

Avoidable deaths during COVID-19 associated with chronic hospital nurse understaffing

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A new [study](#) published in the *International Journal of Nursing Studies* showed that individuals with COVID-19 were more likely to die in

hospitals that were chronically understaffed before the pandemic. This study is one of the first to document the continuing public health dangers of permitting so many U.S. hospitals to ration nursing care by understaffing nursing services.

The study, conducted by researchers at the Center for Health Outcomes and Policy Research (CHOPR) at the University of Pennsylvania School of Nursing (Penn Nursing) explains why rates of COVID-19 mortality varied across U.S. hospitals.

"In 2020, roughly one in three individuals who were hospitalized with COVID-19 died within 30 days of admission. Our study found that individuals' likelihood of surviving was related to hospitals' investments in nursing services prior to the pandemic—in terms of hiring sufficient numbers of RNs, employing nurses with bachelor's educational preparation, and sustaining favorable work environments," said lead author Karen Lasater, Ph.D., RN, Associate Professor, the Jessie M. Scott Term Chair in Nursing and Health Policy.

The researchers studied the outcomes of over 87,000 Medicare patients admitted with COVID-19 from April-December 2020 in 237 general acute care hospitals in New York and Illinois. They found that:

- Patients with COVID-19 admitted to hospitals with better nurse staffing prior to and during the COVID-19 pandemic were more likely to survive. Each additional patient a nurse typically cared for in their hospital prior to the pandemic was associated with 20% higher odds of patients dying in their hospital during the pandemic.
- Patients in hospitals with higher proportions of bachelors-prepared registered nurses had 8% lower odds of dying.
- More favorable nurse work environments and Magnet designated hospitals were also associated with lower odds of dying.

"These findings demonstrate that hospital nursing resources are a cornerstone of public health emergency-preparedness that need to be well-funded in usual times in order for hospitals to be prepared for emergencies like the next pandemic," said senior author Linda Aiken, Ph.D., RN, Professor of Nursing and Founding Director of CHOPR.

"It is in the public's interest to establish state and [federal policies](#) that guarantee a minimum safe standard of hospital nurse staffing at all times," said Lasater. "Our team's work shows that U.S. hospitals were already chronically understaffed prior to the pandemic and staffing worsened during the pandemic."

The study projected that if hospitals had been staffing nurses at an average of 4 patients per nurse on medical-surgical units prior to the pandemic (rather than the observed average of 5.6 patients per nurse), thousands of deaths following COVID-19 hospitalizations may have been prevented. These research findings coincide with policy initiatives in both study states (New York, Illinois) that would require hospitals to staff enough [nurses](#) to safely care for patients.

Other recent publications by the Center for Health Outcomes and Policy Research, University of Pennsylvania School of Nursing show that:

- Establishing minimum hospital nurse staffing standards is in the public's interest.
- Poor hospital nurse work environments pre-dated the [pandemic](#) and were strongly associated with nurse burnout and intent to leave their employer.

The study was carried out by the Center for Health Outcomes and Policy Research at the University of Pennsylvania School of Nursing.

More information: Karen B. Lasater et al, Hospital nurse staffing

variation and Covid-19 deaths: A cross-sectional study, *International Journal of Nursing Studies* (2024). [DOI: 10.1016/j.ijnurstu.2024.104830](https://doi.org/10.1016/j.ijnurstu.2024.104830)

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