Immunocompromised adults with COVID-19 hospitalization have increased odds of intensive care unit (ICU) admission and in-hospital death, regardless of vaccination status, according to research published in the July 8 issue of the U.S. Centers for Disease Control and Prevention Morbidity and Mortality Weekly Report.

Jason Robert C. Singson, M.P.H., from the California Emerging Infections Program in Oakland, and colleagues examined the association between immunocompromise and ICU admission and in-hospital death during March 1, 2021, to Feb. 28, 2022. The association between COVID-19 vaccination status and ICU admission and in-hospital death was also investigated.

The researchers found that during the study period, 12.2 percent of the 22,345 adults hospitalized for COVID-19 were immunocompromised. Among unvaccinated patients, the odds of ICU admission and in-hospital death were higher for those who were immunocompromised versus nonimmunocompromised (adjusted odds ratios, 1.26 and 1.34, respectively). Among vaccinated patients, the odds were also increased for ICU admission and in-hospital death for immunocompromised versus nonimmunocompromised patients (adjusted odds ratios, 1.40 and 1.87, respectively). Among nonimmunocompromised patients, the odds of death were lower for vaccinated compared with unvaccinated patients (adjusted odds ratio, 0.58); among immunocompromised patients, the odds of death did not differ for vaccinated and unvaccinated patients.

"Given the increased odds of severe COVID-19 outcomes among immunocompromised hospitalized patients, multilayered prevention strategies for immunocompromised persons are critical to preventing hospitalization for COVID-19 and subsequent severe outcomes, especially when community levels indicate increased transmission and disease severity," the authors write.

One author disclosed financial ties to the pharmaceutical industry.

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