

POSITION STATEMENT:

Infection prevention and control program components for long-term care homes

This position statement was developed by IPAC Canada Long Term Care Interest Group.

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BACKGROUND

Residents of long-term care homes (LTCHs) are a vulnerable population. As a result, there have been many outbreaks with significant morbidity and mortality caused by a plethora of different micro-organisms (influenza A, SARS-CoV-2, Group A Streptococcus, methicillin-resistant *Staphylococcus aureus* [MRSA], Carbapenemase-producing Enterobacteriaceae [CPE], norovirus, *Clostridioides difficile*, extended spectrum beta-lactamase-producing organisms [ESBL], hepatitis B and C) amongst others [1-5]. There are currently no national IPAC recommendations specifically for an IPAC program in LTCHs, although there have been publications recommending IPAC programs and resources [6-10]. LTC and retirement homes have been disproportionately affected by COVID-19 in Canada with 10% of all Canadian COVID-19 cases (about 80,000), resulting in more than 66% of the national deaths (over 14,000 deaths in residents and close to 30 staff) as of February 2021. More than 2,500 homes experienced an outbreak, and the proportion of COVID-19 deaths in Canadian LTC and retirement home residents (69%) exceeds the international average (41%) [5]. As per federal and provincial/territorial legislation, employers shall ensure that the LTC setting is a safe work environment which protects residents and staff [6].

POSITION STATEMENT

The goals of an IPAC program are to protect residents from healthcare-associated infections and to prevent the spread of infections among residents, healthcare providers, staff, visitors, and others in the healthcare environment [6]. Active, evidence-based IPAC programs that are continuously supported by senior leadership and evaluated on a yearly basis have been demonstrated to decrease the morbidity, mortality and financial

burden of outbreaks in LTCH [1,2,6,7]. The IPAC program should include, as a minimum, the following elements:

Human Resources

- One dedicated full-time equivalent (FTE) Infection Prevention and Control Professional (ICP) per 150-200 occupied beds [6-10].
 - o Where an increase in acuity and complexity of resident care exists (e.g., chronic ventilation, dialysis, and specialized programs for spinal cord injuries, psychiatry and cognitive impairment), one FTE ICP per 150 occupied beds is recommended [7,8].
 - o For homes with fewer than 150 beds, where possible, a dedicated FTE ICP is preferred, especially if combined with a related role (e.g., clinical education). The ICP staffing level should be sufficient to ensure that all the components of the IPAC programs are met as outlined in this position statement.

New ICPs are enrolled in an IPAC-Canada-endorsed training program, which includes the core competencies as described in the document *IPAC Canada Core Competencies for Infection Control Professionals* [11]. Training should commence within the first six months of entering the profession. New ICPs are ideally mentored by an experienced, CIC® certified ICP after hire [7,8]. IPAC Canada endorses certification in Infection Prevention and Control through the Certification Board of Infection Control (CBIC) [12].

- The expected number of hours per week that are devoted to infection prevention and control must be clearly stated and protected [8].
- Access to a physician with the expertise of IPAC [7,8] whose professional development in IPAC includes:

- o surveillance and epidemiology
- o microbiology and infectious diseases
- o outbreak management
- o ability to critically review the IPAC literature [7].

Laboratory

LTCHs should have a collaborative relationship with a licensed and accredited microbiology laboratory. There should be a system to alert the IPAC program when targeted microorganisms are isolated or detected and provide laboratory reports in a timely manner [7,8,10].

IPAC Policies/Procedures

Policies and procedures should be developed from current, evidence-based federal, provincial, territorial and Accreditation Canada guidance/recommendations and legislation, and include as a minimum:

- A hand hygiene program, which includes hand skin care, reflecting the IPAC Canada Practice Recommendation on Hand Hygiene [8,13-16].
- Point-of-Care Risk Assessment, Routine Practices and Additional Precautions [6,8,16-18].
- Outbreak management [6,10,19,20]. In the event of a pandemic, LTCHs will abide by the provincial and federal directives.
- Cleaning of the environment shall be as per national and provincial/territorial guidance [6-8,21].
- Cleaning and disinfection of reusable and shared medical equipment shall be as per national and provincial/territorial guidance [6-8,17,18,21-23].

Education and Training

- All healthcare providers (HCPs) and other staff, including contract staff, are to have IPAC training upon hire, on a regular basis, at least annually, and as needed (e.g., based on audit results, during an outbreak or identification of significant organism, or as directed by provincial/territorial legislation) [6-10,20].
- Education/training is to include as a minimum: hand hygiene, point-of-care/personal risk assessment, routine practices, additional precautions, correct donning and doffing of personal protective equipment (PPE), healthy workplace policy, safe management of sharps, immunization, work restrictions due to infectious diseases, equipment cleaning and disinfection, and environmental cleaning [6-9,19].
- IPAC education is also to be provided to residents, families, visitors, sitters/companions and volunteers as indicated, and includes hand-hygiene, Capitals on Routine Practices and Additional Precautions, correct donning and doffing of PPE, and healthy workplace policy [7-9,19].
- The LTCH ICP should be a member of IPAC Canada and their local chapter to support ongoing education and networking [10].

Occupational Health Program

- IPAC collaborates with this program, which includes, at a minimum, a healthy workplace policy, a sharps safety program, review of immunizations, TB screening, a hand skin care program, and a process for monitoring trends for any communicable infections, such as acute respiratory infection and gastroenteritis, in HCPs and other staff [7,8,18-20].
- A Resident Immunization Program (e.g., influenza, pneumococcal vaccine, pandemic vaccines), which follows the National Advisory Committee on Immunization (NACI) recommendations [7,20,24].

Surveillance Program

Process and outcome surveillance is required to ensure data is systematically collected, collated, analyzed, and disseminated to those who require it to take action [6,25]. The surveillance program has a written process, which is evidence-based and is aligned with provincial/territorial legislation requirements for surveillance and reporting, and takes into account local epidemiology [6-8,25-28]. As a minimum surveillance shall include:

- Admission screening, active syndromic surveillance (e.g., respiratory infection and gastroenteritis), and identification of sentinel events (e.g., invasive group A *Streptococcus*, SARS-CoV-2);
- Process audits (e.g., compliance with Routine Practices and Additional Precautions, including hand hygiene, PPE use, environmental cleaning, shared equipment cleaning);
- Antimicrobial stewardship (e.g., asymptomatic bacteriuria/urinary tract infections, *Clostridioides difficile*)

Facility Design, Renovation and Maintenance

The ICP is included as part of the multidisciplinary team/project team. The ICP has an important role in the prevention of infections throughout any construction/renovation/maintenance or facility design project [29-34]. For any renovations or redevelopment, the Canadian Standards Association's (CSA) document, Z8000 *Canadian healthcare facilities*, should be followed with respect to design with the goal to eliminate multi-bed rooms (i.e., ensuring single rooms with a single resident dedicated bathroom and sink). Studies have shown a clear relationship between use of single rooms and the reduction in infection transmission [18,29,32-34]. The CSA Z317-13 document, *Infection control during construction, renovation, and maintenance of healthcare facilities*, should be followed for IPAC measures needed during construction/renovation/maintenance of a facility [29,31].

GLOSSARY/DEFINITIONS

As per the Canadian Standard Association (CSA):

"SHALL" is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the standard.
"SHOULD" is used to express a recommendation, or that which is advised but not required; and
"MAY" is used to express an option, or that which is permissible within the limits of the standard, an advisory or optional statement.

Healthcare provider: Any person delivering care to a client/patient/resident. This includes, but is not limited to, the following: emergency service workers, physicians, dentists, nurses, respiratory therapists and other health professionals, personal support workers, clinical instructors, students and home healthcare workers. In some non-acute settings, volunteers might provide care and would be included as a healthcare provider. See also, Staff [7].

Long-term care home: A long-term care home (LTCH) provides care and services for people who are no longer able to live independently, or who require onsite nursing care, 24-hour supervision, or personal support.

Staff: Anyone conducting activities in settings where healthcare is provided, including healthcare providers. See also, Healthcare providers [7].

Stakeholders: LTCH management and healthcare providers, residents, families and visitors and the community at large.

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