

# Using the number of licensed beds as the sole criterion for infection prevention and control lead staffing in long-term care settings; the case of Ontario, Canada

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## BACKGROUND

In April 2022, the Ministry of Long-Term Care (LTC) in Ontario, Canada released the infection prevention and control (IPAC) standard as part of the requirements under a new legislation referred to as the *Fixing Long-Term Care Act*, 2021. This was enacted to address gaps in the sector that were exposed during the COVID-19 pandemic. The main aspect of the infection prevention and control (IPAC) standard within the *Act*, requires each long-term care home (LTCH) to have an IPAC lead whose primary responsibility is the home's IPAC program. As part of the regulation, every licensee shall ensure that the IPAC Lead works regularly in that position on-site at the home for at least the following minimum hours based on the licensed bed capacity: for homes with a licensed bed capacity of 69 beds or fewer at least 17.5 hours per week; for homes with a licensed bed capacity of more than 69 beds but fewer than 200 beds, at least 26.25 hours per week; for homes with a licensed bed capacity of 200 beds or more, at least 35 hours per week (FLTCA 2021). Section 102 (7) of the regulation further elaborates on the broad responsibilities of the IPAC lead including: working with the interdisciplinary IPAC team to implement the IPAC program; managing and overseeing the program; overseeing the delivery of IPAC education to all staff, caregivers, volunteers, visitors, and residents; and auditing of IPAC practices in the home.

In meeting regulatory compliance, most homes in the province of Ontario are now basing their staffing of the IPAC lead position solely on the minimum hours required under the regulation. There is no doubt that, historically, the ratio of infection control professionals (ICPs) in acute care settings has been tied to inpatient beds with no regard on the variability in facility complexity. For example, the Study of the Efficacy of Nosocomial Infection Control (SENIC) in the United States that evaluated the nosocomial IPAC programs from 1970 to 1976 recommended 1 infection control nurse per 250 beds (Haley *et al*, 1985). Another study suggested a ratio of 0.8 – 1.0 ICP

per 100 occupied acute care beds (O'Boyle *et al.*, 2002) and a more recent study that aggregated data across organizations recommended a new benchmark of 1.0 ICP full-time equivalent per 69 beds if ambulatory, LTC, or home care are included (Bartles *et al*, 2018).

## EVIDENCE AND BEST PRACTICE

Despite this new evidence, some regulatory bodies such as the Ministry of Long-Term Care in Ontario are still relying on the old approach of using operating bed capacity to determine the minimum IPAC hours required for LTC homes. In this editorial, I argue that this one-size-fits-all model of IPAC lead staffing fails to sufficiently account for population complexity and risk levels as suggested by Bartles *et al* (2024) in their IPAC staffing calculator.

The calculator captures information about the facility (name/identifier, county/state) in which the facility is located, number of full-time infection prevention employees, how long they have been in the IPAC role, if they are CIC certified, and their academic degrees. Additionally, the number of licensed beds at the facility, the type of facility (whether it's a LTC or a long-term acute care hospital (LTACH)), and whether the facility is part of a larger healthcare system are considered. There is also the National Healthcare Safety Network (NHSN) reporting requirement related to whether the facility conducts surveillance or has an infection prevention surveillance software. There are also questions such as the number of ventilated patients cared for in the facility and the number of blood and urine cultures processed monthly. Finally, the calculator also considers the catheter-associated urinary tract infections (CAUTIs) and the *Clostridioides difficile* Standard Infection Ratio (SIR) for the last 12 months (APIC 2024).

This calculator indeed demonstrates that the number of licensed beds at a facility alone is not sufficient or appropriate to be used as a sole criterion for staffing in LTC facilities as it does not take into consideration resident acuity, complexity of care or the scope of services provided by the facility.

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The day-to-day functions of an IPAC lead such as surveillance, antimicrobial stewardship, education, audits, outbreak management, quality improvement, etc. have nothing to do with bed capacity. Smaller or crowded LTC homes are even more prone to outbreaks (Leece *et al* 2023), and when outbreaks occur, the IPAC lead is required to have a full-time presence in the home to put in place measures and processes to effectively control the outbreaks. Any lack of IPAC resources or capacity during outbreaks may lead to a delay in the detection of infections and this may facilitate the spread of the disease within the home.

### WHY SHOULD EVERY LONG-TERM CARE HOME NEED AN IPAC LEAD?

Ageing is a complex process in life characterized by several changes that make residents susceptible to infections. The following risk factors put seniors at increased risk of infections in LTC settings:

- The increasing use of invasive devices (like catheters, ventilators, or feeding tubes) contributes to the risk of infection.
- Malnutrition, which is common in older adults, is associated with impaired immune function manifested by a decrease in cell-mediated immunity.
- Immunosenescence, the age-related changes that occur in the immune system may lead to decrease in the effectiveness of the immune system in older adults. Due to immunosenescence, the immune response from vaccinations for older adults has been shown to be weaker than the response in younger adults (Gavazzi *et al*, 2002).
- A diminished ability to complain of or self-identify symptoms, or increased likelihood of presenting with atypical symptoms or signs of infection.
- Cognitive deficits, which may complicate compliance with basic sanitary practices, such as hand washing and functional impairments associated with incontinence or immobility.
- Comorbid conditions, such as diabetes, neurological disease, cerebrovascular disease, and cardiorespiratory disease, are associated with physiological and functional impairment, which contribute to the risk of infection.
- LTC homes generally have shared air circulation, which may contribute to the transmission of airborne pathogens. Additionally, institutionalization may facilitate transmission of organisms between residents and staff thereby contributing to outbreaks.

These factors make residents in LTC settings, regardless of the size of the home, vulnerable to infections. Therefore, LTC regulators must move away from the outdated bed capacity metric and adopt an approach that would require every LTC home to have at least one full-time IPAC Lead irrespective of the bed capacity. Larger homes, those with high-acuity residents (e.g., those with dementia units), and those delivering complex care may even be required to have more dedicated IPAC hours.

### CONCLUSION

Based on the scope of practice of ICPs, there are other foundational administrative requirements and baseline tasks that IPAC leads must complete daily, regardless of the number of residents in the facility (e.g., environment of care rounding, public health reporting, regulatory readiness, surveillance, outbreak management, audits, delivery of education and occupational health and safety interventions, etc.). Although the time needed to complete each of these tasks increases with the size of the home, every home needs a designated IPAC Lead to complete these tasks irrespective of the home's size. Therefore, regulators must acknowledge this and consider additional facility-specific requirements based on the size, resident population, and infection risk (Knighton *et al*, 2024; Bartles *et al*, 2024). Appropriate staffing levels are necessary for IPAC Leads to meet the requirements of the role to not just control infections but prevent them.

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