

Impact of COVID-19 Vaccination Status on Mortality Rates After Operative Treatment for Hip Fracture.

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Purpose: There are limited data on the risk of mortality in patients undergoing surgical treatment for hip fracture in the setting of prior COVID-19 infection. This study aimed to identify the effect of vaccination status on the incidence and risk of mortality among patients undergoing surgical treatment for hip fracture.

Methods: Adult Kaiser Permanente health plan members undergoing surgical treatment for hip fracture from 2020 to 2022 were identified using internal procedure codes. A total of 3674 patients of varying levels of vaccination, with or without SARS-CoV-2 infection within 6 months prior to surgery were compared. Regression analysis compared patients adjusting for baseline demographics, comorbidities, and COVID-19 status to produce incidence rate ratios (IRR). The primary outcome was a 90-day mortality rate.

Results: Patients undergoing surgery for hip fracture with or without recent COVID-19 infection had a 90-day mortality rate of 11%. Those with COVID-19 infection within 6 months of surgery who were unvaccinated or partially vaccinated were at 4.49 times the risk of mortality compared to those who were fully vaccinated (IRR 4.49, 95% CI: 3.72–5.42).

Conclusion: COVID-19 vaccine status may be protective against mortality for patients with recent COVID-19 infection undergoing urgent surgery for hip fracture. Future studies should explore if vaccination of patients with hip fracture at or around the time of surgery is a potentially modifiable risk factor for reducing mortality risk.