PROJECT BRIEF

UCSF University of California San Francisco

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Changes in nursing home staffing instability throughout the COVID-19 pandemic

Micah Segelmanan, PhD; Nathan Rowan, BS; Dana B. Mukamel, PhD; Laura M. Wagner, PhD, RN, FAAN
UCSF Health Workforce Research Center on Long-Term Care

October 2025

Background and Aims

High nursing home staffing instability (i.e. daily variation) is associated with poor resident outcomes. While it is known that nursing homes had difficulty maintaining adequate average staffing during the COVID-19 pandemic, it is not known how staffing instability was impacted by the pandemic, and if it was impacted, if rates of instability have returned to pre-pandemic levels once the pandemic abated. By examining trends in staffing instability in the years before the pandemic through the post-pandemic period (2017 – 2023), this study examines changes in nursing home staffing instability during the COVID-19 pandemic and investigates whether instability patterns differed by nursing home characteristics.

Methods

The study utilized staffing data from the Payroll Based Journal (PBJ) covering the period from 2017 to 2023. The PBJ includes daily provider-level data on staffing hours and resident census, which were summarized at the facility/quarter level. The data were merged with provider characteristics obtained from LTCFocus and the CMS Provider Data Catalog. The sample included 13,219 nursing homes with complete data for at least one quarter between 2017 Q1 and 2023 Q4, amounting to 351,472 facility-quarter observations.

Staffing data were aggregated at the facility/quarter level. Total nursing hours were defined as the sum of hours worked by all nursing staff (RNs, LPNs, CNAs) in a quarter. Hours per resident-day (HPRD) were calculated by dividing total nursing hours by resident-days in a quarter. Staffing instability was defined as the percentage of days within a quarter where staffing HPRD fell below 80% of the quarter's average HPRD.

Nursing home characteristics included payer mix, average daily census, chain status, racial/ethnic composition, ownership type, urban/rural classification, CMS Star ratings, and the previous quarter's total nurse staffing HPRD. We graphically presented quarterly trends of both staffing HPRD and staffing instability, overall and by nursing home characteristics. We estimated three independent mixed-effects regression models to examine the relationship between staffing instability and nursing home characteristics. The dependent variable for all models was staffing instability in the quarter.

Findings

Staffing instability increased during the COVID-19 pandemic and has since declined, but has not returned to pre-pandemic levels. Noteworthy observations:

1. **Racial/Ethnic Composition:** Nursing homes with higher proportions of Black residents experienced the highest staffing instability, while those nursing homes with the most Hispanic residents tended to have similar staffing HPRD and lower instability than other nursing homes. Additionally, nursing homes with the highest proportions of Black residents experienced the largest increases in instability during and after the COVID-10 peak period.
2. **Ownership Status:** Government-owned nursing homes had higher levels of instability than either for-profit or non-profit nursing homes. For-profit nursing homes had the largest increases in staffing instability during the COVID-19 peak.
3. **Urban/Rural Location:** Urban nursing homes had higher staffing levels and lower instability. During parts of the pandemic, instability in urban nursing homes was close to the level of instability in rural nursing homes.
4. **Star Ratings:** Higher star-rated nursing homes had better staffing levels and lower instability, indicating that higher quality facilities were better able to maintain stable staffing levels.
5. **State Fixed Effects:** State fixed effects impacted many of the estimates, suggesting possible impacts of state policies on staffing instability.

Limitations and Future Directions

This study's reliance on secondary data sources like the PBJ and LTCFocus introduces potential limitations related to data accuracy and completeness. Future research should examine specific state policies, including minimum staffing requirements, wage regulations, and Medicaid payment policies related to nursing home staffing and their impact on instability. Further investigation is also needed to understand the relationship between increases in average staffing levels, use of contract staff, and staffing fluctuations.

Policy Implications

Policymakers should focus on reducing staffing instability in nursing homes, particularly in facilities with high proportions of Black residents and those that are for-profit or government-owned. Incorporating staffing instability measures into existing policy frameworks like the SNF Value-Based Purchasing Program could enhance the quality of care. Additionally, policies aimed at increasing staffing levels should also address potential fluctuations and reliance on contract staffing.

Conclusion

The COVID-19 pandemic significantly impacted staffing instability in nursing homes, with effects persisting into 2023. This study highlights the need for targeted policies to support facilities facing the greatest instability challenges. Ensuring stable staffing is crucial for maintaining high-quality care in nursing homes, particularly during public health crises. Future research and policy interventions should focus on both increasing average staffing levels and reducing staffing instability to improve overall care quality.

Full Report

https://healthworkforce.ucsf.edu/bibcite/reference/2066

This project was supported by the Health Resources and Services Administration (HRSA) of the US Department of Health and Human Services (HHS) as part of an award totaling $543,300 with 0% financed by non-governmental sources. The contents are those of the authors and do not necessarily represent the official views of, nor an endorsement by, HRSA, HHS, or the US Government. For more information, please visit HRSA.gov.

