

Trends in Disparities in COVID Hospitalizations Among Community-Dwelling Residents of Two Counties in Connecticut, Before and After Vaccine Introduction, March 2020 - September 2021

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Abstract

Background. Prior to the introduction of vaccines, COVID-19 hospitalizations of non-institutionalized persons in Connecticut disproportionately affected communities of color and individuals of low socioeconomic status (SES). Whether the magnitude of these disparities changed 7-9 months after vaccine rollout during the Delta wave is not well documented. **Methods.** All initially hospitalized patients with laboratory-confirmed COVID-19 during July-September 2021, were obtained from the Connecticut COVID-NET database, including patients' geocoded residential addresses. Census tract measures of poverty and crowding were determined by linking geocoded residential addresses to the 2014-2018 American Community Survey. Age-adjusted incidence and relative rates of COVID-19 hospitalization were calculated and compared to those from July-December 2020. Vaccination levels by age and race/ethnicity at the beginning and end of the study period were obtained from Connecticut's COVID vaccine registry and age-adjusted average values were determined. **Results.** There were 708 COVID-19 hospitalizations among community residents of the two counties, July-September 2021. Age-adjusted incidence was highest among non-Hispanic Blacks and Hispanic/Latinx compared to non-Hispanic Whites ((RR 4.10 (95% CI 3.41-4.94) and 3.47 (95% CI 2.89-4.16)). While RR decreased significantly among Hispanic/Latinx and among the lowest SES groups, it increased among non-Hispanic Blacks (from RR 3.1 (95% CI 2.83-3.32) to RR 4.10). Average age-adjusted vaccination rates among those >12 years were lowest among non-Hispanic Blacks compared to Hispanic/Latinx and non-Hispanic Whites (50.6% vs 64.7% and 66.6%). **Conclusions.** While racial/ethnic and SES disparities in COVID-19 hospitalization have mostly decreased over time, disparities among non-Hispanic Blacks increased, possibly due to differences in vaccination rates.

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