Early release, published at www.cmaj.ca on July 22, 2020. Subject to revision.

COMMENTARY VULNERABLE POPULATIONS

COVID-19 and long-term care facilities: Does ownership matter?

Margaret J. McGregor MD MHSc, Charlene Harrington RN PhD

Cite as: *CMAJ* 2020. doi: 10.1503/cmaj.201714; early-released July 22, 2020

See related article at www.cmaj.ca/lookup/doi/10.1503/cmaj.201197

In related research, Stall and colleagues examined the relation between ownership of a long-term care (LTC) facility and the occurrence, extent and mortality associated with outbreaks of coronavirus disease 2019 (COVID-19) in Ontario's 623 LTC facilities.[1] In their analysis, adjusted at the facility level, the authors found no association between ownership and the odds of an outbreak occurrence. They did find, however, that facilities run on a for-profit basis had more extensive outbreaks and more deaths than facilities run on a nonprofit basis, with an even more marked effect when for-profit facilities were compared with facilities that were entirely municipally run. However, when multi-bed room design was added to the model, for-profit ownership status lost its significance for these outcomes, leading the authors to conclude that building upgrades should be an important part of addressing the problems in the LTC sector in Ontario.

In their expanded model, the authors also found that chain status of the LTC facility conferred a significant risk of more extensive outbreak and deaths. Of Ontario's for-profit LTC facilities, 85% are part of a chain (v. 31% of nonprofit, and no chains among municipally run homes), which begs the question of whether for-profit chain status of a facility is a significant and independent risk factor for more extensive outbreaks and deaths, even after controlling for multi-bed rooms. If so, simply ensuring building upgrades, while important, is unlikely to be enough to address systemic deficiencies.

Stall and colleagues' study did not include data on staffing across facility ownership groups. Long-term care staffing is consistently reported in the literature as being an important difference between for-profit, nonprofit and publicly owned facilities.[2,3] A 2011 study of nursing homes in the United States found that the largest for-profit chains had the lowest nursing hours,[4] and an earlier Canadian study found that government (health-authority)–owned facilities provided 61 more minutes of staffing per resident day than for-profit facilities.[5] A recent report from the Office of the BC Seniors Advocate on government contracts to LTC homes found that the for-profit sector failed to deliver 207 000 hours of care for which it had received funds in 2016/18, compared with the nonprofit sector, which provided 80 000 *more* hours of care than it was funded to deliver.[6] Moreover, research is starting to show that, when it comes to outbreaks of COVID-19, LTC staffing matters..

A recent study of COVID-19 outbreaks in California found that LTC facilities with total staffing levels of registered nurses (RNs) less than the recommended minimum standard (0.75 h per resident day) were twice as likely to have residents with infection of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) than adequately staffed facilities.[7] A study in Connecticut found that for LTC facilities with at least 1 confirmed case of COVID-19, every 20-minute (per resident day) increase in RN staffing was associated with 22% fewer confirmed cases, and in facilities with at least 1 death from COVID-19, every 20-minute increase in RN staffing significantly predicted 26% fewer deaths.[8]

Recognizing the importance of staffing characteristics was key to limiting COVID-19 outbreaks in long-term care in BC. Staff were quickly identified as an important vector of transmission, which led to the BC government limiting staff working across multiple sites by offering the same higher standard of wages and working conditions to all LTC workers.[9]

This evidence clearly shows that ownership matters when it comes to staffing, and staffing matters when it comes to

KEY POINTS

- Research has shown that for-profit ownership of long-term care (LTC) homes has been relevant to patterns of coronavirus disease 2019 (COVID-19) outbreaks and deaths in Ontario; this is related to building characteristics and chain status of owners.
- For-profit ownership has been related to lower LTC staffing levels in research comparing for-profit and nonprofit facilities.
- Recent research has shown an association between lower nurse staffing levels and worse COVID-19–related outcomes in LTC facilities.
- Long-term care policy should prioritize funding and mandating sufficient staffing levels based on the available evidence.

managing outbreaks of COVID-19 in LTC facilities. Evidence from time-motion studies and modelling have also allowed for easy calculation of the number and types of staff needed to meet resident care needs.[9] Ratios of 1 care aide for 10 or more residents are clearly unacceptable to meet the care needs of nearly all residents now admitted to publicly funded LTC homes. Minimum standards should be ratios of 1 personal support worker (care aide) to no more than 5 to 7 residents for day and evening shifts.[10] Recommendations for minimum ratios of residents to RNs and licensed practical nurses, adjusted for resident case mix, are also available and evidence informed.[11]

In preparation for the next wave of COVID-19, public policy should be directed at funding, mandating and enforcing sufficient staffing levels based on the available evidence, not only to address resident care needs, but also to accommodate the added time required for safety-related tasks such as meticulous handwashing, careful donning and doffing of personal protective equipment, and consistent compliance with infection control standards. If requirements to fund adequate levels of staffing affect the bottom lines of for-profit facilities, then it might be time for this care to be turned over to public and nonprofit entities.

As O'Neill and colleagues noted, "If increasing quality raises costs more quickly than it does revenues, profits must fall as quality improves. That is, a trade-off between profit and quality would exist."[12] Public policy needs to come to terms with this trade-off and intervene on behalf of our most vulnerable seniors.

References

1. Stall NM, Jones A, Brown KA, et al. For-profit long-term care homes and the risk of COVID-19 outbreaks and resident deaths. *CMAJ* 2020 July 22 [Epub ahead of print]. doi: 10.1503/cmaj.201714.
2. Comondore VR, Devereaux PJ, Zhou Q, et al. Quality of care in for-profit and not-for-profit nursing homes: systematic review and meta-analysis. *BMJ* 2009;339:b2732.
3. Hillmer MP, Wodchis WP, Gill SS, et al. Nursing home profit status and quality of care: Is there any evidence of an association? *Med Care Res Rev* 2005;62:139-66.
4. Harrington C, Olney B, Carrillo H, et al. Nurse staffing and deficiencies in the largest for-profit nursing home chains and chains owned by private equity companies. *Health Serv Res* 2012;47:106-28.
5. McGregor MJ, Tate RB, McGrail KM, et al. Trends in long-term care facility staffing by facility ownership in British Columbia, 1996 to 2006. *Health Rep* 2010;21:27-33.
6. McKenzie I. *A billion reasons to care: a funding review of contracted long-term care in B.C. — 2020*. Victoria: Office of the Seniors Advocate; 2020. Available: www.seniorsadvocatebc.ca/app/uploads/sites/4/2020/02/ABillionReasonsToCare.pdf (accessed 2020 July 15).
7. Harrington C, Ross L, Chapman S, et al. Nurse staffing and coronavirus infections in California nursing homes. *Policy Polit Nurs Pract* 2020 July 7 [Epub ahead of print]. doi: 10.1177/1527154420938707.
8. Li Y, Temkin-Greener H, Gao S, et al. COVID-19 infections and deaths among Connecticut nursing home residents: facility correlates. *J Am Geriatr Soc* 2020 June 18 [Epub ahead of print]. doi: 10.1111/jgs.16689.
9. Order of the Minister of Public Safety and Solicitor General: Emergency Program Act. Ministerial Order No. M105. Province of British Columbia; 2020 Apr. 10. Available: www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/emergency-preparedness-response-recovery/gdx/orders-april-10/ep_act_order_m105-2020_single_site.pdf (accessed 2020 May 12).
10. Schnelle JF, Schroyer LD, Saraf AA, et al. Determining nurse aide staffing requirements to provide care based on resident workload: a discrete event simulation model. *J Am Med Dir Assoc* 2016;17:970-7.
11. Harrington C, Dellefield ME, Halifax E, et al. Appropriate nurse staffing levels for U.S. nursing homes. *Health Serv Insights* 2020 June 29 EEpub ahead of print]. doi: 10.1177/1178632920934785.
12. O'Neill C, Harrington C, Kitchener M, et al. Quality of care in nursing homes: an analysis of relationships among profit, quality, and ownership. *Med Care* 2003;41:1318-30.

Competing interests: None declared.

This article was solicited and has been peer reviewed.

Affiliations: Department of Family Practice (McGregor), University of British Columbia; Centre for Clinical Epidemiology & Evaluation (McGregor), Vancouver Coastal Health Research Institute, Vancouver, BC; University of California San Francisco (Harrington), San Francisco, Calif.

Contributors: Both authors contributed to the conception and design of the work, drafted the manuscript, revised it critically for important intellectual content, gave final approval of the version to be published and agreed to be accountable for all aspects of the work.

Correspondence to: Margaret J. McGregor, mrgret@mail.ubc.ca