

SYNOPSIS

03/23/2020

Review of “Severe outcomes among patients with coronavirus disease 2019 (COVID-19) — United States, February 12–March 16, 2020”

Article citation: CDC COVID-19 Response Team. Severe outcomes among patients with coronavirus disease 2019 (COVID-19) — United States, February 12–March 16, 2020. MMWR Morb Mortal Wkly Rep. 2020 Mar 18 [Epub ahead of print]. Available from:

<https://www.cdc.gov/mmwr/volumes/69/wr/mm6912e2.htm>

One-Minute Summary

- This report analyzes the severity of coronavirus disease 2019 (COVID-19) cases (**N=4,226**) by age group in the United States from February 12 to March 16, 2020.
- **Patient age distribution, where age was known (n=2,449):**
 - ≥85 years: 6%
 - 65-84 years: 25%
 - 55-64 years: 18%
 - 45-54 years: 18%
 - 20-44 years: 29%
 - 0-19 years: 5%
- **Proportion of patients hospitalized, where hospitalization status was known (n=508), by age group:**
 - ≥85 years: 9%
 - 65-84 years: 36%*
 - 55-64 years: 17%
 - 45-54 years: 18%
 - 20-44 years: 20%
 - 0-19 years: <1%
- **Proportion of patients admitted to ICU, where ICU status was known (n=121), by age group:**
 - ≥85 years: 7%
 - 65-84 years: 46%
 - 45-64 years: 36%
 - 20-44 years: 12%
 - 0-19 years: 0%
- **Proportion of deaths, where illness outcome or death was known (n=44), by age group:**
 - ≥85 years: 34%
 - 65-84 years: 46%
 - 20-64 years: 20%

- 0-19 years: 0%
- The proportion hospitalized and admitted to ICU increased with age, as did case-fatality.
 - The estimated **case-fatality** ranged from 1.8-3.4% overall and was **highest in persons ≥85** (10-27%).
- Overall, the data suggest the **highest percentages of severe illness and death are among those aged ≥65 years**, but severe illness can occur among adults 20-64 years with COVID-19.
 - Persons aged 0-19 years with COVID-19 had milder illness, with very few hospitalizations and no ICU admissions or deaths.

Additional Information

- Data included voluntarily reported laboratory-confirmed COVID-19 cases sent to Centers for Disease Control and Prevention from 49 states, Washington DC and three US territories.
- The authors excluded cases among people repatriated to the US from Wuhan, China and Japan (including patients repatriated from cruise ships).
- **Limitations include:**
 - Missing data for key variables (including hospitalization, ICU admission and death), which likely resulted in an underestimation of outcomes and impacted estimates of case-fatality.
 - Short follow-up time to ascertain outcomes among cases.
 - Data on other risk factors (i.e., underlying health conditions) were unavailable.
 - Likely over-representation of those with travel histories or more severe disease.
 - Limited testing for COVID-19 to date in the US.

PHO Reviewer’s Comments

- *The authors state 26% were hospitalized in the body of their article, but their figure indicates a higher proportion.

Citation

Ontario Agency for Health Protection and Promotion (Public Health Ontario). Review of “Severe outcomes among patients with coronavirus disease 2019 (COVID-19) — United States, February 12–March 16, 2020”. Toronto, ON: Queen’s Printer for Ontario; 2020.

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