

Research Brief

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## WINTER STORM URI REDUCED AVAILABILITY OF DAILY DIRECT-CARE NURSE STAFF IN TEXAS NURSING HOMES

**Keywords:** disaster preparedness, nursing home staffing, natural disaster, winter storm

**Purpose of the Study:** To understand the impact of winter storms on direct-care nurse staffing in nursing homes.

### Key Findings:

- ✓ Direct-care nurse staffing shortages were most severe on days 3-5 of the storm among LPNs and CNAs.
- ✓ Urban and lower quality nursing homes had more severe staffing shortages than rural and higher quality nursing homes, respectively.

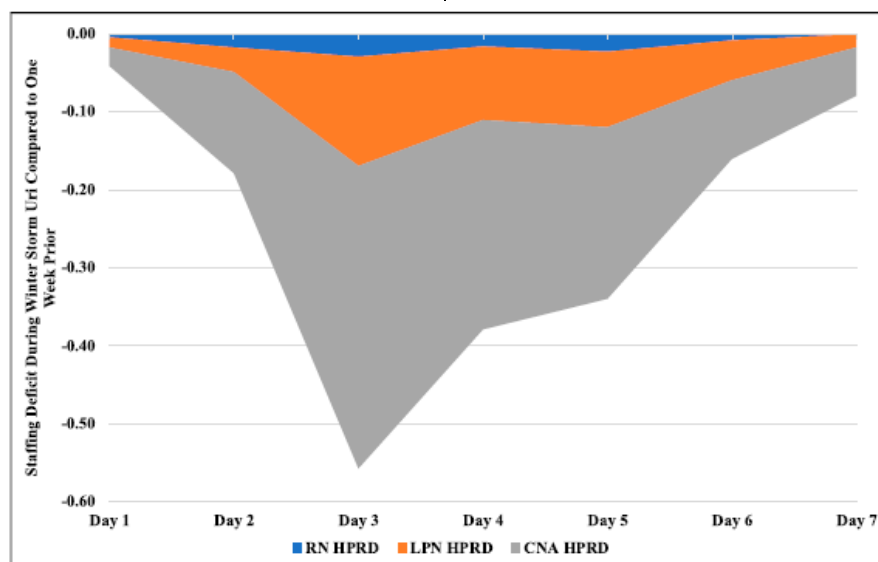
**Major Policy/Practice Implication:** Policymakers and providers need to consider emergency measures to ensure staff can make it to work during natural disasters.

### IMPORTANT BACKGROUND INFORMATION

Winter Storm Uri hit Texas in February 2021, resulting in at least 246 deaths. Among 1,200 Texas nursing homes (NHs), 400 lost power and 570 reported emergencies. Power outages, and other effects of natural disasters, can cause serious, even fatal, disruptions to nursing home resident care and access medical equipment. As a result, many NH residents need increased support from direct-care nurse staff (RNs, LPNs, and CNAs), yet direct-care staff levels often decrease during disasters because staff are not able to make it to work or they are managing the impacts of disasters in their own lives. This study documents daily patterns of direct-care staffing loss during Winter Storm Uri to help NHs mitigate future staffing shortages.

### STUDY METHODS

Data come from 1,173 Texas NHs that are included in both Care Compare, a nursing home quality rating website, and Payroll Based Journaling (PBJ), the Centers for Medicare and Medicaid (CMMS) database that compiles NH staffing data from payroll. Researchers compared staffing data from the week of the storm to the week prior that did not experience a natural disaster. They analyzed data in terms of hours per resident-day to compare data across different size NHs. Data were analyzed using statistical models that examined the daily change in staffing levels, as well as controlled for NH characteristics, such as profit-status. They also classified each NH as rural or urban, and as high quality or low quality based on Care Compare star ratings.



**Figure 1.** Difference in direct-care nurse staffing during Winter Storm Uri and 1 week prior in hours per resident-day. *Note.* Winter Storm Uri began on February 13th, 2021. Day 1 was calculated as the mean staffing levels by type on February 13th, 2021 minus the mean staffing levels by type on February 6th, 2021. **Abbreviations.** CNA = Certified Nursing Assistant. HPRD = Hours Per Resident-Day. LPN = Licensed Practical Nurse. RN = Registered Nurse.

## KEY FINDINGS

- ✓ **Compared to the week before the storm, residents had less time with all direct-care nurse staff.** During the week of Winter Storm Uri, residents had about...
  - 6.06 minutes less with RNs
  - 26.58 minutes less with LPNs
  - 76.22 minutes less with CNAs
- ✓ **Staffing shortages were the worst among LPNs and CNAs on days 3-5 of the storm.** On day 3 of the storm NHs experienced...
  - An 11% reduction in RN staff compared to the week before.
  - A 13% reduction in LPN staff compared to the week before.
  - A 22% reduction in CNA staff compared to the week before.

- ✓ **Urban and lower quality NHs experienced more severe staffing shortages. At the worst...**
  - Urban NHs had a 24% reduction in CNA staffing, while rural NHs had a 16% reduction.
  - Lower quality NHs had a 22% reduction in CNA staffing, while higher quality NHs had a 20% reduction.

## PRACTICE AND POLICY IMPLICATIONS

**For policymakers:** Consider implementing policies or emergency responses that prioritize NH staffing, such as providing emergency transportation for essential workers.

**For providers:** Have emergency plans for CNAs to stay on-site during disasters that may include overnight accommodations, food, compensation, and family care/support.

## ORIGINAL ARTICLE

Jester, D. J., Peterson, L. J., Andel, R., & Dosa, D. M. (2023). Winter Storm Uri Reduced Availability of Daily Direct-Care Nurse Staff in Texas Nursing Homes. *Journal of Applied Gerontology*, 42(10), 2148-2157. doi: 10.1177/07334648231175428.

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