

Young people hospitalized with COVID-19 face substantial adverse outcomes

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While older age is widely recognized as a risk factor for increased morbidity and mortality due to COVID-19, younger patients have received less attention as a population vulnerable to adverse clinical outcomes. Researchers from Brigham and Women's Hospital analyzed records from 419 hospitals using the Premier Healthcare Database to study the clinical trajectories of 3,222 hospitalized COVID-19 patients

aged 18-34. Findings were published as a research letter in *JAMA Internal Medicine*. Researchers found that over one-fifth of the patients (21 percent) required intensive care, 10 percent required mechanical ventilation and 2.7 percent died. For comparison, the team wrote, the death rate of those in the same age group hospitalized with heart attacks is approximately half of that figure.

"There was a significant rate of adverse outcomes," said Jonathan Cunningham, MD, a Cardiovascular Medicine fellow at the Brigham and first author on the letter. "Even though a 2.7 percent death rate is lower than for [older patients](#), it's high for young people who typically do well even when hospitalized for other conditions."

Another striking observation for the researchers was that 57 percent of the young people hospitalized for COVID-19 were Black or Hispanic, a finding consistent with other reports about the disproportionate burden the disease has had on these demographics.

Individuals with cardiovascular [risk factors](#) were also over-represented among the young people hospitalized: 36.8 percent and 24.5 percent of patients had obesity and [morbid obesity](#), respectively; 18.2 percent of patients had diabetes and 16.1 percent had hypertension. The researchers found that patients who presented these comorbidities were also more likely to experience adverse outcomes. Patients with morbid obesity, for example, comprised 41 percent of the hospitalized [young adults](#) who died or required mechanical ventilation. For individuals with more than one of these conditions, risks for adverse outcomes were comparable to the risks faced by middle-aged adults, aged 35-64, who had none of these conditions, as observed in a study of 8,862 members of this population.

The researchers stress that the dataset, which relies on hospital administrative claims, only lends insight into the adverse outcomes of

hospitalized [young people](#).

"We know nothing about the total denominator of patients who got an infection," said corresponding author Scott Solomon, MD, director of noninvasive cardiology in the Division of Cardiovascular Medicine at the Brigham. "We think the vast majority of people in this age range have self-limited disease and don't require hospitalization. But if you do, the risks are really substantial."

There was no funding organization for this study. Cunningham reported grants from the National Heart, Lung, and Blood Institute (T32HL094301) during the conduct of the study. Solomon reported grants from industry outside of the submitted work. A full list of disclosures are available in the paper.

More information: Jonathan W. Cunningham et al, Clinical Outcomes in Young US Adults Hospitalized With COVID-19, *JAMA Internal Medicine* (2020). [DOI: 10.1001/jamainternmed.2020.5313](https://doi.org/10.1001/jamainternmed.2020.5313)

Provided by Brigham and Women's Hospital

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