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Infection Prevention and Control for Long-Term Care Homes

Summary of Key Principles and Best Practices

Guide

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Public Health Ontario

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NOTES: This document is intended to provide best practices only.
Health care settings are encouraged to work towards these best practices in an effort to improve quality of care.

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About This Document

This document compiles core recommendations for infection prevention and control (IPAC) best practices developed by the Provincial Infectious Diseases Advisory Committee for Infection Prevention and Control (PIDAC-IPC) that are relevant for long-term care homes (LTCHs) in Ontario in providing routine care. Although the target audience of this document is long-term care homes, many of the IPAC principles may be adaptable to other congregate care settings such as retirement homes.

This document is meant to be a quick reference for those delegated with IPAC responsibilities; and covers the following topics:

1. Legislation relating to IPAC practices in long-term care settings
2. IPAC program
3. Staff education and training
4. Routine Practices
5. Additional Precautions
6. Medications, vaccines and skin antisepsis
7. Control of the environment
8. Reprocessing medical equipment
9. Surveillance
10. Administrative controls
11. Outbreak management

For details on the evidence base and rationale of these recommendations, and relevant implementation tools, please refer to the source PIDAC-IPC documents, PHO web pages and Ministry of Health recommendations listed under each topic.

Note that additional measures may be taken during an influenza epidemic or pandemic, or for agents for which Ministry of Health guidance is currently available. In the case of influenza, the epidemiology of the disease is known and the best practices for responding to an influenza pandemic are set out in the *Ontario Health Plan for an Influenza Pandemic*.[1]

1. Legislation Relating to IPAC Practices in LTC Settings

The *Long-Term Care Homes Act* requires that every long-term care home (LTCH) has an IPAC program which core functions are to promptly detect signs and symptoms of infection in residents through daily monitoring activities, and to ensure measures are in place to prevent the transmission of infections.[2] Elements of such an IPAC program are laid out in the *General* regulation[3] under that Act.

In addition, providers of long-term care services have a responsibility to have systems in place with established policies and procedures that protect the health and safety of workers in their workplace as per the *Occupational Health and Safety Act*,[4] including the following:

- The employer shall take every precaution reasonable in the circumstances for the protection of a worker.
- A joint health and safety committee is required at a workplace at which twenty or more workers are regularly employed. This committee must have a central role along with the employer in addressing the measures and procedures needed to protect workers, e.g., having the power to identify situations that may be a source of danger or hazard to workers; making recommendations to the employer and the workers for the improvement of health and safety of workers; recommending to the employer and the workers the establishment, maintenance and monitoring of programs, measures and procedures respecting the health and safety of workers.
- Workers are provided with information and instruction on the hazardous materials (e.g., a biological agent) that they are or likely to be exposed to.

Furthermore, a variety of requirements in the *Health Care and Residential Facilities*[5] regulation under the *Occupational Health and Safety Act*[4] are relevant to IPAC in the long-term care setting. For example:

- Requirements for an employer to establish written measures and procedures for the health and safety of workers, in consultation with the joint health and safety committee or health and safety representative, if any. Such measures and procedures may include, but are not limited to, the following:
    - safe work practices
    - safe working conditions
    - proper hygiene practices and the use of hygiene facilities
    - the control of infections
    - immunization and inoculation against infectious diseases.

- The requirement that at least once a year the measures and procedures for the health and safety of workers shall be reviewed and revised in the light of current knowledge and practice.
- A requirement that the employer, in consultation with the joint health and safety committee or health and safety representative, if any, shall develop, establish and provide training and educational programs in health and safety measures and procedures for workers that are relevant to the workers' work.
- A worker who is required by his or her employer or by the Regulation for Health Care and Residential Facilities to wear or use any protective clothing, equipment or device shall be instructed and trained in its care, use and limitations before wearing or using it for the first time and at regular intervals thereafter and the worker shall participate in such instruction and training.
- The employer is reminded of the need to be able to demonstrate training, and is therefore encouraged to document the workers trained, the dates training was conducted, and the information and materials covered during training.
- Under the *Occupational Health and Safety Act*,[4] a worker must work in compliance with the Act and its regulations, and use or wear any equipment, protective devices or clothing required by the employer.
- The *Needle Safety* regulation[6] (O.Reg 474/07) has requirements related to the use of hollow-bore needles that are safety-engineered needles.

Other statutory requirements LTCHs must meet include:

- *Health Protection and Promotion Act*,[7] RSO 1990, c H.7 concerning duty to report diseases of public health significance.
- *Food Premises*,[8] RRO 1992, Reg 562 for safe food handling.
- *Environmental Protection Act*,[9] RSO 1990, c E.19 for safe disposal of clinical waste.
- General,[3] O Reg 63/09 under Pesticides Act, RSO 1990, c P.11 for pest control.
- *Transportation of Dangerous goods Act, 1992*,[10] SC 1992, c 34 and *Dangerous Goods Transportation Act*,[11] RSO 1990, c D.1 when transporting soiled equipment or devices (for LTCHs that transport loaned, shared and leased medical equipment or devices.)

Best Practices for Long-Term Care Settings Supported by Relevant Legislations

1.1 Employers shall uphold WHMIS standards in their workplace.[12]

1.2 Employers shall ensure that the long-term care setting is a safe work environment that protects residents and staff and in accordance with federal and provincial legislation.[12]

2. IPAC Program

The goals of an IPAC program are:

- To protect residents from health care-associated infections, resulting in improved survival rates, reduced morbidity associated with infections.
- To prevent the spread of infections amongst residents, health care providers, visitors and others in the health care environment.

To achieve these goals in a cost-effective manner, an active, effective, organization-wide IPAC program must be developed and its implementation must be continuously supported by senior administration. The IPAC program must clearly be the responsibility of at least one designated person. In LTCHs, this person may also have other responsibilities. Regardless of the size of the facility, the expected number of hours per week that are devoted to IPAC must be clearly stated in the institutional policy and implemented.

In addition, LTCHs should have access to a certified IPAC professional (ICP) or trained individuals to support the implementation of the IPAC program and resources that are proportional to the size, case mix and estimated risk of the populations served by the health care setting. Minimum recommendations for staffing should not be based exclusively on bed numbers. The ratio of ICPs will vary according to the acuity and activity of the health care setting and the volume and complexity of the ICP's work, taking into account the expanded role of the IPAC program to deal with issues regarding bioterrorism, surge capacity, increases in antibiotic-resistant organisms, acute respiratory infection surveillance, resident safety issues, facility design and construction input, IPAC education, reprocessing of equipment, etc.

For details on IPAC programs and qualifications of an ICP, see PIDAC's *Best Practices for Infection Prevention and Control Programs in Ontario in All Health Care Settings*.[13]

Best Practices for IPAC Programs

2.1 All LTCHs in Ontario shall develop, provide and evaluate an active, effective IPAC program that meets the mandate and goal to decrease the risk of health care-associated infections and improve health care safety.[13]

2.2 Continuing support for the IPAC program must be an organizational priority.[13]

2.3 LTCHs must evaluate their IPAC needs and then implement an IPAC program suited to those needs.[13]

2.4 At the minimum, the IPAC program must be evaluated annually to reassess the LTCH's needs and to determine which elements are required to continue to meet the goals of the program for that home.[13]

2.5 Senior administration and the IPAC committee must support the implementation and execution of the IPAC program by staff responsible for IPAC.[13]

2.6 LTCHs must have trained ICPs and resources to implement the IPAC program that are proportional to the size, complexity, case mix and estimated risk of the population served by the LTCH.[13]

2.7 LTCHs must have access to an accredited microbiology laboratory that can alert the IPAC program to microorganisms of importance and provide assistance to the program with surveillance information in a timely fashion.[13]

2.8 LTCHs must support the IPAC program with an annual budget for the maintenance of current educational resource.[13]

2.9 The IPAC component of the occupational health and safety (OHS) program must be developed jointly by OHS and the ICP.[13]

3. Staff Education and Training

The goal of a quality IPAC education and training program is to develop a culture wherein all health care providers follow the recommended policies and "best practices" at all times and take pride in practising good IPAC as part of their daily routine.[14] LTCHs must provide regular education and support to help staff (including agency and temporary staff) consistently implement appropriate IPAC practices.[2,14]

For more information on IPAC education and training for staff, see PIDAC's:

- *Best Practices for Infection Prevention and Control Programs in Ontario in All Health Care Settings*.[13]
- *Routine Practices and Additional Precautions in All Health Care Settings*.[15]

For additional resources and learning materials available for LTCHs, see PHO's:

- *Infection Prevention and Control Fundamentals*[16]

Best Practices for Staff Education and Training

3.1 Education in IPAC must span the entire health care setting and be directed to all who work in that setting.[13]

3.2 Orientation programs for staff new to the LTCH must include an IPAC component.[13]

3.3 LTCHs should have appropriate policies and procedures that ensure:[13]

- mandatory attendance at, or completion of, periodic IPAC training/education for all employees; and
- attendance recorded and reported back to the manager to become a part of the individual's performance review.

3.4 Continuing education must address the IPAC needs of the organization with regard to content, target audience and timing of the education (e.g., scheduled continuing education, special education based on specific needs such as outbreaks).[13]

3.5 There must be evaluation of the IPAC education program to ensure that it is current, relevant and effective.[13]

3.6 The resources required to carry out the IPAC education program must be allocated to achieve the educational goals of the program.[13]

3.7 Adherence to IPAC practices should be part of the performance review.[13]

4. Routine Practices

Routine Practices is the term used to describe the standards one must use in the care of all residents all of the time regardless of their clinical or infectious status. Adherence to Routine Practices protects not only the health care provider but also staff and residents who may subsequently be in contact with that health care provider. The importance of strict adherence to Routine Practices is higher in LTCH than in many other health care settings due to the infection risks associated with congregate living, rapid staff turnover, substantial involvement of caregivers beyond regulated health professionals, immunocompromised status amongst many residents, and frequent use of invasive devices.[17] Also, the consistent and appropriate use of Routine Practices by all health care providers with all resident encounters will lessen microbial transmission in the LTC setting and reduce the need for Additional Precautions.

The first step in the effective use of Routine Practices is to perform a point-of-care risk assessment, whereby the health care provider assesses a resident's clinical presentation, and the risk of exposure to blood, body fluids, secretions, excretions, and non-intact skin. From that assessment, the health care provider identifies strategies that will decrease exposure risk and prevent the transmission of microorganisms.

One important element of Routine Practices is hand hygiene, which is the most effective infection control measure to prevent the spread of health care-associated infections. Alcohol-based hand rub is the preferred method for decontaminating hands when hands are not visibly soiled. Non-alcohol-based waterless antiseptic agents are not recommended for hand hygiene in health care settings. Note that hand washing sinks are not to be used for any purpose other than hand washing, and health care providers should not perform hand hygiene in a resident's sink.

Gloves reduce but do not eliminate the risk of hand contamination, and hands are frequently contaminated during the process of glove removal. Hand hygiene should be performed immediately prior to donning gloves and immediately after removal of gloves.

Another important element of Routine Practices is the use of personal protective equipment (PPE):

- Gloves are worn when it is anticipated that the hands will be in contact with mucous membranes, non-intact skin, tissue, blood, body fluids, secretions, excretions, or equipment and environmental surfaces contaminated with the above.
- A gown is worn when it is anticipated that a procedure or care activity is likely to generate splashes or sprays of blood, body fluids, secretions, or excretions.
- A mask is used in addition to eye protection to protect the mucous membranes of the nose and mouth when it is anticipated that a procedure or care activity is likely to generate splashes or sprays of blood, body fluids, secretions or excretions or within two metres of a coughing resident.

- An N95 respirator is used to prevent inhalation of small particles that may contain certain infectious agents known to be transmitted via the airborne route (e.g., pulmonary tuberculosis), or when aerosol-generating medical procedures are being done on residents presenting symptoms of or confirmed to have respiratory infections (see 5. Additional Precautions).

PPE should be carefully removed immediately and disposed of in the appropriate receptacle when the interaction for which the PPE was used has ended. This will prevent contaminating one's clothing and the environment by used PPE. Proper use of PPE will not only prevent transmission of infectious agents from residents to staff, but transmission from resident to resident, staff to resident, and staff to staff.

A hierarchy of controls should be put in place to prevent the transmission of infections amongst residents and staff:

- Engineering controls: these are physical or mechanical measures put in place to reduce the risk of infection to staff or residents. Examples include heating, ventilation and air conditioning systems; room design; physical barriers; placement of hand washing sinks; point-of-care sharps containers and alcohol-based hand rub dispensers. **Engineering controls are the preferred controls** as they are built into the facility infrastructure and do not depend on correct implementation by individual health care providers.[15,18]

- Administrative controls: these are policies, procedures and care practices put in place to protect staff and residents from infection during the provision of care. Examples include IPAC policies and procedures; education and training; immunization programs; respiratory etiquette; resident placement; cleaning of medical equipment and the environment; practice audits; sufficient staffing levels. **Effectiveness of administrative controls relies on the commitment by the LTCH to provide the resources required** for optimal implementation of these controls.[15,18] (see 7. Control of the Environment; 9. Reprocessing Medical Equipment; 10. Administrative Controls)

- PPE: these are pieces of equipment worn by staff to protect against exposure to infectious diseases or chemical agents and are selected based on a point-of-care risk assessment. Examples include masks, eye protection (goggles, face shields), gowns and gloves. They need to be readily accessible at point of care and in multiple sizes for correct fit. Appropriate use of PPE provides a physical barrier between a susceptible person and an infective source. In health care settings, appropriate selection and use of PPE remains an important control measure. However, as the effectiveness of this tier of control depends on individuals' awareness of and adherence to proper use techniques, it is the last and weakest level in the hierarchy of controls and should not be relied on as a primary prevention measure independent of engineering and administrative controls.[15,18]

For details on Routine Practices, including point-of-care risk assessment and hand hygiene, see PIDAC's:

- Routine Practices and Additional Precautions for All Health Care Settings.[15]

- Annex A—Screening, Testing and Surveillance for Antibiotic-Resistant Organisms (AROs).[19]

- Best Practices for Hand Hygiene in All Health Care Settings.[20]

Best Practices for Routine Practices Overall

4.1 Provide instruction to visitors regarding specific facility control measures before they visit a resident, to ensure compliance with established practices.[15]

4.2 Perform a point-of-care risk assessment before each interaction with a resident or his/her environment in order to determine which interventions are required to prevent transmission during the planned interaction.[15]

Best Practices for Hand Hygiene

4.3 Develop and implement a multidisciplinary, multifaceted hand hygiene program, including hand hygiene agents that are available at point-of-care. In LTCHs the hand hygiene program must also include:[20]

a. Senior and middle management support and commitment to make hand hygiene an organizational priority.

b. Environmental changes and system supports, including alcohol-based hand rub at the point-of-care and a hand care program.

c. Education for health care providers about when and how to clean their hands.

d. Ongoing monitoring and observation of hand hygiene practices, with feedback to health care providers.

e. Resident engagement.

f. Opinion leaders and champions modelling the right behaviour.

4.4 Each LTCH must have written hand hygiene policies and procedures.[20]

4.5 The four moments for hand hygiene in health care are:[20]

a. before initial contact with each resident or items in their environment

b. before performing an invasive/aseptic procedure

c. after care involving risk of exposure to, or contact with, body fluids

d. after contact with a resident or their environment.

4.6 Provide hand hygiene facilities for residents and visitors. Encourage and assist residents to perform hand hygiene upon arrival, before eating and before leaving their room or clinic area.[20]

4.7 Health care providers should strive to maintain hand skin integrity to enable effective hand hygiene.[20]

4.8 Implement a hand care program that includes hand assessment, staff education and staff input into product selection.[20]

4.9 Use 70 to 90% alcohol-based hand rub for hand hygiene in LTC settings.[20]

4.10 Wash hands with soap and water if there is visible soiling with dirt, blood, body fluids or other body substances. If hands are visibly soiled and running water is not available, use moistened towelettes to remove the visible soil, followed by alcohol-based hand rub.[20]

4.11 Do not use bar soap for hand hygiene in any LTCHs except for individual resident use.[20]

4.12 Do not use alcohol-free, waterless antiseptic agents as hand hygiene agents.[20]

4.13 Consider user acceptability as a factor in hand hygiene product selection.[20]

4.14 Choose hand hygiene and hand care products with low irritant potential.[20]

4.15 Hand hygiene products must not interfere with glove integrity or with the action of other hand hygiene or hand care products.[20]

4.16 When using an alcohol-based hand rub, apply sufficient product such that it will remain in contact with the hands for a minimum of 15 seconds before the product becomes dry (usually one to two pumps).[20]

4.17 When using soap and water, lather hands for a minimum of 15 seconds before rinsing.[20]

4.18 Dry hands using a method that does not re-contaminate the hands.[20]

4.19 Dry hands completely before putting on gloves.[20]

4.20 Do not use alcohol-based hand rub immediately after washing hands with soap and water.[20]

4.21 To enable effective hand hygiene:[20]

a. Nails must be kept clean and short.

b. Nail polish, if worn, must be fresh and free of cracks or chips.

c. Artificial nails or nail enhancements must not be worn.

d. It is preferred that rings not be worn.

e. Hand and arm jewellery, including watches, must be removed or pushed up above the wrist by staff caring for residents before performing hand hygiene.

4.22 Before installing hand washing sinks and dispensers, prepare a workflow pattern and risk assessment to facilitate the decision about where to place sinks and products.[20]

4.23 Hand washing sinks shall be hands-free, free-standing and used only for hand washing.[20]

4.24 There should be sufficient hand washing sinks such that staff do not need to walk more than six metres/20 feet to reach the sink.[20]

4.25 Disposable paper towels shall be used for drying hands in clinical areas.[20]

4.26 Towel dispenser design shall be such that only the towel is touched during removal of towel for use.[20]

4.27 Where hot-air dryers are used in non-clinical areas, hands-free taps are required.[20]

4.28 There shall be a contingency plan to deal with power interruptions and temperature regulation when hot-air dryers or sink controls based on electric-eye technology are used.[20]

4.29 Locate alcohol-based hand rub dispensers at point-of-care and at the entrance to other locations where activities occur, unless contraindicated by the risk assessment or guidelines from the Ontario Fire Marshall's Office.[20]

4.30 Provide staff with hand moisturizing skin-care products (and encourage regular frequent use) to minimize the occurrence of irritant contact dermatitis associated with hand hygiene.[20]

4.31 Dispense all hand hygiene and hand care products from a disposable dispenser that delivers an appropriate volume of the product.[20]

4.32 Use single-use product dispensers that are discarded when empty. Do not "top-up" or refill containers. Clearly define responsibility for maintaining product dispensers.[20]

4.33 Refer individuals to OHS if skin integrity is an issue.[20]

4.34 Educate health care providers about:[20]

- indications for hand hygiene
- factors that influence hand hygiene
- hand hygiene agents
- hand hygiene techniques
- hand care to promote skin integrity

4.35 Encourage partnerships between residents, their families and health care providers to promote hand hygiene in health care.[20]

Best Practices for PPE in General

4.36 Choose PPE based on the risk assessment.[15]

4.37 Provide sufficient supplies of easily accessible PPE.[15]

4.38 Implement a process for evaluating PPE to ensure it meets quality standards where applicable, including a respiratory protection program compliant with the Ministry of Labour, Training and Skills Development requirements when respirators are used in the facility.[15]

4.39 Provide education in the proper use of PPE to all health care providers and other staff who have the potential to be exposed to blood and body fluids.[15]

Best Practices for Gloves

4.40 Wear gloves when it is anticipated that the hands will be in contact with mucous membranes, non-intact skin, tissue, blood, body fluids, secretions, excretions, or equipment and environmental surfaces contaminated with the above.[15]

4.41 Do not wear gloves for routine health care activities in which contact is limited to the intact skin of the resident.[15]

4.42 Select gloves that fit well and are of sufficient durability for the task.[15]

4.43 Put on gloves just before the task or procedure that requires them.[15]

4.44 Perform hand hygiene before putting on gloves for aseptic procedures.[15]

4.45 Change or remove gloves if moving from a contaminated body site to a clean body site within the same resident.[20]

4.46 Do not use the same pair of gloves for the care of more than one resident.[20]

4.47 Remove gloves immediately after completion of the task that requires gloves, before touching clean environmental surfaces.[15]

4.48 Clean hands immediately after removing gloves.[15]

4.49 Do not re-use or wash single-use disposable gloves.[15]

Best Practices for Gowns

4.50 Wear a gown when it is anticipated that a procedure or care activity is likely to generate splashes or sprays of blood, body fluids, secretions, or excretions.[15]

4.51 Remove gown immediately after the task for which it has been used in a manner that prevents contamination of clothing or skin and prevents agitation of the gown.[15]

Best Practices for Masks

4.52 Wear a mask and eye protection to protect the mucous membranes of the eyes, nose and mouth when it is anticipated that a procedure or care activity is likely to generate splashes or sprays of blood, body fluids, secretions or excretions.[15]

Best Practices for Transfer and Resident Placement

4.53 Choose resident accommodation based on the risk assessment.[15]

4.54 Single rooms, with dedicated bathroom and sink, are preferred for placement of all residents.[15]

4.55 Provide clear protocols for determining options for resident placement and room sharing based on a risk assessment if single rooms are limited.[15]

4.56 Place residents who visibly soil the environment or for whom appropriate hygiene cannot be maintained in single rooms with dedicated toileting facilities.[15]

5. Additional Precautions

Additional Precautions refer to IPAC interventions (e.g., PPE, accommodation, additional environmental cleaning) to be used in addition to Routine Practices when Routine Practices alone may not be sufficient for preventing transmission of an infectious agent.[18] There are three categories of Additional Precautions based on the mode of transmission:[15]

- Contact Precautions for interrupting transmissions via the direct or indirect contact route.
- Droplet Precautions for interrupting transmissions via the droplet route.
- Airborne Precautions for interrupting transmissions via the airborne route.

Note that N95 respirators should also be worn by health care providers within two metres of aerosol-generating medical procedures that have been shown to expose staff to undiagnosed tuberculosis or coronavirus disease 2019 (COVID-19). The meaning of "aerosol generating" medical procedures has been subject to misinterpretation. For more information on what procedures are considered aerosol-generating or not, see PHO's:

- *IPAC Recommendations for Use of Personal Protective Equipment for Care of Individuals With Suspect or Confirmed COVID-19*.[21]
- *Focus on: Aerosol Generation From Coughs and Sneezes*.[22]

When a resident is placed on Additional Precautions, a spatial separation of at least two metres from other residents sharing the room should be kept if a single room is not available. Staff must remove and discard their PPE on leaving a resident's room or bed space, and fresh PPE must be worn when re-entering the room. Health care equipment must be dedicated to the resident whenever possible, or cleaned between use on other residents. In addition, it is essential that the status of Additional Precautions is communicated when the resident goes to another department, health care settings or facilities.

Note that cohorting is a way to help prevent the spread of infection within a facility when single rooms are not available or during outbreaks. In LTCHs, geographically relocating of residents for cohorting is often not appropriate because displacement of residents from their own rooms will often cause harm to the resident. Nonetheless, resident cohorting can still be accomplished by treating those who already share a room or who share a bathroom and who are infected or colonized with the same microorganism as a cohort. Staff members who look after one cohort of residents should not move from one cohort to another during a shift if possible. If staff must move between the cohorts, they should only go from the lowest risk cohort (those who are well and not exposed or who have resolved infection) to the highest risk cohorts (those who are infected or colonized, or exposed with negative or unknown infective status) if at all possible. Ideally, staff members should work with only one cohort during the course of an outbreak if possible.

Where more than one mode of transmission exists for a particular microorganism, the precautions used must take into consideration both modes. Decisions about the initiation of Additional Precautions need to take into consideration laboratory turnaround time for identifying an infectious agent, the likelihood of transmission (based, for instance, on the resident risk factors and the level of transmission that has occurred on the particular unit in the past), and the risk of illness in adjacent residents should transmission occur. Contact Precautions may be instituted before screening results are available for residents believed to be at particularly high risk of being colonized or infected with antibiotic-resistant organisms.

- For details on Additional Precautions in the long-term care setting, see PIDAC's *Routine Practices and Additional Precautions for All Health Care Settings*.[15]
- For more information on Additional Precautions for antibiotic-resistant organisms, see PIDAC's *Annex A—Screening, Testing and Surveillance for Antibiotic-Resistant Organisms (AROs)*.[19]

Best Practices for Additional Precautions—General

5.1 LTCHs should incorporate the elements of Additional Precautions into their health care practices.[15]

5.2 LTCHs should ensure appropriate policies and procedures are in place to require staff attendance at training/education in Additional Precautions, with attendance recorded and reported back to the manager to become a part of the employee's performance review.[15]

5.3 When single resident rooms are limited, determine the feasibility of cohorting residents who are infected or colonized with the same microorganism.[15]

5.4 Consider the use of geographic cohorting residents and staff to reduce transmission during outbreaks.[15]

5.5 When cohorting, apply Additional Precautions individually for each resident within the cohort. Do not wear the same gowns and gloves when going from resident to resident within the cohort and do not share resident care equipment.[15]

5.6 Provide PPE for visitors to residents on Additional Precautions if they will be in direct contact with residents or are providing direct care.[15]

5.7 Implement a policy authorizing any regulated health care professional to initiate the appropriate Additional Precautions at the onset of symptoms.[15]

5.8 Continue Additional Precautions until there is no longer a risk of transmission of the microorganism or illness.[15]

5.9 Implement a policy that permits discontinuation of Additional Precautions in consultation with the ICP or designate.[15]

5.10 Do not use Additional Precautions any longer than necessary. Ongoing assessment of the risk of transmission should be performed by ICPs.[15]

Best Practices for Contact Precautions

5.11 Place residents who require Contact Precautions as determined on a case-by-case basis using a risk assessment.[15]

5.12 For Contact Precautions wear gloves and a gown for activities that involve direct care. Remove gloves and gown, if worn, and perform hand hygiene immediately on leaving the room.[15]

5.13 Whenever possible, dedicate equipment and items to the resident on Contact Precautions.[15]

Best Practices for Droplet Precautions

5.14 Ensure residents who require Droplet Precautions remain in their room or bed space, if feasible.[15]

5.15 Wear a mask and eye protection within two metres of a resident on Droplet Precautions.[15]

5.16 Provide a mask to residents on Droplet Precautions for transport or ambulation outside of the room, if tolerated.[15]

Best Practices for Airborne Precautions

5.17 Move residents who require Airborne Precautions to an airborne infection isolation room (AIIR) as soon as possible. If an AIIR is not available, transfer the resident to a facility with appropriate accommodation as soon as medically feasible.[15]

5.18 Restrict resident on Airborne Precautions to his/her room with the door closed, unless he/she must leave the room for medically necessary procedures.[15]

5.19 Wear a fit-tested seal-checked N95 respirator when entering an AIIR.[15]

5.20 Do not enter the room of a resident with measles, varicella (chickenpox) or disseminated zoster (shingles) unless immune.[15]

5.21 Provide a mask to residents on Airborne Precautions during transport or activities outside their room, if tolerated.[15]

5.22 Wear an N95 respirator to prevent inhalation of small particles that may contain infectious agents transmitted via the airborne route.[15]

5.23 Wear an N95 respirator during transport of residents on Airborne Precautions.[15]

Best Practices for Combinations of Additional Precautions

5.24 LTCHs must ensure that all health care providers who provide care for a resident with symptoms of an acute respiratory infection are aware of the need to initiate and maintain Droplet and Contact Precautions.[22]

5.25 Each LTCH should have a policy authorizing any regulated health care professional to initiate the appropriate Additional Precautions at the onset of symptoms and maintain precautions until laboratory results are available to confirm or rule out the diagnosis.[22]

5.26 Residents with an acute respiratory infection who are not in single room accommodation should be managed in their bed space using Droplet and Contact Precautions with privacy curtains drawn.[22]

5.27 Once the need for Droplet and Contact Precautions has been established, any receiving unit/facility or diagnostic service must be informed.[22]

Best Practices for Additional Precautions for Antibiotic-Resistant Organisms

5.28 Residents should receive health care based on their overall care needs, despite colonization with antibiotic-resistant organisms.[19]

5.29 Each LTCH should have policies in place that identify residents who are at the highest risk for colonization with *Clostridioides difficile*, methicillin-resistant Staphylococcus *aureus* (MRSA), vancomycin-resistant enterococci (VRE) and carbapenemase-producing *Enterobacteriaceae* (CPE), so that they may be placed on Contact Precautions until the results of screening tests are available.[19]

6. Medications, Vaccines and Skin Antisepsis

General principles related to use and storage of medications include:

- Medications should only be stored in areas where access is secured and not accessible to non-authorized persons.
- Provide facilities for hand hygiene in the area where medications are prepared.
- Provide a puncture-resistant sharps container that is accessible at point-of-use.
- Store and prepare medications and supplies in a clean area on a clean surface.
- Date opened containers of sterile solutions and discard every 24 hours and/or according to manufacturer's instructions.
- Discard outdated medications. There should be a process in place to check expiry dates before use.

Note that the use of multidose vials increases the risk of transmission of bloodborne pathogens and bacterial contamination. Single-dose vials are ALWAYS preferred, and resident safety should be prioritized over cost when choosing between multidose and single-use medication vials. If multidose vials are selected for use, the following recommendations must be followed each time the multidose vial is used:[12]

- All needles are SINGLE USE ONLY.‡
- All syringes are SINGLE USE ONLY. ‡
- NEVER re-enter a vial with a used needle OR used syringe.
- Once medication is drawn up, the needle should be IMMEDIATELY withdrawn from the vial.

A needle should NEVER be left in a vial to be attached to a new syringe.

- Use multidose vial for a single patient whenever possible and mark the vial with the patient's identifying data.
- Mark the multidose vial with the date it was first used and ensure that it is discarded at the appropriate time.
- Adhere to aseptic technique when accessing multidose vials. Multidose vials should be accessed on a surface that is clean and where no dirty, used or potentially contaminated equipment is placed or stored. Scrub the access diaphragm of vials using friction and 70% alcohol. Allow to dry before inserting a new needle and new syringe into the vial.

- Discard the multidose vial immediately if sterility is questioned or compromised or if the vial is not marked with the patient's name and unique identifying data, and the original entry date.
- Review the product leaflet for recommended duration of use after entry of the multidose vial. Discard opened multidose vials according to the manufacturer's instructions or within 28 days, whichever is shorter*.

‡ When it is not feasible to use new needles and syringes for each injection to a single patient (e.g., when administration of incremental doses to a single patient from the same syringe is an integral part of the procedure), one should adhere to aseptic technique strictly when reusing the same syringe and needle for the same patient as part of a single procedure. The syringe should never be left unattended and that it be discarded immediately at the end of the procedure.

* Exceptions can be considered for multidose vials used for a single patient (e.g., allergy shots) if the manufacturer's instructions state that the vial can be used for longer than 28 days. All of the above steps must be followed and the vial must only be used for a single patient.

There have also been outbreaks reported relating to the reuse of lancing devices between residents. These devices (including the sharp instrument (lancet) that actually punctures the skin, lancet hubs and the pen-like device that houses the lancet) must never be shared, even with close family and friends. Also, whenever possible, blood monitoring devices such as glucose meters should not be shared. If they have to be shared, the device must be approved by Health Canada for multiuse and should be cleaned and disinfected after every use, according to the manufacturer's instructions. If the manufacturer does not specify how the device should be cleaned and disinfected between residents, or if the device is labelled for single resident use, then it must not be shared.

- For detail, see PIDAC's *Infection Prevention and Control for Clinical Office Practice*.[12]
- For more information about vaccine storage and handling, refer to the Ontario Ministry of Health and Long Term Care's (2012) *Vaccine Storage and Handling Guidelines*.[23]

Best Practices for Medications, Vaccines and Skin Antisepsis

6.1 A medication vial must never be re-entered nor medication removed from a vial with a syringe or needle that has been used for a resident.[12]

6.2 Syringes must not be reused.[12]

6.3 Single dose vials must not be reused and leftover contents of single dose vials must not be pooled.[12]

6.4 Syringes must not be pre-filled for later use.[12]

6.5 Opened multidose medication vials should be discarded according to the manufacturer's instructions or 28 days after opening, whichever is shorter.[12]

6.6 The vaccine manufacturer and the Ministry of Health instructions for vaccine storage and handling must be followed.[12]

7. Control of the Environment

Controlling the environment includes measures that are built into the infrastructure of the LTCH that have been shown to reduce the risk of infection to staff and residents. This includes administrative controls, such as:

- Appropriate accommodation and placement. Single rooms, with dedicated bathroom and sink, are preferred for placement of all residents. Where there are not sufficient single rooms for routine care, decisions must be made regarding room assignments and selection of roommates based on the route of transmission of the known or suspect infectious agent; residents' risk factors for transmission (e.g., hygiene, cognitive status); and other residents' risk factors for acquiring infections (e.g., compromised immunity).
- Resident care equipment that is in good repair (see 9. Reprocessing Medical Equipment).
- Effective cleaning practices for equipment and the environment (discussed below).

LTCHs should have policies that include the criteria to be used when choosing surfaces, finishes, furnishings and equipment for resident care areas. These policies should ensure that all surfaces, finishes, furnishings, and equipment meet IPAC requirements for cleaning and disinfection. The policies should establish a decision making process for the selection and approval of furnishings and equipment that includes the ICP, OHS, and environmental services. These policies should be applied universally regardless of whether the furnishings or equipment are purchased, loaned, borrowed or donated.

The approach to cleaning will vary depending upon the area to be cleaned. For nonclinical areas such as lobbies and administrative offices, a "hotel clean" is required. A more thorough form of cleaning, "health care clean", is required for clinical areas which are not limited to areas where residents receive care but also resident waiting areas, areas for storage of medical equipment and supplies, medication preparation areas, other areas involved in the provision of health care (e.g., nursing stations, procedure rooms, clinic and examination rooms, diagnostic and treatment areas), and washrooms. Environmental services and the ICP should conduct a risk assessment to designate those areas requiring a "health care clean" and the required frequency of cleaning.

For more information on control of the environment, see PIDAC's:

- *Best Practices for Environmental Cleaning for Prevention and Control of Infections in All Health Care Settings*.[24]
- *Routine Practices and Additional Precautions in All Health Care Settings*.[15]

Best Practices for Cleaning the Environment

7.1 Environmental cleaning in LTCHs must be performed on a routine and consistent basis to provide for a safe and sanitary environment.[24]

7.2 Sufficient resources must be devoted to environmental services to ensure effective cleaning at all times, including surge capacity for high-demand periods, e.g., outbreaks; high occupancy; or high turnover.[24]

7.3 LTCHs should design their environmental service organizational structure to ensure accountability at all levels and should have:[24]

a. A single individual with assigned accountability for the cleaning of the physical facility.

b. Supervisors with responsibility for ensuring adherence to occupational health and IPAC policies and protocols, including the correct use of PPE, maintaining a safe work environment, and ensuring adherence to cleaning schedules and protocols.

7.4 LTCHs must have written procedures for cleaning and disinfection of care areas and equipment that include:[24]

- defined responsibility for specific items and areas
- routine and discharge/transfer cleaning
- cleaning in construction/renovation areas
- cleaning and disinfecting areas under Additional Precautions
- outbreak management, and
- cleaning standards and frequency

7.5 If environmental services are contracted out, the OHS policies of the contracting services must be consistent with the facility's OHS policies.[24]

7.6 Dedicated environmental service workers are preferred.[24]

7.7 If other task is assigned to environmental service workers, LTCHs need to recalculate staffing level, and environmental service tasks must be made a priority.[24]

7.8 Levels of supervisory staff must be appropriate to the number of staff involved in cleaning and sufficient to ensure that:[24]

a. All staff are appropriately trained.

b. A safe workplace is maintained at all times, and OHS and IPAC procedures are routinely followed, including the correct use of PPE.

7.9 Each LTCH should have written policies and procedures for the appropriate cleaning of noncritical medical equipment that clearly defines the frequency and level of cleaning, and which assigns responsibility for the cleaning.[24]

7.10 All aspects of environmental cleaning must be performed by knowledgeable, trained staff.[24]

7.11 Environmental service managers and supervisors must receive training.[24]

7.12 Environmental service supervisors should be certified.[24]

7.13 Noncritical medical equipment requires cleaning and disinfection after each use.[24]

7.14 Noncritical medical equipment used in LTCHs, including purchased, borrowed or donated equipment and equipment used for research purposes, shall be able to be cleaned and disinfected with a hospital disinfectant.

7.15 LTCHs must have item-specific instructions from manufacturers for cleaning and disinfecting all noncritical medical equipment, including purchased, borrowed or donated equipment and equipment used for research purposes.

7.16 Reusable equipment used for cleaning must itself be cleaned and disinfected with a hospital disinfectant.

7.17 Cleaning and disinfecting products:[24]

a. Must be approved by environmental services, the ICP, and OHS.

b. Disinfectants must have a drug identification number (DIN) from Health Canada.

c. Should be compatible with surfaces, finishes, furnishings, items and equipment to be cleaned and disinfected.

d. Must be used according to the manufacturer's recommendations.

7.18 Disinfectants chosen for use in LTCHs:[24]

a. Must be active against the microorganisms encountered in the LTCH.

b. Should require little or no mixing or diluting, i.e., be dispensed through an appropriate effective proportioner.

c. Should be active at room temperature with a short contact time.

d. Should have low irritancy and allergenic characteristics.

e. Should be safe for the environment.

7.19 LTCHs should select a limited number of hospital disinfectants to minimize training requirements and the risk of error.[24]

7.20 Hospital disinfectants used on noncritical equipment and surfaces:[24]

a. Must only be applied after visible soil and other impediments to disinfection have been removed.

b. Must follow the manufacturer's instructions for dilution and contact time.

7.21 Cloths must not be repeatedly immersed into disinfectant (i.e., no "double-dipping" of cloths.)[24]

7.22 Aerosol or trigger sprays for cleaning chemicals must not be used.[24]

7.23 Cleaning carts must have a clear separation between clean and soiled items.[24]

7.24 Cleaning carts must never contain personal belonging, food or beverages.[24]

7.25 Selection of environmental cleaning equipment must follow ergonomic principles.[24]

7.26 Environmental service workers must follow best practices for hand hygiene.[24]

7.27 Gloves must be removed and hand hygiene performed on moving from one resident environment to another, or between the resident and the health care environment.[24]

7.28 Environmental service workers must adhere to Routine Practices and Additional Precautions when cleaning.[24]

7.29 PPE:[24]

a. Shall be sufficient and accessible for all environmental service workers.

b. Shall be worn as required by Routine Practices, Additional Precautions, and by safety data sheets when handling chemicals.

c. Must be removed immediately after the task for which it is worn.

7.30 There must be a process in place to measure the quality of cleaning in the LTCH.[24]

7.31 LTCHs shall have written policies and procedures dealing with spills of blood and other body fluids.[24]

7.32 Cleaning schedules must be developed based on an assessment of the risk of contaminated surfaces resulting in infection in residents and staff.[24]

7.33 Electronic equipment used in care areas must be cleaned and disinfected with the same frequency as non-electronic equipment.[24]

7.34 All equipment must be cleaned and disinfected between residents, including transport equipment.[24]

7.35 LTCHs must have policies and procedures for the routine and discharge/transfer cleaning of rooms on Contact and Contact and Droplet Precautions, with specification of required cleaning and disinfection procedures for *C. difficile*, norovirus, VRE and CPE.[24]

Best Practices for Facility Design and Renovations

7.36 Surfaces, finishes, furnishings, and equipment in LTCHs shall be cleanable with hospital cleaners, detergents and disinfectants (except where the furniture is supplied by the resident); and must be smooth, nonporous, and seamless.[24]

7.37 Environmental services, the ICP, and OHS must be involved in the selection of surfaces, finishes, furnishings and equipment in the LTC settings, and LTCHs should have policies that specify the criteria to be used.[24]

7.38 Surfaces that support or promote microbial growth must not be used in the LTCH.[24]

7.39 Cracked or torn furnishings must be removed from care areas until either repaired so that they can be effectively cleaned, or replaced.[24]

7.40 Cloth furnishings and upholstered furniture shall not be used in care areas housing immunocompromised residents and must not be used in other care areas.[24]

7.41 Privacy curtains must be removed, and replaced or cleaned and disinfected immediately if they become contaminated with blood or body fluids, or are visibly soiled.[24]

7.42 Privacy curtains should be changed after all discharges.[24]

7.43 Privacy curtains used for residents requiring Additional Precautions must be removed, and replaced or cleaned and disinfected following discharge or transfer of the resident and before a new resident is admitted to that room or bed space.[24]

7.44 Carpeting must not be used in any care area within LTCHs.[24]

7.45 Plastic coverings used to cover equipment must be:[24]

a. Cleaned and disinfected (or discarded) between resident (for resident care equipment) or on a regular basis (for nonresident care equipment within the care environment.)

b. Replaced if damaged.

7.46 Electronic equipment that cannot be cleaned and disinfected must not be purchased, installed or used in LTCHs.[24]

8. Surveillance

Surveillance is the systematic, ongoing collection, collation and analysis of data with timely dissemination of information to those who require this information in order to take action. There are two types of IPAC surveillance: process and outcome; both measures will reflect the efficacy of the IPAC program in protecting the resident, health care provider and visitor from health care-associated infections while decreasing costs from infections. The type and method of surveillance should be based on the types of infection most important to the long-term care setting and to the care or services provided and the resident population served. Surveillance for some processes and outcomes is appropriately monitored on a continual basis; others may be monitored periodically.

For details on how to conduct routine surveillance in long-term care homes during non-outbreak times, see:

- PIDAC's *Best Practices for Surveillance of Health Care-Associated Infections in Patient and Resident Populations*.[25]
- PIDAC's *Best Practices for Infection Prevention and Control Programs in Ontario*.[13]

Surveillance case definitions for urinary tract infection; skin, soft tissue, and mucosal infections have been updated since the release of the PIDAC best practice document on surveillance. Please refer to Happe et al.'s Surveillance Definitions of Infections in Canadian Long Term Care Facilities[26] for the updated surveillance case definitions. Use of these surveillance case definitions is encouraged by IPAC Canada to ensure consistency of case identification and to allow for comparison against other LTCHs across Canada.[27] For respiratory infections and gastroenteritis, LTCHs are required to apply provincial case definitions in surveillance for outbreaks.[3,28,29]

For details on surveillance for antibiotic-resistant organisms and *Clostridioides difficile*, see PIDAC's:

- *Annex A—Screening, Testing and Surveillance for Antibiotic-Resistant Organisms (AROs)*.[19]
- *Annex C – Testing, Surveillance and Management of Clostridium difficile*.[30]

For details on surveillance of specific infections among LTC staff, see:

- Ontario Hospital Association and Ontario Medical Association's Communicable Diseases Surveillance Protocols.[31]

Best Practices for Surveillance—General

8.1 LTCHs must monitor targeted IPAC processes with regular audits of practices.[13]

8.2 Routinely monitor hand hygiene compliance with the provision of timely feedback by using a reliable, validated observer audit tool and training process.[20]

a. Monitoring should assess compliance with each of the four moments to direct education and provide reliability.[20]

8.3 Results of process surveillance must be analyzed and reported back in a timely fashion; a plan for improvements, including organizational accountability, must be developed by the targeted area in conjunction with the ICP based on the results of surveillance.[13]

8.4 LTCHs must monitor targeted IPAC outcomes using surveillance for health care-associated infections in specific populations.[13]

8.5 LTCHs should ensure that a single individual is designated with the responsibility for reviewing the surveillance data and ensuring that the findings are shared with appropriate IPAC and health care providers (e.g., physicians who support the LTCH or who participate on the IPAC committee, directors of care, persons responsible for quality improvement indicators), as well as senior administration.

Best Practices for Surveillance Planning

8.6 As a first step in the planning of a surveillance system, LTCHs should assess the following to establish priorities:[25]

a. The types of residents served.

b. The key medical interventions and procedures the residents undergo.

c. The types of infections for which the residents are most at risk.

8.7 Daily surveillance of respiratory infections and gastroenteritis should be undertaken in all LTCHs.[25]

8.8 LTCHs should ensure they have the ability to identify cases of acute respiratory infection and to detect clusters or outbreaks of acute respiratory infections.[22]

8.9 All residents who present at a LTCH should be assessed for symptoms of acute respiratory infection using the Case Finding/Surveillance Algorithm for Acute Respiratory Infection.[22]

8.10 LTCHs should have established procedures for notifying their ICP regarding:[22]

a. any residents either admitted with, or who develop, acute respiratory infection so they can monitor the situation; and

b. any clusters of acute respiratory infection in either health care providers or residents.

8.11 LTCH administrators and attending physicians shall report to the local Medical Officer of Health when a resident has a new respiratory infection

AND

a recent travel history to a country with a Public Health Agency of Canada travel health notice for respiratory infection;

OR

contact with someone with an acute respiratory infection with or without a recent travel history to a country with a travel health notice for respiratory infection.

NOTE: It is not necessary to have laboratory confirmation before reporting.[22]

8.12 When selecting outcomes for surveillance in addition to the infections listed above, the following should be considered:[25]

- the frequency of the infection
- the impacts of the infection (including per cent case fatality and excess costs associated with the infection)
- the preventability of the infection.

8.13 The outcomes selected for surveillance should be re-evaluated at least annually.[25]

8.14 LTCHs should use standardized, validated definitions for health care-associated infections in long-term care.[25]

8.15 Steps should be taken in LTCHs to ensure that case definitions are consistently and accurately applied.[25]

Best Practice for Surveillance Data Collection

8.16 Active surveillance should be used in LTCHs because of the higher sensitivity associated with this approach to case finding.[25]

Best Practices for Surveillance Data Analysis

8.17 Rates of health care-associated infection for resident length of stay should be adjusted by using the number of resident days as the denominator, rather than number of admissions or number of beds.[25]

8.18 Rates of device-associated infection that are adjusted for duration of exposure to the device should be calculated.[25]

8.19 When collecting data for the denominator for device-associated infection rates, data should be collected on the length of time that each resident was exposed to a particular device, rather than the total number of days that all residents were exposed to the device.[25]

8.20 Electronic systems that store data and assist with the calculation of health care-associated infection rates should be used.[25]

Best Practices for Infection Rates Interpretation

8.21 A colleague knowledgeable in epidemiology and data analysis should review health care-associated infection rates and check their accuracy prior to any interpretation of the rate.[25]

8.22 The possibility that differences in rates of infection in your facility from previous surveillance periods may be the result of changes in institutional practices or surveillance practices should be explored.[25]

8.23 A set of peer LTCHs should be identified that use the same case definitions and similar case finding methods, to serve as a comparison group. When comparing health care-associated infection rates to those of other LTCHs, an ICP should consider the surveillance methods used by these facilities.[25]

8.24 In addition to benchmarking against other facilities, the LTCH should determine a target for themselves.

8.25 If the infection control team finds that an elevated health care-associated infection rate represents an increased risk of infection, they should use a conceptual framework (such as the Chain of Transmission model) to suggest explanations for these rates and areas where improvements to infection control practices could reduce the rates.[25]

Best Practices for Surveillance Information Communication

8.26 Communication of surveillance data should take place on an ongoing, systematic basis and be targeted to those with the ability to change infection control practice. All surveillance reports should be clear and easy to follow, including the use of visual aids including pie charts, bar charts and graphs.[25]

Best Practices for Surveillance System Evaluation

8.27 The surveillance process implemented in a LTCH (e.g., application of case definitions, case finding and communication methods) should be regularly reviewed and modifications made as needed. At least annually, the outcomes of surveillance systems (i.e., reductions to the risk of infection) should be reviewed and system objectives re-aligned as required.[25]

9. Reprocessing Medical Equipment

Medical equipment and devices must be in good working order and receive documented preventive maintenance as required. Any product used in the provision of care to residents must be capable of being cleaned, disinfected and/or sterilized according to the most current standards and guidelines from the Canadian Standards Association, the Public Health Agency of Canada/Health Canada as well as Ontario's best practices.

The level of reprocessing required for medical equipment/devices is determined by Spaulding's criteria:

- Noncritical equipment touches only intact skin and not mucous membranes, or does not directly touch the resident. At the minimum, noncritical equipment should be cleaned followed by low-level disinfection. Examples: ECG machines, ultrasound probes (peripheral), oximeters, stethoscopes, blood pressure cuffs, bedpans, mobility aids.

- Semicritical equipment comes in contact with non-intact skin or mucous membranes but does not penetrate them. At the minimum semicritical equipment should be cleaned followed by high-level disinfection. Sterilization is preferred. Example: vaginal specula.

- Critical equipment enters sterile body site, including the vascular system. Critical equipment should be cleaned followed by sterilization. Example: foot care equipment.*†

* While not all foot care equipment requires sterilization after use as the level of reprocessing required is determined by the intended use of the device and the potential risk of infection involved in their use, based on an understanding of how foot care equipment is used, the potential for inadvertent injury and blood exposure with many foot care procedures, and existing general guidance on reprocessing, PIDAC recommends that all multi-patient use foot care equipment used in health care settings for procedures that penetrate, or may penetrate the skin or be exposed to blood should be sterilized between uses, ideally by steam sterilization. The selective use of sterilization only if tissue penetration occurs is not a viable option as the instrument must be sterile prior to tissue penetration and it cannot be predicted in advance when this will occur. This recommendation is consistent with recommendations made by the Canadian Standards Association[32] and Health Canada[33] as well as the Centers for Disease Control and Prevention (CDC)[34]. For re-usable, noncritical foot care instruments such as percussion hammers, re-usable holders for caps or cones do not require sterilization but can be subject to cleaning and low-level disinfection.

† Noncritical foot care instruments that are owned by a resident, used only by that resident and not used for another purpose do not require disinfection between uses, provided that they are adequately cleaned and stored dry between uses. It is important that these instruments are not used for invasive or complicated foot care procedures but only for simple procedures such as clipping of nondiseased nails. In addition, these instruments must be labelled and stored in a safe place to avoid accidental use by others (i.e., avoid storage in communal bathrooms).

Reusable medical equipment must be cleanable and be able to be disinfected or sterilized as appropriate for the equipment. This may not be cost-effective or timely for small LTCHs, and other options should be considered. The amount and frequency of equipment use should guide whether reprocessing is feasible, contracting a third party reprocessor, or if purchasing disposable equipment is more cost-effective. For more information about reprocessing, see:

- PIDAC's Best Practices for Cleaning, Disinfection and Sterilization of Medical Equipment/Devices in All Health Care Settings.[35]
- PHO's Algorithm for Level of Reprocessing for Equipment and Instruments.[36]
- PHO's Reprocessing Steps.[37]
- PIDAC's Recommendations for Physical Space for Decontamination Areas.[38]
- PHO's Considerations for Purchasing a Table-top Steam Sterilizer.[39]
- PIDAC's Storage Areas for Sterile Items and Maintaining Sterility.[40]

Best Practices for Reprocessing Medical Equipment

9.1 LTCHs shall, as a minimum, have policies and procedures for all aspects of reprocessing that are based on current recognized standards/recommendations and that are reviewed at least annually.[35]

9.2 The reprocessing method, level and products required for medical equipment/devices shall reflect the intended use of the equipment/device and the potential risk of infection involved in the use of the equipment/device.[12]

9.3 Critical and semi-critical medical equipment/devices labelled as single-use must not be reprocessed and re-used unless the reprocessing is done by a licensed reprocessor.[12]

9.4 The sterilization process shall be tested, monitored with results recorded and audited.[12]

9.5 All sterilizers shall be tested for performance using physical, chemical and biological monitors and indicators.[12]

9.6 A procedure shall be established for the recall of improperly reprocessed medical equipment/devices.[12]

9.7 LTCHs shall have ventilation systems appropriate to the process/product being used, to protect staff from toxic vapours.[12]

9.8 When reprocessing medical equipment, requirements from the Canadian Standards Association shall be met.[12]

9.9 Use of chemical disinfectants shall comply with regulations under *the Occupational Health and Safety Act*.[12]

10. Administrative Controls

Administrative controls are measures that the LTCH puts into place to protect staff and residents from infection, and they cover areas such as healthy workplace policies, staff immunization, tuberculosis prevention, managing infections in health care providers, employee exposure and post-exposure management protocol, and respiratory etiquette.

For more information on administrative controls, see PIDAC's:

- *Routine Practices and Additional Precautions for All Health Care Settings*.[15]
- *Annex B—Best Practices for Prevention of Transmission of Acute Respiratory Infection*.[22]

Best Practices for Administrative Controls

10.1 Ensure that there is a clear expectation that staff do not come into work when ill with symptoms that are of an infectious origin, and this expectation is supported with appropriate attendance management policies.[15]

10.2 Health care providers who develop symptoms of an acute respiratory infection must report their condition to their OHS department or delegate.[22]

10.3 The ICP should alert OHS about any clusters of acute respiratory infections in residents so OHS can monitor health care providers. OHS should alert (non-nominally) the ICP of any clusters of acute respiratory infection among health care providers.[22]

10.4 Employers shall report any occupationally-acquired infection to the Joint Health and Safety Committee.[22]

10.5 If any worker acquires an occupational infection, or a claim in respect of an occupational infection has been filed with the Workplace Safety and Insurance Board, a notice in writing shall be made to the Ministry of Labour, Training and Skills Development.[13]

10.6 All health care providers must be evaluated by OHS for conditions relating to communicable diseases that can be spread in the LTC setting.[13]

10.7 Health care providers must be offered appropriate vaccinations to protect them from occupationally-relevant communicable diseases.[13]

10.8 Annual influenza vaccination should be a condition of continued employment in, or appointment to, LTCHs.[13]

10.9 Influenza immunization should be easily accessible and be promoted in the workplace.[22]

10.10 All LTCHs should have policies in place for health care providers consistent with the Ontario Hospital Association/Ontario Medical Association Joint Influenza Surveillance Protocol for Ontario Hospitals.[22]

10.11 Implement a program to deal with staff exposures, including exposure to blood and body fluids.[15]

10.12 Implement a program that promotes respiratory etiquette to staff, residents and visitors in LTCHs.[15]

11. Outbreak Management

Outbreaks are defined as health care-associated infections that represent an increase in incidence over expected rates. Early intervention to prevent outbreaks or limit the spread of infections once an outbreak has been identified will interrupt transmission, decrease the impact on residents' health and cost. Identification of the occurrence of outbreaks of infectious diseases may be accomplished by:

- Using baseline surveillance data on the incidence of health care-associated infections to identify increases.
- Applying outbreak surveillance case definitions to determine if criteria for an outbreak is met.
- Having health care providers report any clusters or potential outbreaks to the IPAC program immediately.
- Having ICPs review microbiology reports in a timely manner to identify unusual clusters or a greater-than-usual incidence of certain species or strains of microorganisms.

A multidisciplinary outbreak management team shall be convened in the event of an outbreak, and the team should have the authority to institute changes in practice or take other actions required to control the outbreak, e.g., closing the outbreak unit(s) to new admissions; cohorting residents and/or staff; modifying and/or putting on hold communal activities; increasing the frequency of cleaning.

LTCHs should also make sure their contracted laboratory services are able to perform or obtain appropriate testing and prompt reporting to support outbreak investigation.

All facilities should have appropriate resources and expertise to manage outbreaks, including obtaining additional support from public health units, linkages with other health care facilities, academic health sciences centres, PHO's Regional Infection Prevention and Control Support Team, etc.

For details on outbreak preparedness; detection; investigation; management; and control measures for residents, staff and volunteers, see:

- PIDAC's Best Practices for Infection Prevention and Control Programs in Ontario in All Health Care Settings.[13]
- PIDAC's Best Practices for Environmental Cleaning for Prevention and Control of Infections in All Health Care Settings.[24]
- PIDAC's Annex A—Screening, Testing and Surveillance for Antibiotic-Resistant Organisms (AROs).[19]
- PIDAC's Annex C – Testing, Surveillance and Management of Clostridium difficile.[30]

- Ministry of Health and Long-Term Care's Control of Respiratory Infection Outbreaks in Long-Term Care Homes, 2018.[28]
- Ministry of Health and Long-Term Care's Recommendations for the Control of Gastroenteritis Outbreaks in Long-Term Care Homes.[29]

Best Practices for Outbreak Management

11.1 All LTCHs must have the ability and the capacity to identify and manage clusters or outbreaks of infectious diseases.[13]

11.2 Outbreaks in LTCHs should be managed by a multidisciplinary team that includes the ICP and the local public health unit.[13]

11.3 The ICP should have the authority to implement outbreak management measures up to, and including, closure of the affected unit.[13]

11.4 There must be adequate numbers of staff with appropriate training to provide a clean and safe environment, including extra environmental cleaning capacity during outbbreaks.[13]

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