Patients Vaccinated for COVID-19 Have Shorter Hospital Stays Than Unvaccinated Patients

Team A: Justin Lo, PhD, MT(ASCP); Krutika Amin, PhD; Cynthia Cox, MPH; Dustin Cotliar, MD, MPH; Matthew Rae, MPA, MPH

Last updated 22 December 2021 • Check for updates at EHRN.org

Abstract: Average length of stay for patients hospitalized with COVID-19 shorter for vaccinated patients than unvaccinated patients.

Since the beginning of the COVID-19 pandemic, hospital capacity has been a consistent concern. People who are fully vaccinated against COVID-19 have a significantly reduced risk of severe illness resulting in hospitalization,[1,2] which can help reduce the impact of COVID-19 on hospital capacity. We looked at how being vaccinated against COVID-19 impacts length of stay for COVID-related hospitalizations.

Figure 1 shows adults hospitalized with COVID-19 who were fully vaccinated had shorter average hospital stays than those who were not fully vaccinated within the same age group. For example, among patients age 65 and older, the median COVID-19 hospital stay was 1.1 days shorter for those who were fully vaccinated (5.6 days) than for those not fully vaccinated (6.7 days).

Median Length of Hospital Stays Among Adults Hospitalized with COVID-19

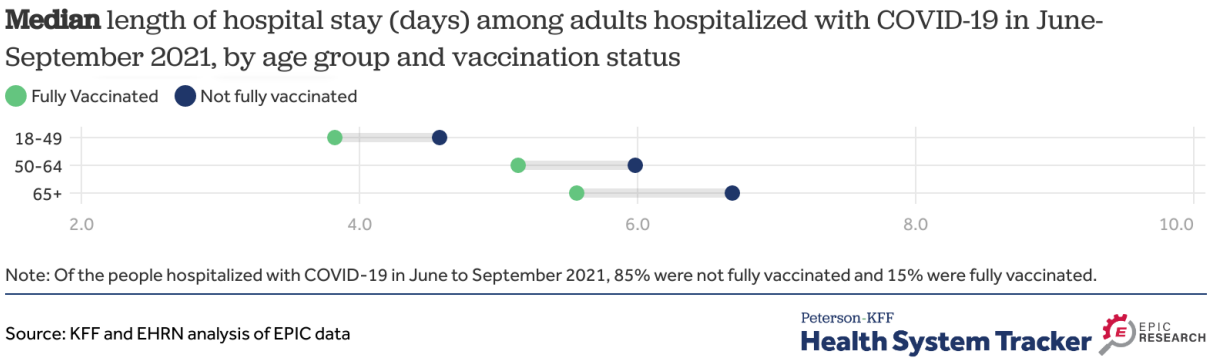

Figure 1. The median length of hospital stays in days among adults hospitalized with COVID-19 between June and September 2021 broken out by age group and vaccination status.

Visit kff.org for additional analysis of characteristics of vaccinated and unvaccinated patients hospitalized with COVID-19 including age differences, comorbidities, and complications.

These data come from Cosmos, a HIPAA-defined Limited Data Set of more than 120 million patients from 141 Epic organizations including 832 hospitals and 13,421 clinics, serving patients in all 50 states. This study was completed in collaboration with the Kaiser Family Foundation.

References

1. Scobie H, Johnson A, Suthar A, et al. Monitoring Incidence of COVID-19 Cases, Hospitalizations, and Deaths, by Vaccination Status — 13 U.S. Jurisdictions, April 4–July 17, 2021. CDC.gov. Published September 17, 2021. https://www.cdc.gov/mmwr/volumes/70/wr/mm7037e1.htm.

2. Little D, Lo J, Allen S, et al. Vaccine Victory: Hospitalization for COVID-19 After Receiving a Vaccine Very Rare. Epic Health Research Network. Published June 29, 2021. https://ehrn.org/articles/vaccine-victory-hospitalization-for-covid-19-after-receiving-a-vaccine-very-rare.

Data Definitions

Term	Definition
Fully vaccinated	Patients who have received the required dose(s) of a COVID-19 vaccine and were at least 14 days from their final vaccine dose
COVID-19 hospitalizations	Hospital admissions with either a documented COVID-19 diagnosis (ICD-10 diagnosis code U07.01) on the hospitalization record or admissions with other respiratory diagnoses involving a patient who tested positive for COVID-19 or received a COVID-19 diagnosis within 14 days of admission. When people have multiple admissions for COVID-19, each admission is counted as a unique observation.
Length of Stay	The number of days the patient was admitted, including the day of admission and the day of discharge. Length of stay was measured in hours divided by 24 to normalize the measure.