29, 07/06, 07/13, 07/20, 07/27, 08/03, 08/10, 08/17

Case demographic data from Harris County Public Health

What does this graph show?

- This graph shows the breakdown of COVID-19 cases in Harris County outside the City of Houston by race/ethnicity.

How is it calculated?

- Data includes only COVID-19 cases in the jurisdiction of Harris County Public Health for which race/ethnicity is known.

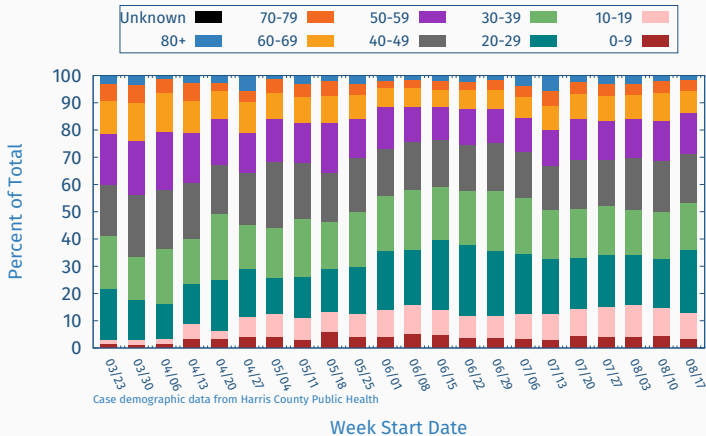- COVID-19 demographic data from Harris County Public Health.

Harris County population demographics

American Indian/Alaskan Native	0.2%
Asian American/Pacific Islander	7.1%
Black	18.7%
Hispanic/Latino	44.3%
Multi-racial	1.6%
Other	0.3%
White	28.9%

Demographics of Harris County COVID-19 Cases: Age

Data updated weekly, last updated on 8/25/2020.

Percent of Weekly Total COVID-19 Cases by Age: As of Tue Aug 25 2020

Legend: Unknown, 80+, 70-79, 60-69, 50-59, 40-49, 30-39, 20-29, 10-19, 0-9

Case demographic data from Harris County Public Health

Week Start Date

X-axis: 03/23, 03/30, 04/06, 04/13, 04/20, 04/27, 05/04, 05/11, 05/18, 05/25, 06/01, 06/08, 06/15, 06/22, 06/29, 07/06, 07/13, 07/20, 07/27, 08/03, 08/10, 08/17

Y-axis: Percent of Total

What does this graph show?

- This graph shows the breakdown of COVID-19 cases in Harris County outside the City of Houston by age.

How is it calculated?

- Data includes only COVID-19 cases in the jurisdiction of Harris County Public Health
- Age breakdowns from US Census do not match age groupings provided by HCPH
- COVID-19 demographic data from Harris County Public Health.