OHSAH

Research Update

Staffing Level And Staff Mix Effect On Injury Rates

Do injury rates decline with added staffing in long-term care facilities? They decline to a certain extent, but beyond a certain threshold there is little effect.

Chronic nursing shortages and cost constraints across the health-care sector have motivated a reassessment of staffing levels required for maintaining quality care and protecting direct care staff from injury risk. We examined the relationship of injury rates with the level and composition of direct care staff (Registered Nurses, Licensed Practical Nurses, and Care Aides).

LPNs and CAs together (LPNCA) had three times the injury risk of RNs. There was no statistically significant direct association between staff-level and injury risk, although there was a decline of LPNCA injury risk with higher LPNCA staff level and an increase RN risk with higher RN staff level. The largest decline of LPNCA injury risk (12%) occurred between the mid to high LPNCA staff-level (22–43%), while the greatest increase in RN injury risk (26%) occurred between the low to mid RN staff-level (1–10%).

Higher RN staff levels, and a higher proportion of RNs in the staff composition are each associated with higher injury risk for both RNs and LPNCAs. Both medical and physical workloads should be considered in staffing decisions to ensure a proper balance of staff level and staff-composition to protect RNs and LPNCAs from higher injury risk while optimizing the quality of care provided to long-term care residents.

Long-term care facilities with a high proportion of RNs in the direct care staff had higher injury risk for both LPNCAs and RNs, with the LPNCAs injury risk increasing 40% when RNs comprised 30% or more of the direct care staff. Trend analyses revealed a statistically significant relationship of higher LPNCA injury risk with increased proportion of RN in direct care staff.

- The literature has shown that high RN staff levels are associated with better medical outcomes for patients.
- LPNCAs have a considerably higher injury risk than RNs.
- When fewer LPNCAs are sharing the physical workload there are corresponding higher injury rates for LPNCAs. The fact that higher RN staff levels, and a higher proportion of RNs in the staff composition, are associated with higher injury risk for both RNs and LPNCAs indicates that it is important not to increase the number of RNs at the expense of LPNCAs.
- RNs experience more physical exertion at higher RN staff levels and when there is a higher proportion of RNs in the staff composition because of the resulting increased involvement in physical care.
- The results indicate that both medical and physical workloads should be considered in staffing decisions to ensure a proper balance of staff level and staff composition to protect RNs and LPNCAs from higher injury risk while optimizing the medical care provided to long-term care residents.

Full text of this report has been submitted for publication, and is not yet available for general distribution.
For more information, please contact OHSAH.

ABOUT THIS DOCUMENT

The Occupational Health and Safety Agency for Healthcare (OHSAH), which operated from 1998-2010, was a precursor to SWITCH BC. Conceived through the Public Sector Accord on Occupational Health and Safety as a response to high rates of workplace injury, illness, and time loss in the health sector, OHSAH was built on the values of bipartite collaboration, evidence-based decision making, and integrated approaches.

This archival research material was created by OHSAH, shared here as archival reference materials, to support ongoing research and development of best practices, and as a thanks to the organization's members who completed the work.

If you have any questions about the materials, please email hello@switchbc.ca or visit www.switchbc.ca