COVID-19 Epidemiology and Vaccination Rates in the United States

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Centers for Disease Control and Prevention

July 19, 2022
Daily Trends in Number of COVID-19 Cases, United States

As of July 14, 2022: 89,067,445 cases

7-day moving average: 126,023

Percent of total COVID-19 cases by race/ethnicity compared to US population, United States, as of July 8, 2022

Data from 80,083,311 cases. Race/Ethnicity was available for 52,460,313 (65%) cases.

Trends in Weighted Variant Proportion Estimates & Nowcast
April 3, 2022-July 9, 2022

Collection date, week ending
COVID-19-Associated Hospitalizations
Weekly Trends in Rates of New Inpatient Admissions among Persons of All Ages, United States, August 1, 2020–July 10, 2022

United States | All Ages

4,936,004

Total Admissions
Aug 01, 2020 - Jul 10, 2022

Weekly Trends in Rates of New Inpatient Admissions among Persons of All Ages, United States, August 1, 2020–July 10, 2022

4,936,004
Total Admissions
Aug 01, 2020 - Jul 10, 2022

4,798,764 (97.2%) of total admissions were among adults ages ≥18 years
Weekly Trends in Rates of New Inpatient Admissions, United States, August 1, 2020-July 10, 2022

Recent increase in hospitalization rates in older ages relative to other age groups

COVID-19 Mortality
Daily Trends in Number of COVID-19 Deaths, United States

As of July 14, 2022:
1,018,578 deaths*


Weekly Trends in COVID-19 Mortality Rates by Age Group, United States, March 1, 2020 - July 9, 2022

>99% of deaths were among adults ages ≥18 years

Source: CDC COVID-19 Case Line-Level Data. 2019 US Census. HHS Protect: Visualization: Data, Analytics & Visualization Task Force and CDC CPR DEO Situational Awareness Public Health Science Team

Weekly Trends in COVID-19 Mortality Rates by Age Group, United States, March 1, 2020 - July 9, 2022

Recent increase in death rates in older ages relative to other ages

Source: CDC COVID-19 Case Line-Level Data, 2019 US Census, HHS Protect: Visualization, Data, Analytics & Visualization Task Force and CDC CPR OEO Situational Awareness Public Health Science Team

Weekly Trends in COVID-19 Mortality Rates by Race/Ethnicity, United States, March 1, 2020 – July 9, 2022

[Graph showing trends in COVID-19 mortality rates by race/ethnicity from 2020 to 2022.]

Race/Ethnicity
- American Indian/Alaska Native, Non-Hispanic
- Asian/Pacific Islander, Non-Hispanic
- Black, Non-Hispanic
- Hispanic
- White, Non-Hispanic

US: The most recent case record was reported during the week ending on Jul 09, 2022. Percentage of deaths among reported cases - 1.09%. Percentage of deaths reporting race by date - 83.35%

US territories are included in case and death counts but not in population counts. Potential six-week delay in case reporting to CDC denoted by gray bars. Weekly data with five or less deaths have been suppressed.

AI = American Indian, AN = Alaska Native, NH = Non-Hispanic, PI = Pacific Islander. Excludes cases with unknown or multiple races. *Case Earliest Date is the earliest of the clinical date (related to illness or specimen collection and chosen by a defined hierarchy) and the Date Received by CDC. The date for the current week extends through Saturday.

## Risk for COVID-19 Infection, Hospitalization, and Death By Race/Ethnicity, Age-adjusted

<table>
<thead>
<tr>
<th>Rate ratios compared to White, Non-Hispanic persons</th>
<th>American Indian or Alaska Native, Non-Hispanic persons</th>
<th>Asian, Non-Hispanic persons</th>
<th>Black or African American, Non-Hispanic persons</th>
<th>Hispanic or Latino persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases(^1)</td>
<td>1.5x</td>
<td>0.8x</td>
<td>1.1x</td>
<td>1.5x</td>
</tr>
<tr>
<td>Hospitalization(^2)</td>
<td>3.0x</td>
<td>0.8x</td>
<td>2.3x</td>
<td>2.2x</td>
</tr>
<tr>
<td>Death(^3, 4)</td>
<td>2.1x</td>
<td>0.8x</td>
<td>1.7x</td>
<td>1.8x</td>
</tr>
</tbody>
</table>

Race and ethnicity are risk markers for other underlying conditions that affect health, including socioeconomic status, access to health care, and exposure to the virus related to occupation, e.g., frontline, essential, and critical infrastructure workers.

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\(^1\) Data Source: Data reported by state and territorial jurisdictions (accessed June 22, 2022). Numbers are ratios of age-adjusted rates standardized to the 2019 U.S. intercensal population estimate. Calculations use only the 66% of case reports that have race and ethnicity; this can result in inaccurate estimates of the relative risk among groups.


\(^3\) Data Source: National Center for Health Statistics provisional death counts (https://data.cdc.gov/NCHS/Provisional-Death-Counts-for-Coronavirus-Disease-C/pj7m-y5uh, data through May 29, 2022). Numbers are ratios of age-adjusted rates standardized to the 2019 U.S. intercensal population estimate.

COVID-19 Disease Trends by Vaccination Status
Age-Adjusted Rates of COVID-19 Cases by Vaccination Status in persons ages 5 years and older, April 4, 2021–June 18, 2022 (31 U.S. Jurisdictions)

In June 2022, unvaccinated people ages ≥5 years had 2.8X higher risk of testing positive for COVID-19 compared to people vaccinated with at least a primary series.

Age-Adjusted Rates of COVID-19-Associated Hospitalization by Vaccination Status in Adults Ages ≥18 Years
January 2021–May 2022

In May 2022, unvaccinated adults ages ≥18 years had 3.5X higher risk of COVID-19-associated hospitalization compared to people who have received a primary series and ≥1 booster dose.

Vertical dashed line indicates timepoint where 5% of adults ages ≥18 years had received primary series and ≥1 booster dose.

These data were posted on June 23, 2022 and reflect hospitalizations through May 2022.
Note: “Primary series” refers to hospitalized patients who have completed their primary COVID-19 vaccination series regardless of whether or not they received a booster or additional dose. “Primary series & ≥1 booster” refers to hospitalized patients who have completed their primary COVID-19 vaccination series and received one or more additional or booster doses. “Unvaccinated” refers to hospitalized patients with no record of receiving any COVID-19 vaccination. “Up-to-date” refers to persons who have received all doses in the primary COVID-19 vaccination series, in addition to one additional dose or booster dose, when eligible.


In May 2022, unvaccinated people ages ≥12 years had 9X higher COVID-19-associated death rates compared to those with a booster dose.

*This includes people who received booster doses and people who received additional doses.
Numbers and dashed lines reflect dates of CDC recommendations for booster doses for: 1. Pfizer-BioNTech recipients ages ≥65 years, in certain populations, or in high risk occupational or institutional settings, 2. Janssen recipients ages ≥18 years and Moderna recipients ages ≥65 years, in certain populations, or in high risk occupational or institutional settings, 3. all adults ≥18 years, 4. including adolescents 16-17 years, 5. all adolescents 12-17 years, 6. 2nd booster for adults ages ≥50 years and immunocompromised individuals.
Monitoring Rates of Cases, Hospitalizations, and Deaths by Vaccination Status Has Limitations

- Vaccine effectiveness studies allow for more robust analyses (i.e., based on extra information collected in defined settings) and a better understanding of how well vaccines are working
Opportunities to increase COVID-19 vaccination rates among US adults

Intent to receive a COVID-19 vaccine will be discussed in a later presentation
Percentage of People Receiving with at Least One Dose of COVID-19 Vaccine by Age Group and Date Administered, United States, December 14, 2020–July 6, 2022

Due to the time between vaccine administration and when reported to CDC, vaccinations administered during the last 5 days may not yet be reported. This reporting lag is represented by the gray, shaded box.

~26-37 million US adults have not yet received a COVID-19 vaccine

CI = confidence interval
Percent of U.S. Adults Ages ≥18 Years Not Yet Receiving a COVID-19 Vaccine by Race and Ethnicity, May 1-28, 2022

- Other or multiple races, non-Hispanic: 22.1
- American Indian/Alaska Native, non-Hispanic: 20.6
- Native Hawaiian/Pacific Islander, non-Hispanic: 14.7
- Hispanic: 14.3
- White, non-Hispanic: 14.2
- Black, non-Hispanic: 12.8
- Asian, non-Hispanic: 2.1

95% Confidence intervals shown by error bars
Percent of U.S. Adults Ages ≥18 Years Not Yet Receiving a COVID-19 Vaccine by Age Group and Race and Ethnicity, May 1-28, 2022

95% Confidence intervals shown by error bars
Percent of U.S. Adults Ages ≥18 Years Not Yet Receiving a COVID-19 Vaccine by Metropolitan Statistical Area, May 1-28, 2022

95% Confidence intervals shown by error bars
Percent of U.S. Adults Ages ≥18 Years Not Yet Receiving a COVID-19 Vaccine by Income and Poverty Status, May 1-28, 2022

- Below poverty: 19.9%
- Above poverty, income <$75k: 15.1%
- Above poverty, income ≥$75k: 9.8%
- Unknown income: 15.8%

95% Confidence intervals shown by error bars
Percent of U.S. Adults Ages ≥18 Years Not Yet Receiving a COVID-19 Vaccine by Markers of Access to Health Care, May 1-28, 2022

### Have a regular physician or provider for primary care

<table>
<thead>
<tr>
<th></th>
<th>Percent</th>
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<tr>
<td>No</td>
<td>23.5</td>
</tr>
<tr>
<td>Yes</td>
<td>11.3</td>
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### Health insurance status

<table>
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<th></th>
<th>Percent</th>
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</thead>
<tbody>
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<td>Not insured</td>
<td>31.9</td>
</tr>
<tr>
<td>Insured</td>
<td>12.0</td>
</tr>
</tbody>
</table>

95% Confidence intervals shown by error bars

Conclusions
Summary

- As of July 14, 2022, >89 million COVID-19 cases and >1 million COVID-19 deaths have occurred in the United States
- COVID-19 continues to cause new cases, hospitalizations and deaths
- COVID-19 has contributed to health inequities
  - American Indian/Alaska Native, Black, and Hispanic/Latino persons have been disproportionately affected by COVID-19-associated hospitalizations and deaths
- Vaccination prevents COVID-19 cases, hospitalization, and death
- About 26-37 million US adults have not yet received a COVID-19 vaccine and will benefit from starting a primary series
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- Epidemiology Task Force
- National Immunization Survey
- Data and Analytics Visualization Task Force
For more information, contact CDC
1-800-CDC-INFO (232-4636)

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.