



Central Iowa COVID19 Update

Wednesday, July 28, 2021



Statistical Consulting

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Quick Stats¹

| | Polk County | Iowa |
|--------------------------------------|-------------|-------|
| Percent of population with 1 dose* | 4.6% | 3.2% |
| Percent of population with 2 doses* | 54% | 46.9% |
| 7d Lab Test Positivity | 4.4% | 2.1% |
| 14d Lab Test Positivity | 3.3% | 3.6% |
| Total cases per 100,000 the last 7d | 62 | 65 |
| Total cases per 100,000 the last 14d | 106 | 109 |
| Average daily cases the last 7d | 44 | 294 |
| Average 7-day new cases per 100,000 | 9 | 9 |

*Percent of entire population vaccinated to represent progress to herd immunity.

All data are sourced from <https://coronavirus.iowa.gov/pages/case-counts> with previous days refreshed daily. When recent data are unavailable, data from <https://github.com/nytimes/covid-19-data> may be used. Population of Polk County used is 490,161.

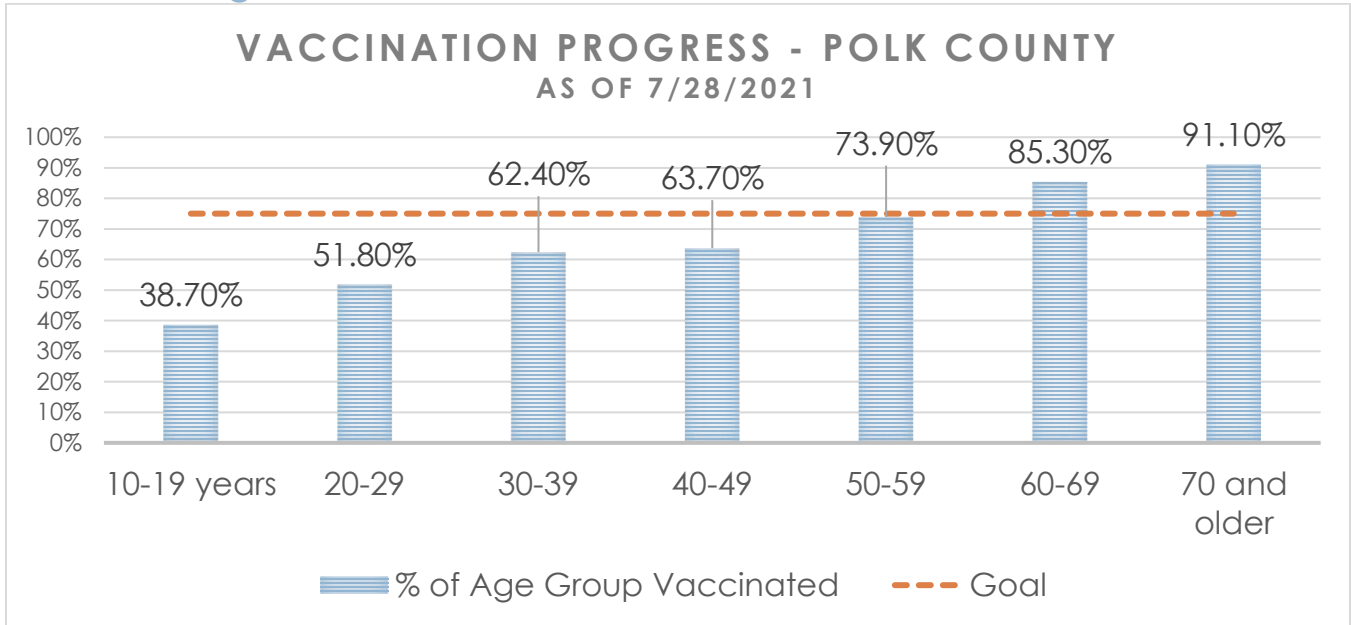
Population of Iowa used is 3.155 million. Averages and percent positivity are subject to change with retrospectively refreshed data.

Critical Points, Media, and Research

- The US, including Iowa, is experiencing an aggressive surge due to the Delta variant. Several other countries – primarily India and UK, recently recovered from surges. Delta causes case increases rapidly, which seem to decline quickly after approximately eight weeks. If Iowa follows a similar trend, there are four more weeks of case increases to come before a peak.
- Metro hospitalizations have doubled in the last week. Cases statewide are averaging 300 per day; 44 in Polk County.
- Delta Variant – Moderna and Pfizer vaccines appear to have only reduced efficacy, though studies are small and mainly antibody titer-based. [Reduced neutralisation of the Delta \(B.1.617.2\) SARS-CoV-2 variant of concern following vaccination](#)
- [Viral infection and transmission in a large well-traced outbreak caused by the Delta SARS-CoV-2 variant](#) The average viral load (Ct values) of 167 infections traced back to the index case were approximately 1,000-fold higher than the 19A/19B strains of the initial 2020 epidemic.
- [SARS-CoV-2 testing and sequencing for international arrivals reveals significant cross border transmission of high-risk variants into the United Kingdom](#) Prevalence of infection was 2.4% in unvaccinated travelers (2449/105,193), 1.6% in travelers with 1 vaccine dose (244/15,415) and 0.5% in travelers with 2 vaccine doses (31/5,844).
- [Association Between BNT162b2 Vaccination and Incidence of SARS-CoV-2 Infection in Pregnant Women | JAMA Network](#). The Pfizer vaccine provides strong protection against COVID-19 in pregnant women.
- [BNT162b2 vaccine breakthrough: clinical characteristics of 152 fully vaccinated hospitalized COVID-19 patients in Israel](#) Hospitalized patients with breakthrough infections had a high burden of comorbidities and immunosuppression.
- [Decreased infectivity following BNT162b2 vaccination: A prospective cohort study in Israel](#)
- [Durable Humoral and Cellular Immune Responses 8 Months after Ad26.COV2.S Vaccination | NEJM](#). Antibodies from the Janssen (J&J) vaccine sustain to at least 8 months.
- [Transparent communication about negative features of COVID-19 vaccines decreases acceptance but increases trust](#)
- [Newly-detected COVID-19 cases, hospitalizations in Iowa show another large jump](#)
- [CDC reverses policy on face masks, amid reports of breakthrough infections with delta variant of COVID-19](#)
- [Pfizer: 'No issues' in testing for COVID-19 kid vaccine as Delta variant rises](#)



Vaccine Progress

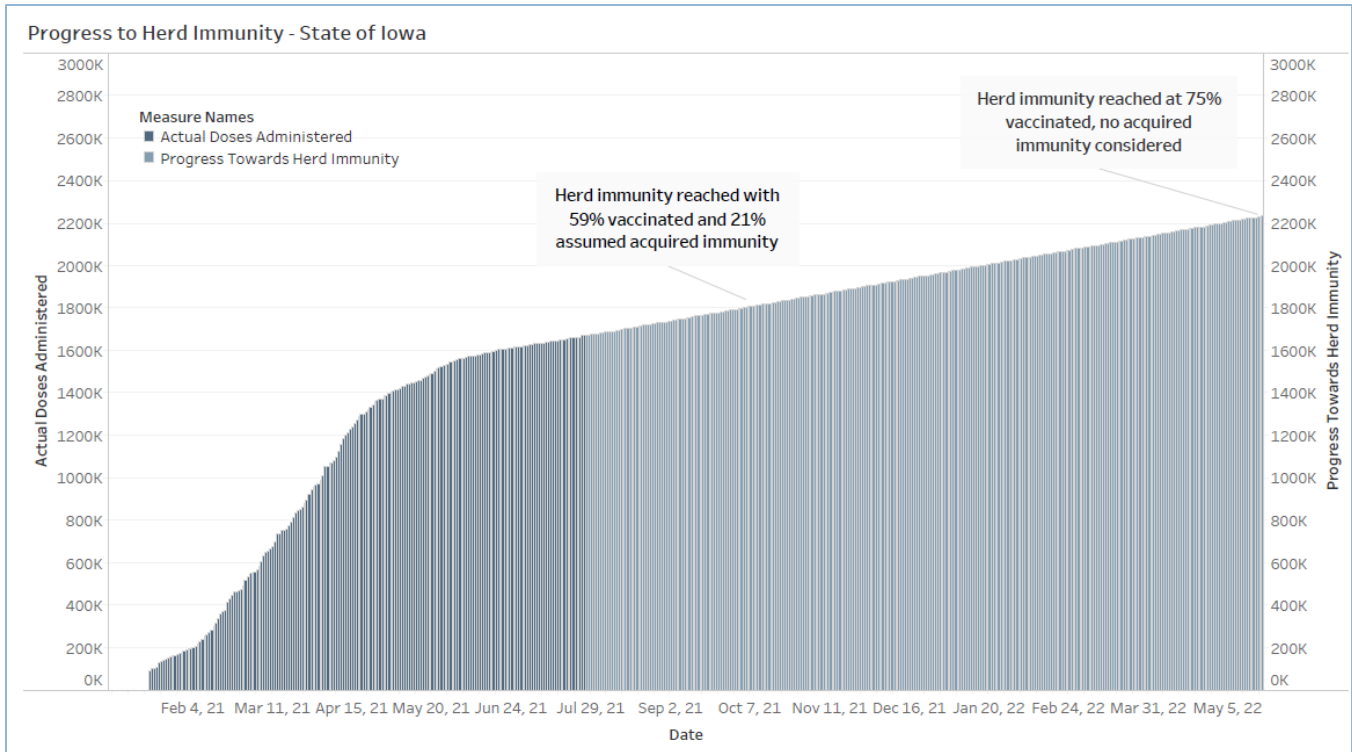


| Number of Doses Administered (by date of report) | Initiated Vaccination (1st dose/No Janssen) | Completed Vaccination (2nd dose/Janssen) | Total Polk Co Residents Partially/Fully Vaccinated | Total Population of Polk County (all ages) |
|--|---|--|--|--|
| 511,012 | 18,019 | 253,217 | 271,236 | 505,884 |

| Age Group | Vaccinated | % Age Group Vaccinated | Estimated Census Population* |
|--------------|------------|------------------------|------------------------------|
| 10-19 years | 24,089 | 38.70% | 62,295 |
| 20-29 | 35,761 | 51.80% | 69,065 |
| 30-39 | 43,700 | 62.40% | 69,982 |
| 40-49 | 41,624 | 63.70% | 65,361 |
| 50-59 | 44,154 | 73.90% | 59,727 |
| 60-69 | 42,044 | 85.30% | 49,269 |
| 70 and older | 39,864 | 91.10% | 43,742 |
| Total | 271,236 | 64.70% | 419,441 |

*U.S Census Bureau Polk County (2019 1yr estimate). Census predetermined age data includes non-eligible ages 10 and 11 years old.

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Variant Prevalence

Use the controls to focus on a specific region and/or 2-week interval

HHS Region

Region 7 - Iowa, Kansas, Missou...

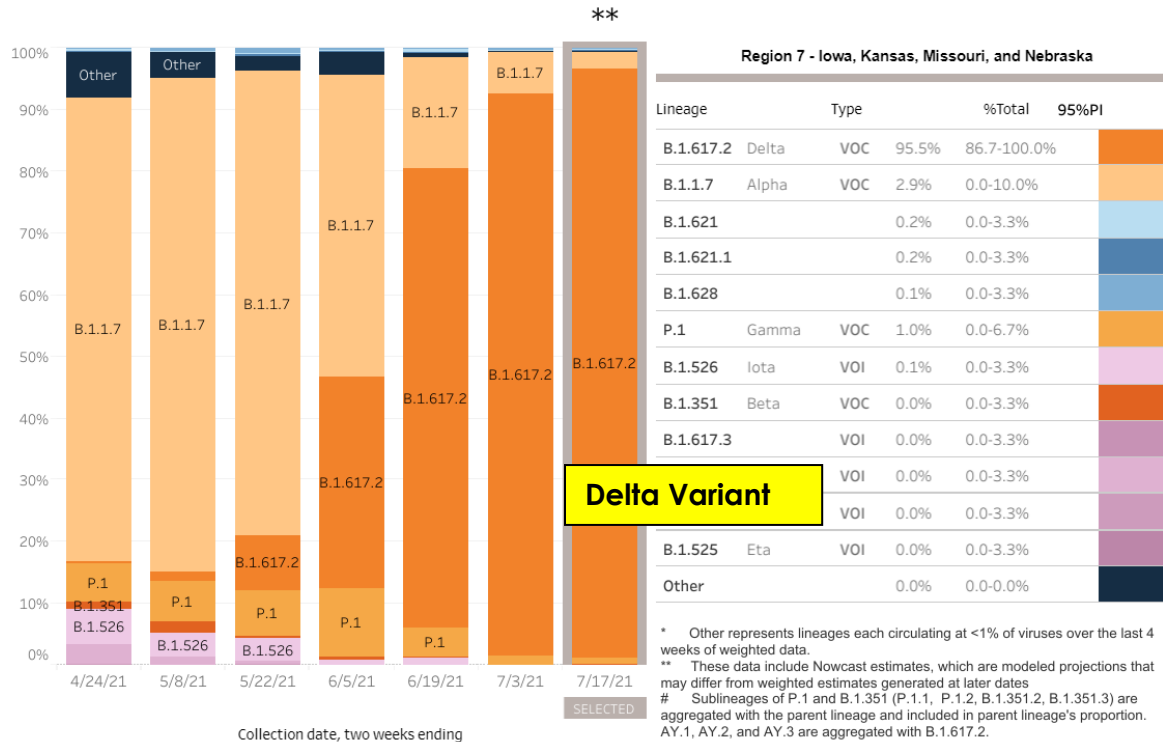
Nowcast On
 Nowcast Off

Two weeks ending

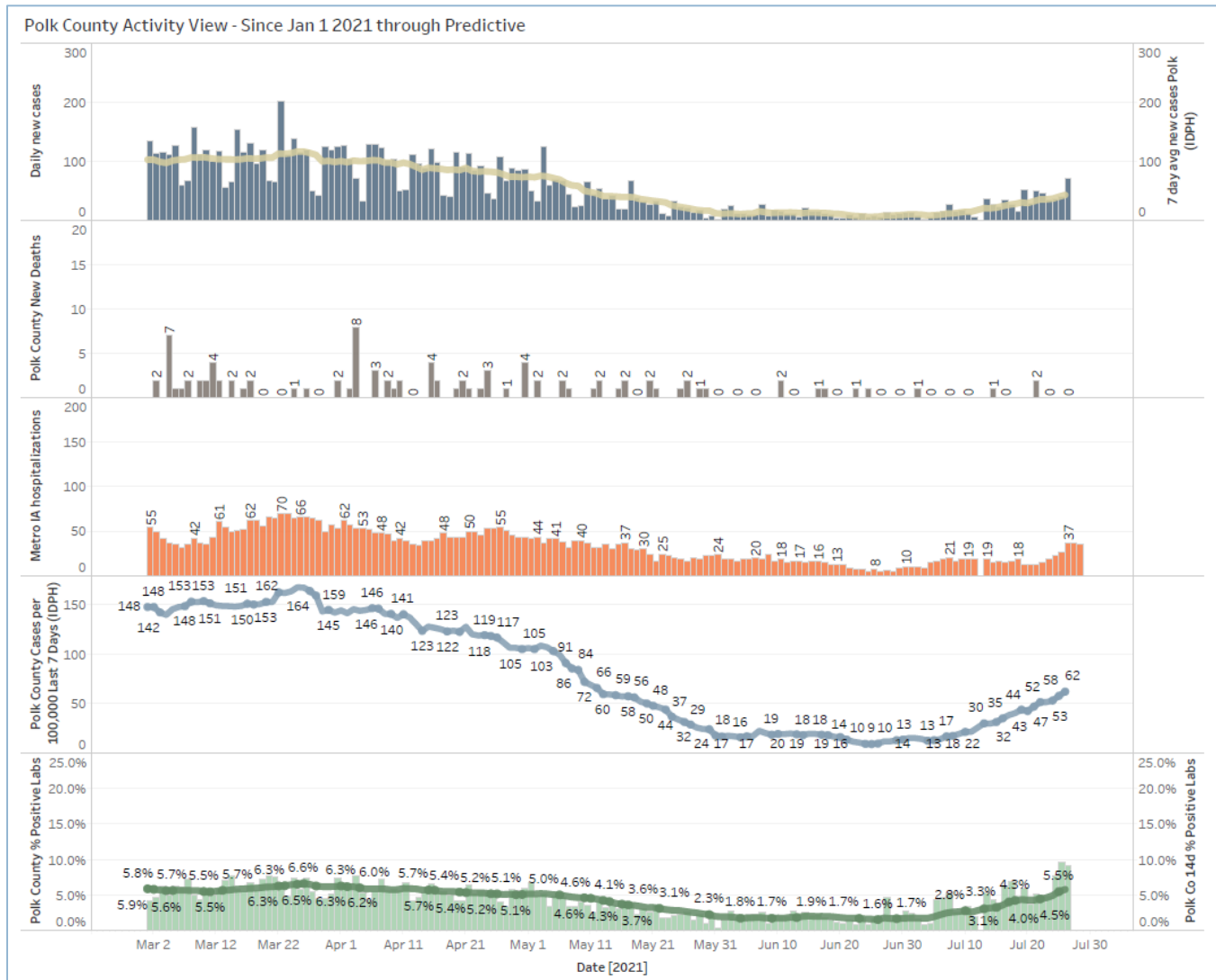
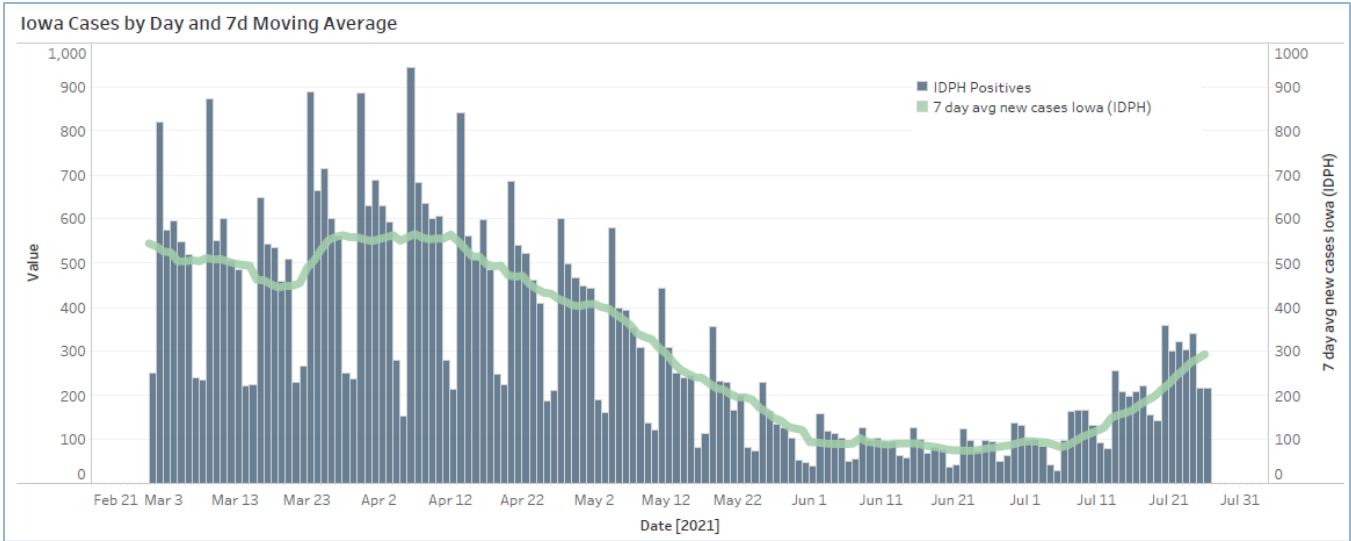
7/17/2021

HHS Region 7: 4/11/2021 – 7/17/2021

HHS Region 7: 7/4/2021 – 7/17/2021 NOWCAST



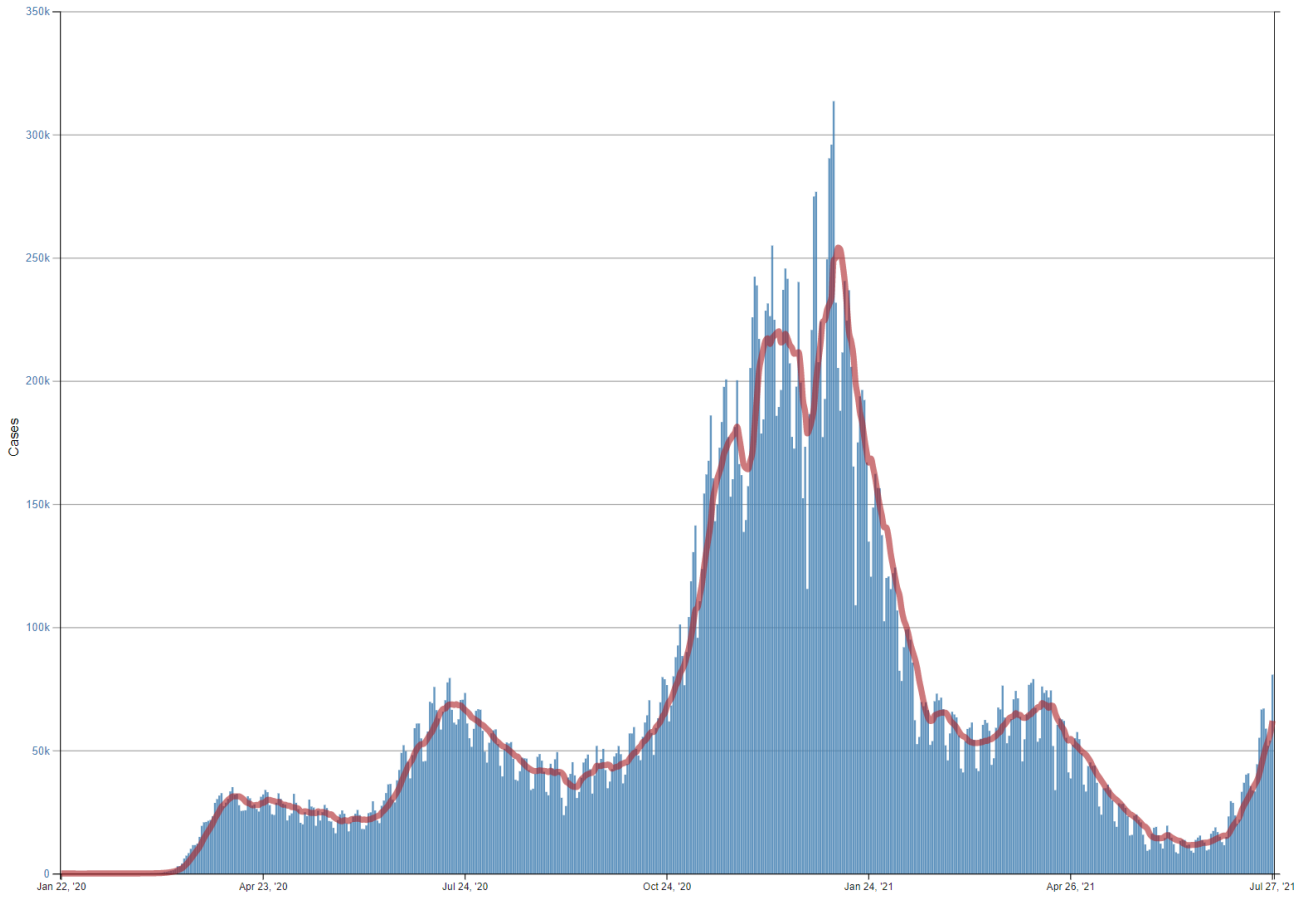
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Daily Trends in Number of COVID-19 Cases in the United States Reported to CDC



| | CASES DAILY AVG. | PER 100,000 | 14-DAY CHANGE | HOSPITALIZED DAILY AVG. | PER 100,000 | 14-DAY CHANGE | DEATHS DAILY AVG. | PER 100,000 | FULLY VACCINATED |
|---------------|---------------------|----------------|------------------|----------------------------|----------------|------------------|----------------------|----------------|---------------------|
| United States | 63,248 | 19 | +145% | 34,870 | 11 | +70% | 290.1 | 0.09 | 49% |
| Louisiana > | 3,680 | 79 | +307% | 1,039 | 22 | +169% | 10.4 | 0.22 | 37% |
| Florida > | 12,496 | 58 | +124% | 6,794 | 32 | +123% | 46.6 | 0.22 | 49% |
| Arkansas > | 1,574 | 52 | +61% | 875 | 29 | +60% | 11.4 | 0.38 | 36% |
| Mississippi > | 1,197 | 40 | +274% | 495 | 17 | +68% | 6.6 | 0.22 | 34% |
| Missouri > | 2,434 | 40 | +59% | 1,767 | 29 | +39% | 16.0 | 0.26 | 41% |
| Alabama > | 1,775 | 36 | +217% | 869 | 18 | +146% | 4.6 | 0.09 | 34% |
| Oklahoma > | 1,197 | 30 | +229% | 610 | 15 | +84% | 5.3 | 0.13 | 40% |
| Nevada > | 914 | 30 | +43% | 1,042 | 34 | +52% | 13.3 | 0.43 | 44% |
| Alaska > | 211 | 29 | +185% | 88 | 12 | +117% | 0.4 | 0.06 | 45% |
| Texas > | 6,472 | 22 | +178% | 4,488 | 15 | +81% | 31.0 | 0.11 | 43% |