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Long-term care home operations and infection prevention and control

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Preface

This is the first edition of CSA Z8004, *Long-term care home operations and infection prevention and control.*

In response to the federal government's commitment in 2020 to improve the provision of long-term care (LTC) across Canada, the Standards Council of Canada (SCC), the Canadian Standards Association (CSA Group), and Health Standards Organization (HSO) agreed to develop two new complementary national standards for long-term care that would be shaped by the needs and voices of Canada's long-term care home (LTCH) residents, staff, and local communities, as well as broader members of the public. The national standard developed by CSA Group addresses the design, operation, and infection prevention and control (IPAC) practices in LTCHs, while the national standard developed by HSO addresses the delivery of safe, reliable, and high-quality long-term care services.

CSA Group acknowledges that the development of this Standard was made possible, in part, by the financial support of the Standards Council of Canada. The views expressed herein do not necessarily represent the views of the Standards Council of Canada.

This Standard was prepared by the Subcommittee on Long-Term Care Homes, under the jurisdiction of the Technical Committee on Health Care Facilities and the Strategic Steering Committee on Health and Well-Being, and has been formally approved by the Technical Committee.

This Standard has been developed in compliance with Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

Notes:

1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*
2) *Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.*
3) *This Standard was developed by consensus, which is defined by* CSA Policy governing standardization — Code of good practice for standardization *as "substantial agreement. Consensus implies much more than a simple majority, but not necessarily unanimity". It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this Standard.*
4) *To submit a request for interpretation of this Standard, please send the following information to inquiries@csagroup.org and include "Request for interpretation" in the subject line:*
   a) *define the problem, making reference to the specific clause, and, where appropriate, include an illustrative sketch;*
   b) *provide an explanation of circumstances surrounding the actual field condition; and*
   c) *where possible, phrase the request in such a way that a specific "yes" or "no" answer will address the issue.*

   Committee interpretations are processed in accordance with the CSA Directives and guidelines governing standardization *and are available on the* Current Standards Activities *page at standardsactivities.csa.ca.*
5) *This Standard is subject to review within five years from the date of publication. Suggestions for its improvement will be referred to the appropriate committee. To submit a proposal for change, please send the following information to inquiries@csagroup.org and include "Proposal for change" in the subject line:*
   a) *Standard designation (number);*
   b) *relevant clause, table, and/or figure number;*
   c) *wording of the proposed change; and*
   d) *rationale for the change.*

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CSA Z8004:22
Long-term care home operations and infection prevention and control

0 Introduction

0.1 General

This Standard provides requirements for the safe operation and IPAC of LTCHs. This Standard is intended for use by operational staff, operational management, infection control professionals (ICPs), directors of care, architects, designers, engineers, governmental and funding bodies, LTCH residents and their families, and essential family caregivers.

Engineers, architects, and designers will benefit from using this Standard alongside other detailed CSA Group Standards (see Clause 2).

LTCHs in Canada can be subject to local, provincial, or territorial building and fire safety regulations, or in the absence of such regulations the *National Building Code of Canada* and *National Fire Code of Canada*. LTCHs are encouraged to adopt the most up-to-date policies, procedures, and methodologies as directed by their authority having jurisdiction (AHJ).

0.2 Overview

LTC is a complex topic in Canada, receiving significant public attention. Significant gaps have been found in the quality and safety of care, and quality of life, for residents within LTCHs. LTC is not publicly insured under the *Canada Health Act* and is governed by provincial and territorial legislation, resulting in different jurisdictions offering a variable range of services and cost coverage for LTCHs across the country.

Residents of LTCHs are more vulnerable to infections and are at greater risk of experiencing severe symptoms, resulting in high rates of mortality due to congregate living circumstances. LTCH residents are more vulnerable due to being older and frailer than the general population, as well as being more prone to pre-existing medical conditions. They are also more susceptible to infection because of shared spaces (e.g., bedrooms) and supplies, transit of people within and between different HCFs, and visitation practices. Inadequate standards of practice can also contribute to transmission. As a result, staff at LTCHs are also at a higher risk of exposure. The purpose of this Standard is to provide guidance for operations, design, systems implementation, and policies and procedures for IPAC in LTCHs.

The Standard provides an overview of organizational commitments of LTCHs such as person-centred care, equity, diversity, inclusion, and sexual expression and intimacy of residents. The organizational commitments section (Clause 4) is meant to be applied in operations, IPAC, and design considerations in all LTCHs. The objective is to balance safety and the resident's right to live with dignity and risk. In addition, the safety, health, and wellness of staff is considered, while balancing the resident's right to dignity.

The Standard provides an overview of operations including but not limited to visitor policies, nutrition and food, waste management, and communications. Guidance is provided for a transdisciplinary assessment team (TDAT) and for quality improvement, including risk management and quality auditing.

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IPAC requirements are incorporated regarding program elements, hand hygiene, personal protective equipment, cleaning and disinfection, procurement, laundry, considerations for resident belongings, IPAC and design considerations for resident bedrooms and washrooms, and anti-microbial stewardship. LTCH system requirements such as plumbing and heating, ventilation and air conditioning, medical gas, and electrical and electronic building systems are provided. Security systems and access control requirements that contribute to the safety of residents are included. The IT section considers design and implementation, network equipment, RTLS, data systems, and data management.

The Standard considers the emergence of new technologies throughout the various clauses. Training and education of staff, residents, EFCs, and families is also an important topic in this Standard.

1 Scope

1.1 General

This Standard provides guidance on safe operating practices, design, and IPAC in LTCHs while incorporating a person-centred approach. The Standard takes into consideration what is required during both normal, day-to-day circumstances and catastrophic events (e.g., outbreaks, epidemics, pandemics, fires, earthquakes, loss of power). The Standard considers factors such as homes of different sizes, resident acuity and demographics, and new builds vs. existing LTCHs.

1.2 Exclusions

This Standard does not cover administrative topics such as pricing, insurance, or reimbursement. Content related to medical practice and professional obligations is not included in the Standard. The Standard does not address topics related to resident care and services (e.g., bathing frequency, feeding and assistive measures, quality indicators for care, dementia, age-friendly care).

1.3 Terminology

In this Standard, “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.

Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material.

Notes to tables and figures are considered part of the table or figure and may be written as requirements.

Annexes are designated normative (mandatory) or informative (non-mandatory) to define their application.

2 Reference publications

This Standard refers to the following publications, and where such reference is made, it shall be to the edition listed below, including all amendments published thereto.

Note: *Additional reference material is provided in Annex J.*

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CSA Group

B651:18
Accessible design for the built environment

C282:19
Emergency electrical power supply for buildings

EXP06-15 (R2018)
Evaluating emerging materials and technologies for infection prevention and control

Z32:21
Electrical safety and essential electrical systems in health care facilities

Z94.3:20
Eye and face protectors

Z94.4.1:21
Performance of filtering respirators

Z305.13:13 (R2020)
Plume scavenging in surgical, diagnostic, therapeutic, and aesthetic settings

Z316.6:20
Sharps injury protection - Requirements and test methods - Sharps containers (Adopted ISO 23907-2:2019, first edition, 2019-11, with Canadian deviations)

Z317.1:21
Special requirements for plumbing installations in health care facilities

Z317.2:19
Special requirements for heating, ventilation, and air-conditioning (HVAC) systems in health care facilities

Z317.5-17
Illumination systems in health care facilities

Z317.10:21
Handling of health care waste materials

Z317.12:20
Cleaning and disinfection of health care facilities

Z317.13:22
Infection control during construction, renovation, and maintenance of health care facilities

Z317.14-17
Wayfinding in health care facilities

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Z7396.1:22
Medical gas pipeline systems — Part 1: Pipelines for medical gases, medical vacuum, medical support gases, and anaesthetic scavenging systems

Z8000:18
Canadian health care facilities

Z8002:19
Operation and maintenance of health care facilities

Z8003:21
Health care facility design studies and post-occupancy evaluation

Z10535.1:15 (R2021)
Hoists for the transfer of disabled persons — Requirements and test methods

Z10535.2-17
Lifts for the transfer of persons — Installation, use, and maintenance

CAN/CSA-ISO 17664:21
Processing of healthcare products — Information to be provided by the medical device manufacturer for the processing of medical devices

CAN/CSA-Z94.4-18
Selection, use, and care of respirators

CAN/CSA-Z314-18
Canadian medical device reprocessing

CAN/CSA Z8001-13 (R2018)
Commissioning of health care facilities

CSA ISO/IEC 27000:19
Information technology — Security techniques — Information security management systems — Overview and vocabulary

ANSI (American National Standards Institute)

ANSI/IICRC S500-2021
Standard for Professional Water Damage Restoration

ANSI/ASHRAE 188-2018
Legionellosis: Risk Management for Building Water Systems

CARF (Commission on Accreditation of Rehabilitation Facilities International)

2021 Aging Services Standards Manual

Government of Canada

Air quality and health, 2022
https://www.canada.ca/en/health-canada/services/air-quality.html

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Indoor air quality resources for professionals, 2022
https://www.canada.ca/en/health-canada/services/air-quality/residential-indoor-air-quality-guidelines.html

HSO (Health Standards Organization)
CAN/HSO 21001:2022
Long-Term Care Services

IEEE (Institute of Electrical and Electronic Engineers)
IEEE 802.1 Series

IEEE Standard for Local Metropolitan Area Networks — Timing and Synchronization for Time-Sensitive Applications

802.3-2022
IEEE Standard for Ethernet

IPAC (Infection Prevention and Control Canada)
Infection Prevention and Control (IPAC) Program Standard, 2016
https://www.ipac-canada.org/photos/custom/pdf/IPAC_PROGRAM_STANDARD_2016.pdf

National Research Council Canada
National Building Code of Canada, 2020

National Fire Code of Canada, 2020

Provincial Infectious Diseases Advisory Committee
PIDAC: Annex C: Testing, Surveillance and Management of Clostridium difficile, 2013
https://www.publichealthontario.ca/-/media/Documents/C/2013/cdiff-testing-surveillance-management.pdf?sc_lang=en

Best practices for environmental cleaning for prevention and control of infections in all health care settings, 3rd Edition, April 2018
https://www.publichealthontario.ca/-/media/documents/B/2018/bp-environmental-cleaning.pdf

Public Health Agency of Canada (PHAC)
HAI Surveillance Case Definitions, 2020
https://ipac-canada.org/photos/custom/Members/CNISPpublications/CNISP_2021_HAI_Surveillance_Case_Definitions_EN.pdf

Hand hygiene practices in healthcare settings, 2012
https://publications.gc.ca/collections/collection_2012/aspc-phac/HP40-74-2012-eng.pdf

Infection prevention and control for COVID-19: Interim guidance for long-term care homes, 2021
https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/prevent-control-covid-19-long-term-care-homes.html

Routine practices and additional precautions for preventing the transmission of infection in healthcare Settings, 2016

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https://www.canada.ca/content/dam/phac-aspc/documents/services/publications/diseases-conditions/routine-practices-precautions-healthcare-associated-infections/routine-practices-precautions-healthcare-associated-infections-2016-FINAL-eng.pdf

Public Health Ontario
Antimicrobial Stewardship Essentials Checklist in Long-Term Care, 2018
https://www.publichealthontario.ca/-/media/documents/C/2018/checklist-antimicrobial-stewardship-ltc.pdf

Terrapin Bright Green, LLC
14 Patterns of Biophilic Design: Improving Health and Well-Being in the Built Environments, 2014
https://www.terrapinbrightgreen.com/report/14-patterns/

U.S. Environmental Protection Agency
US-EPA 2016 — Air Quality Index Scale and Color Legend
https://aqicn.org/scale/

U.S. Centers for Disease Control and Prevention
Personal Protective Equipment (PPE) Burn Rate Calculator, 2021
https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/burn-calculator.html

World Health Organization
WHO Guidelines on Hand Hygiene in Health Care, 2009
https://www.who.int/publications/i/item/9789241597906

3 Definitions and abbreviations

3.1 Definitions

The following definitions shall apply in this Standard:

Accessible — as applied to a site, building, or other facility, possessing the necessary characteristics for it to be entered, exited, and used by people, including those with physical, sensory, communication, or cognitive disabilities

Note: *An equivalent term, "barrier-free," has been used in previous editions of CSA healthcare facility standards. To maintain consistency with the terminology in CSA B651, future healthcare facility standards will use "accessible".*

Additional precautions — extra measures taken when routine practices alone might not be enough to interrupt transmission of an infectious agent. They are used in addition to routine practices and can be initiated both on condition/clinical presentation (syndrome) and on specific etiology (diagnosis).

AgeTech — technology-based solutions that improve the lives of older adults and their caregivers from software applications to hardware sensors, robots, and smart homes

Airborne isolation room — a room that is designed, constructed, and ventilated to limit the spread of airborne microorganisms from an infected occupant to the surrounding areas of the LTCH.

Notes:

1) *AIRs are designed for use when caring for residents requiring airborne precautions (e.g., patients with known or suspected tuberculosis, varicella-zoster, or measles).*
2) *AIRs are designed to maintain negative pressurization relative to adjacent areas.*

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Airborne isolation room anteroom — a small room or space at the entrance to an AIR that is separated by doors from both the outside and the main space in the AIR.

Note: *The AIR anteroom allows for storage and removal of PPE and provides an airlock between the adjacent space and the resident. The anteroom is designed to maintain negative pressurization relative to adjacent areas.*

Alcohol-based hand rub (ABHR) — a liquid, gel, or foam formulation of alcohol (e.g., ethanol, isopropanol) that is used to reduce the number of microorganisms on hands in clinical situations when the hands are not visibly soiled.

Audit — a systematic and independent examination to determine whether quality activities and related results comply with planned arrangements, are implemented effectively, and are suitable to achieve the objective.

Autonomy — a person's ability or state of being self-governing.

Note: *Autonomy is often mistakenly used as a synonym for functional independence, which refers to the ability of a person to perform activities of daily living with or without assistance.*

Authority having jurisdiction — a federal, provincial/territorial, or local/regional regulatory body responsible for enforcing the requirements of a specific codes or standards, or for approving equipment, materials, an installation, or a standard operating procedure (SOP) for personnel.

Biomedical waste — waste that requires special handling and disposal because it presents a risk of disease transmission.

Note: *Biohazard and biomedical waste are often used interchangeably.*

Catastrophic event — an incident that threatens life, property, operations, or the environment of the healthcare facility or LTCH.

Notes:

1) *Catastrophic events can be classified as follows:*
   a) *a pandemic, epidemic, or infectious disease outbreak, which include any highly contagious disease (e.g., pandemic influenza) being experienced within the LTCH or requiring the LTCH to provide treatment;*
   b) *internal catastrophic events, which include fires within the LTCH, hazardous spills (e.g., chemical, radiation, nuclear), power failure, contamination of ventilation air intakes, or major failure of heating, cooling sources, or power; and*
   c) *external catastrophic events, which can include earthquakes, floods, fires, chemical/biological/radiation/nuclear/explosion (CBRNE) events (including hazardous spills/release of contaminants), multi-casualty events, terrorist attacks, civil unrest, or unusual weather events (e.g., hurricane, tornado, ice, or other type of storm).*
2) *See CSA Z1600.*

Catastrophic event management — an ongoing process to prevent, mitigate, prepare for, respond to, and recover from catastrophic events.

Notes:

1) *The four pillars of an effective catastrophic event emergency management plan include planning, prevention/mitigation, response, and recovery (both within and beyond the institution).*
2) *This can also be referred to as emergency measures or emergency management, or disaster or crisis management.*

Cleaning — the physical removal of foreign material (e.g., dust, soil) and organic material (e.g., blood, secretions, excretions, microorganisms).

Notes:

1) *Cleaning physically removes rather than kills microorganisms. It is accomplished with water, detergents, and mechanical action.*

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2) *The terms "decontamination" and "sanitation" can be used for this process in certain settings (e.g., a medical device reprocessing department or dietetics).*
3) *Cleaning reduces or eliminates the reservoirs of potential pathogenic organisms. Cleaning agents are the most common chemicals used in environmental services (EVS) activity.*
4) *Organic material present on objects that are being disinfected can hinder the action of some disinfectants. Gross (visible) contamination on any surface needs to be removed (cleaned) even if using a one-step cleaning and disinfectant agent.*

Cleaning agent — a substance, or mixture of substances, that physically removes foreign material (e.g., dust, soil) and organic material (e.g., blood, secretions, excretions, microorganisms) from environmental surfaces and inanimate objects due to the detergent or enzymatic properties of the formulation.

Clostridioides difficile (C. difficile) — bacterium that causes mild to severe diarrhea and intestinal conditions like pseudomembranous colitis (inflammation of the colon).

Notes:

1) C. difficile *is the most frequent cause of infectious diarrhea in LTCHs in Canada as well as in other industrialized countries.*
2) *Most cases of* C. difficile *occur in residents who are taking certain antibiotics in high doses or over a prolonged period of time. Some antibiotics can destroy a person's normal bacteria found in the gut, causing* C. difficile *bacteria to grow. When this occurs, the* C. difficile *bacteria produce toxins, which can damage the bowel and cause diarrhea. However, some people can have* C. difficile *bacteria present in their bowel and not show symptoms.*
3) *See Government of Canada resources for more details: https://www.canada.ca/en/public-health/services/infectious-diseases/nosocomial-occupational-infections/clostridium-difficile-infection-prevention-control-guidance-management-long-term-care-facilities.html*

Contamination — the presence of an infectious agent on hands or on a surface such as clothes, gowns, gloves, bedding, resident care equipment, dressings, or other inanimate objects.

Crisis management — see **Catastrophic event management**.

Decontamination — the process of cleaning, by use of physical and chemical means, to remove, inactivate, or destroy pathogenic microorganisms and render an object safe for handling.

Detergent — a cleansing agent that can emulsify oil and suspend soil.

Notes:

1) *Detergents contain surfactants that do not precipitate in hard water. They can also contain enzymes or whitening agents.*
2) *Detergents used in health care can also be neutral or alkaline. See Cleaning agent.*
3) *Detergents do not have label claims for killing microorganisms and their use must be followed by application of a disinfectant to achieve cleaning and disinfection.*

Disability — any impairment, including a physical, mental, intellectual, cognitive, learning, communication, or sensory impairment, or a functional limitation whether permanent, temporary, or episodic in nature, or evident or not, that, in interaction with a barrier, hinders a person's full and equal participation in society.

Discharge cleaning — the thorough cleaning and disinfection of a resident room or bed space following the discharge, death, or transfer of the resident, in order to remove contaminating microorganisms that might be acquired by subsequent occupants and/or personnel.

Notes:

1) *In some instances, discharge cleaning and disinfection might be used when some types of additional precautions have been discontinued.*

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2) *This can also be known as "transfer cleaning" or "terminal cleaning". This is not an inclusive list of terms used in various jurisdictions.*

Disinfection — the inactivation of disease-producing microorganisms.

Notes:

1) *Cleaning occurs prior to disinfection. This can be achieved via using a one-step, ready-to-use cleaning/ disinfectant solution, or by following a two-step process using detergent and disinfectant solution.*
2) *Disinfection does not destroy bacterial spores.*

Disposal — the removal of waste, treated waste, or residue from a facility, offsite waste treatment facility, reuse facility, or transfer station to a final location.

Note: *Disposal includes placement in a landfill or discharge to a sanitary sewer.*

Equity, diversity, and inclusion (EDI) — embodies the range of experiences of all individuals regardless of their ethnicity, race, gender, sexual orientation, sexual expression, sexual orientation, sexual identity, ancestry, age, socio-economic status, where they live, gender identity, gender expression, abilities, health status, political beliefs, religious beliefs, or citizenship, including those who have experienced colonization.

Emergency management — see **Catastrophic event management**.

Environmental services (EVS) — the department primarily responsible for the development and implementation of the environmental cleaning and disinfection programs, policies, and standard operating procedures including but not limited to

a) environmental surfaces;
b) furniture;
c) mobile shared non-invasive equipment;
d) portable electronic devices;
e) waste management; and
f) the development and applications/inspections of its program operations.

Notes:

1) *In general, the HCF EVS department has this responsibility although other departments and services (e.g., nursing, physiotherapy, dental) are also accountable for following cleaning and disinfection standards.*
2) *"EVS" and "housekeeping services" are often used interchangeably.*

Essential family caregivers — a person or persons who provide care that is essential to maintaining resident mental and physical health. EFCs can regularly participate in and advocate for compassionate, palliative, cultural, spiritual, and hospice care, especially during times when regular health services might be limited. They can provide oversight for the resident's medical condition and medication use. EFCs can be relatives or chosen family selected by the resident. They can also act as the resident's substitute decision-makers or powers of attorney.

Note: *EFCs bring a wealth of lived experiences and come from every career path. They have an inherent knowledge of the resident's health and wishes, and they are part of the care team.*

Evacuation — an emergency response procedure for the movement of people, animals, and/or materials from dangerous or potentially dangerous areas to a safe place.

Family — Persons of various demographics chosen by residents for the purpose of meeting their individual needs. These persons can be connected by affection, biology, choice, convenience, necessity, or law.

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General waste — material that does not pose a disease-related risk or a threat to people or the environment when managed in accordance with appropriate practices and applicable regulations.

Hazardous waste — a material or substance that, if handled improperly, has the potential to harm people, property, or the environment.

Hand hygiene — any action of hand cleaning that removes visible soil and the removal or killing of transient microorganisms from the hands.

Note: *Hand hygiene can be accomplished using an alcohol-based hand rub, or soap and running water. See ABHR and waterless hand hygiene station.*

Hand hygiene sink — a sink that is dedicated for hand washing and not used for any other purpose.

Notes:

1) *The design of a hand hygiene sink includes the placement of a soap dispenser, a towel dispenser, and a garbage can.*
2) *A lavatory or other sink that is used for general purposes is not a dedicated hand hygiene sink.*
3) *See CSA Z317.1.*

Hand washing — a process for the removal of visible soil/organic material and transient micro-organisms from the hands by washing with soap (plain or antiseptic) and water.

Health care-associated infections — relating to an infection that is acquired during the delivery of health care (also known as nosocomial infection).

Healthcare facility (HCF) — a set of physical infrastructure elements supporting the delivery of specific health-related services.

Notes:

1) *A HCF can comprise a single room or area, an entire building, or a group of buildings. A HCF could also be a non-stationary unit such as a mobile facility, ambulance, or trailer where health care services are provided (although these would fall outside the scope of this Standard). In addition, different classes of HCF can reside in the same building or structure.*
2) *This Standard recognizes that provincial/territorial governments define healthcare facilities in different ways for regulatory and capital planning purposes.*

Healthcare workers (HCWs) — any person delivering care to a resident. This includes but is not limited to

a) emergency service workers;
b) physicians;
c) nurses;
d) respiratory therapists and other health professionals;
e) personal support workers;
f) students;
g) home healthcare providers;
h) designated support persons; and
i) recreation or activation team members.

Note: *In some non-acute settings, volunteers might provide care and would be included as HCWs.*

High-touch surfaces — surfaces that have frequent contact with hands.

Note: *Examples include built-in and equipment elements, with particular attention to surfaces where shared contact might occur. This can include handles; handrails; grab bars; light switches; the edges of privacy curtains; and lids or handles on clean, soiled, and waste bins.*

Household — a residential group of residents in a contiguous group and part of a larger home.

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Human waste management system — equipment or methods for human waste disposal requiring no manual cleaning of waste containers.

Note: *Human waste disposal refers to disposal of feces, urine, and emesis.*

Infection — the entry and multiplication of an infectious agent in the tissues of the host. *Asymptomatic* or *subclinical infection* is an infectious process running a course similar to that of clinical disease but below the threshold of clinical symptoms. *Symptomatic* or *clinical infection* is an infectious process resulting in clinical signs and symptoms (i.e., disease).

Infection control risk assessment (ICRA) — a process used to identify design elements that increase the risk of microbial transmission in the environment.

Note: *An ICRA considers the home's resident population and clinical programs, as well as the potential effects of both disruptions to essential services (e.g., water, ventilation, electricity) and dust-generating activities that could affect resident placement or safety, or necessitate relocation of residents.*

Infection control professional (ICP) — an individual who is employed with the primary responsibility for development, implementation, evaluation, and education related to policies, procedures, and practices that affect the prevention of infections. ICPs lead the development of the knowledge, skills, and practices required for an effective IPAC program in the organization. ICPs come from various professional backgrounds with specific education and experience and can hold certification in infection control.

Infection prevention and control — evidence-based practices and procedures that, when applied consistently in LTCHs, can prevent or reduce the risk of infection in resident, personnel, and visitors.

Infectious agent — a microorganism (e.g., a bacterium, fungus, parasite, virus, or prion) that is capable of invading body tissues, multiplying, and causing infection.

Long-term care homes — a residential facility in which residents remain on an extended basis with varying levels of independence and generally do not require invasive medical interventions.

Note: *Long-term care homes are known by many names in various jurisdictions. A defining feature of such facilities is that they act as an ongoing home (either short-term or long-term) for the residents and as a place of work for the staff that support the residents.*

Manufacturer's instructions for use (MIFU) — written directions provided by the manufacturer or distributor of a product that contain the necessary information for the safe and effective use of the product.

Notes:

1) *Verbal instructions can assist the user in understanding the MIFU, but they are not a substitute for written instructions.*
2) *The MIFU needs to be correct for the product. Any questions or discrepancies regarding the appropriateness of the instructions should be resolved before the product is used.*
3) *See CAN/CSA-ISO 17664.*

Microfibre — a material constructed using filaments of very fine denier (generally 1 denier or less) in a dense construction.

Note: *Denier is a unit of measurement that denotes the fineness of a textile filament or yarn. It is based on the relationship between the weight and the length of textile filaments. A lower denier value denotes a thinner filament, and hence a finer textile.*

Microorganism — living organisms of microscopic size.

Note: *The term is generally used here to refer to bacteria, fungi, and viruses.*

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Mobile shared equipment — equipment in a LTCH that can be transported easily by way of built-in wheels or is light enough to be carried by a single person into an area occupied by residents.

Note: *Examples of MSE include but are not limited to:*

1) *wheelchairs;*
2) *commodes;*
3) *workstations on wheels;*
4) *vital sign carts;*
5) *medication carts;*
6) *intravenous (IV) poles; and*
7) *suction machines.*

Neighbourhood — in the context of a LTCH, an area of the facility that consists of two or more clustered households and shared common areas.

Non-resident areas — spaces within the LTCH for use by all staff. These can include but are not limited to office spaces, space for administrative tasks, areas for staff breaks, staff change areas, and staff washrooms.

No-touch disinfection systems — systems that use chemical disinfectants or physical agents to disinfect surfaces and do not require the active agent to be directly applied to the surface.

Occupational health and safety — the promotion in the workplace of the physical, mental, and social well-being of staff and the protection of staff from, and the prevention of, workplace conditions and factors adverse to their health and safety.

One-step cleaning and disinfection agent — a substance or mixture of substances that has been tested and found to be effective as a cleaning agent and a disinfectant in the presence of light to moderate amounts of soil (e.g., a 5% organic soil load).

Note: *Gross (i.e., visible) contamination on any surface needs to be removed (cleaned) even if using a one-step cleaning and disinfectant agent.*

Outbreak — an increase in the number of cases above the number normally occurring in a particular LTCH over a defined period of time.

Outbreak management team — a group of key individuals who work cooperatively to provide a timely and coordinated response to a suspected or confirmed outbreak, including but not limited to representatives from

a) local public health;
b) IPAC-trained supports;
c) environmental services;
d) workplace occupational health and safety;
e) administration or site management;
f) microbiology; and
g) nursing leadership from areas impacted by the outbreak.
h) residents, EFCs, and families.

Note: *Composition of the outbreak management team will depend on disease and facility type.*

Pandemic — an outbreak that has spread internationally and affects a large proportion of the population.

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Personal protective equipment — equipment designed to protect the wearer's face and body from injury or infection when worn correctly. PPE is a barrier that protects healthcare workers from exposure to microorganisms. PPE effectiveness is highly dependent on appropriate and proper use.

Note: *Examples of PPE include masks, respirators, gowns, gloves, and eye protection. See Public Health Agency of Canada's (PHAC) routine practices and additional precautions (RPAP) for more details.*

Person-centred care (PCC) — a focus on the resident as the locus of control that emphasizes supporting residents in making their own choices and having control over their daily lives. PCC also incorporates the healthcare system experience of residents, families, and essential family caregivers, and it is organized around the comprehensive needs of people.

Quality control — the routine testing of materials, equipment, processes, and products to ensure that specifications are met.

Quality management — coordinated activities to direct and control an organization with regard to quality.

Quality system — the organizational structure, responsibilities, procedures, instructions, processes, and resources involved in the implementation of quality management.

Resident — persons that reside in the LTCH; persons that participate in and benefit from healthcare systems along the continuum of care. Residents can be referred to as clients, community members, or patients in other healthcare settings and contexts.

Resident engagement — the involvement of residents in activities and decision-making (e.g., policy development, evaluation, quality improvement, care, training, design). Residents provide lived experience and are valued as lived experience experts, and are encouraged to work in collaboration with, and as equal partners to, professionals.

Risk assessment — the overall process of risk identification, risk analysis, and risk evaluation.

Routine practices — a comprehensive set of IPAC measures that have been developed for use in the routine care of all residents at all times in all healthcare settings. Routine practices aim to minimize or prevent HAIs in all individuals in the healthcare setting, including residents, HCWs, other staff, visitors, and contractors.

Sink — a bowl and faucet permanently installed and connected to a water supply and drainpipe.

Notes:

1) *Sinks are used for a variety of purposes throughout the LTCH (e.g., in resident washrooms and housekeeping closets). Specific requirements for sinks are provided as part of the area requirements for each of these locations in CSA Z8000.*
2) *A lavatory is one type of sink that is permanently installed and connected to a water supply and drainpipe located in a resident washroom or in a resident care area and used for hand hygiene. See CSA Z8000 and CSA Z317.1 for requirements for sinks in all types of washrooms.*
3) *Hand hygiene sinks, which are located throughout the LTCH, are separately defined; the requirements for these sinks are provided in CSA Z8000 Table 11.1.*

Staff — a person employed by a LTCH or working in or on behalf of the LTCH in a term, contract, or temporary position. Staff can be persons who are paid or unpaid, and includes clinical and non-clinical roles such as HCWs, supervisors, managers, contractors, service providers (e.g., environmental services, kitchen staff, housekeeping), volunteers, students, or other stakeholders actively engaged in undertaking activities for benefit to the LTCH.

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Surveillance — the systematic observation of the occurrence and distribution of disease processes in a population.

Textiles — fabric products that touch residents or employees directly or indirectly on a daily basis. Textiles can include bedsheets, privacy curtains, pillows cases, blankets, towels, and personal clothing.

Transdisciplinary assessment team — a group comprising representatives from various disciplines in the LTCH that work together so that appropriate IPAC measures, cleaning and disinfection measures, and operations policies and procedures are followed. This includes directors, managers, and leaders from various disciplines in the LTCH, including risk management team representatives, ICPs, occupational health professionals, residents, families, EFCs, and others (e.g., local public health officials) who oversee that the appropriate cleaning and disinfection measures are followed.
Note: *Some LTCHs refer to the TDAT as a multidisciplinary team.*

Waterless hand hygiene station — a location that is equipped with a waterless (e.g., alcohol-based) hand sanitizer dispenser.

Wayfinding — a spatial problem-solving process that individuals use to understand where they are in an environment or building, know where their desired location is, and know how to get to their desired destination from their present location.
Note: *See CSA Z317.14 and CSA Z8000.*

Wayfinding design — a multi-sensory plan and evaluation of interior, exterior, and digital coordinated elements to draw on the varied and distinct sensory capabilities of all users to help them find their way within built and outdoor environments.
Note: *The focus in wayfinding design is on minimizing stress and optimizing independence. Strategies can be supported by attention to floor and wall treatments; distinctive site furnishings or landmarks; lighting levels and lighting features; signage detection and comprehension level of signage content; acoustic cues or strategic management of the acoustic landscape to help orient people; tactile qualities and features; and even olfactory qualities related to the design (e.g., location of food services, kitchens, kitchenettes/nutrition areas) that might help with orientation and navigation.*

Wayfinding plan — a comprehensive planning process focused on supporting people to orient themselves on a site and navigate facilitated by a transdisciplinary assessment team. This might include optimizing design elements related to
a) place (multi-sensory, perceptual, and physical aspects of the overall form and function of the building);
b) people (supporting human interactions to assist in orientation and navigation or reduce the workload of staff);
c) elements (leveraging specific elements such as signage, technology, or products); and
d) continual improvement (maintenance and follow-up on the changing environment).

Note: *See CSA Z8000.*

Wayfinding system — process to assist with clearly defined orientation from the first point of contact (i.e., home to arrival to the site, to the entrance to the building, and the ultimate destination within the facility and the return journey).
Note: *See CSA Z317.14 and CSA Z8000.*

3.2 Abbreviations

The following abbreviations shall apply in this Standard:

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2SLGBTQI+ — two-spirit, lesbian, gay, bisexual, transgender, queer or questioning, intersex, and other people who identify as a sexual or gender minority

AIR — airborne isolation room

ABHR — alcohol-based hand rub

AGMP — aerosol-generating medical procedures

AHJ — authority having jurisdiction

AMR — antimicrobial resistance

ARO — antibiotic-resistant organisms

ASP — antimicrobial stewardship program

BIPOC — Black, Indigenous, people of colour

CARF — Commission on Accreditation of Rehabilitation Facilities

CBRNE — chemical, biological, radiation, nuclear, explosion

CDI — *Clostridioides difficile* infection

CIHI — Canadian Institute for Health Information

EDI — equity, diversity, and inclusion

EFC — essential family caregiver

EVS — environmental services

HAI — health care-associated infections

HCF — healthcare facilities

HCW — healthcare workers

HSO — health standards organization

ICP — infection control professional

ICRA — infection control risk assessment

IPAC — infection prevention and control

HVAC — heating, ventilation, and air conditioning

IT — information technology

IV — intravenous

LTC — long-term care

LTCH — long-term care home

MIFU — manufacturer’s instructions for use

MSE — mobile shared equipment

NTDS — no-touch disinfections systems

OHS — occupational health and safety

OMT — outbreak management team

PACS — picture archive and communication system

PCC — person-centred care

PDSA — plan-do-study-act

PIDAC — Provincial Infectious Diseases Advisory Committee

PHAC — Public Health Agency of Canada

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POE — post-occupancy evaluation
PPE — personal protective equipment
RCDD — registered communications distribution designer
RFID — radio frequency identification
RPAP — routine practices and additional precautions
RTLS — real-time locating system
SOP — standard operating procedure
TDAT — transdisciplinary assessment team
UV — ultraviolet
UVGI — ultraviolet germicidal irradiation
VSS — video surveillance system
WHMIS — workplace hazardous materials information system

4 Organizational commitments

Notes:

1) *See CARF's* Aging Services Standards Manual *for guidance on person-centred LTC communities, including business practices, care processes, and program-specific quality standards.*
2) *See CAN/HSO 21001 for additional guidance on respecting residents' rights.*

4.1 General

4.1.1 Core goals and values

The organization and leadership team, including staff representatives, shall be dedicated to collaborative decision-making and make commitments to the following core goals and values to create an inclusive and supportive environment:

a) integration of PCC to promote a safe LTCH for all;
b) inclusive policies and procedures that value each individual's sexual and gender expression;
c) operations through an EDI lens;
d) build and maintain relationships where all staff, residents, EFCs, and families fully participate in the growth and development of the LTCH; and
e) protection and safety of residents, EFCs, family, and staff.

4.1.2 Residents, EFCs, and families

The core principles shall be based on residents, EFCs, and families as partners in care.

4.1.3 Accessibility

Design, IPAC policies and procedures, and operation of LTCHs shall be centred on meeting the physical, social, familial, emotional, sensory, and psychosocial needs of residents, their EFCs, and families.

Design, IPAC policies and procedures, and operation of LTCHs shall include and accommodate activities and appropriate space and design considerations to achieve specific objectives related to the PCC principles, as specified in Clause 4.2.

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4.1.4 Collaborative operational decisions

All operational decisions, including the development of IPAC policies and procedures and the tasks related to the operations of the LTCH, shall be developed in consultation with and with the participation of staff, residents, EFCs, and families.

4.1.5 Companionship and activity

Design, IPAC policies and procedures, and operations in LTCHs shall enable companionship, inclusivity, purposeful and meaningful activity, and resilience while responding with understanding to the physical, social, familial, emotional, sensory, and psychosocial needs of each resident.

4.1.6 Safety and autonomy

Design, IPAC policies and procedures, and operations in LTCHs shall balance safety and autonomy, and adapt to the complex health and social care needs of residents to provide an environment that enables individuals to live safely and with dignity (i.e., non-judgment, inclusion, purpose).

4.1.7 Resident demographics

Design decisions, IPAC policies and procedures, and operations in LTCHs shall reflect the differing needs of the resident demographics.

4.1.8 Complaint submission

Residents, EFCs, and families shall have protection from fear and threat retribution. LTCHs shall take a non-reprisal approach and have a clear and confidential process in place for residents, EFCs, and family members who wish to come forward with their concerns. LTCHs shall have an open, confidential, and transparent process that residents, EFCs, and families can understand and use.

4.1.9 Aging in place

LTCHs shall be designed to enable an environment that fosters and supports residents to age in place while respecting their rights, preferences, and lifestyle choices.

Note: *For residents to age in place, they require the health and social supports and services to live safely and independently in their home or community for as long as they wish and are able.*

4.1.10 Implementation of Residents' Bill of Rights

The organization and leadership team should implement a Residents' Bill of Rights to guide all policies and procedures throughout the LTCH.

Note: *See Annex A for a sample Resident Bill of rights that LTCHs can use.*

4.1.11 Residents' Bill of Rights precedence

Whenever there is a question of interpretation, the Residents' Bill of Rights should prevail.

4.1.12 Residents' Bill of Rights purpose

The Residents' Bill of Rights may be considered an agreement between the resident and the LTCH during the admission process. It may be used to inform residents of their rights at admission and on an ongoing basis, and should be made available in an accessible format.

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4.2 PCC principles

Design, IPAC policies and procedures, and operations in LTCHs shall incorporate the following PCC principles into their organizational commitment and leadership:

a) balance of safety and right to live with risk;
b) resilience, independence, and quality of life;
c) integrity;
d) relevance;
e) communication and trust;
f) inclusion and preparation;
g) individualized care;
h) compassion;
i) dignity and respect;
j) humility and learning;
k) person empowerment;
l) person- and relationship-centred partnerships;
m) safety and security;
n) timely, equitable, and affordable operations and care; and
o) evidence-informed and value-based decision-making and operations.

Notes:

1) *The PCC principles are related to each other and overlap to help enable balance across IPAC, safety, and design.*
2) *See CSA Z8000 for more on the philosophy of care.*
3) *PCC calls for a renewed focus on the interaction and collaboration between people, where it is acknowledged that stronger and more intentional connections lead to improved decision-making and teamwork, higher morale, decreased hospitalizations, and improved trainee competence. The guiding principles add to providing safe and high-quality care in all health and social services sectors. These principles are the basis for PCC.*

4.3 Sexual expression and intimacy

4.3.1 Sexuality

LTCHs shall respect the right of residents with the capacity to consent to sexual and intimate acts to engage in such activity.

4.3.2 Cultural and religious differences

LTCHs shall respect and support, without judgment, cultural and religious differences in gender identity and expression, sexuality, sexual orientation, and sexual expression, including self-pleasure.

4.3.3 Confidentiality

LTCHs shall not reveal confidential information about residents' participation in sexual and intimate acts to EFCs, family, or others not directly involved in their care if the individual has capacity and has not consented to this information being shared.

4.3.4 Consent

LTCHs shall establish policies and procedures to accommodate those residents who are not able to give consent, and to protect vulnerable residents who are unable to communicate.

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4.3.5 Staff support

LTCHs shall support staff to adopt approaches to resident sexual expression, orientation, and intimacy that avoids making assumptions, and recognizes diversity and individual choice while assisting staff in addressing their own attitudes and behaviours towards sexual expression.

4.3.6 Private rooms

LTCHs that are unable to provide privacy for residents in their bedrooms should provide dedicated private rooms and privacy for intimate acts and conversations.

4.3.7 Resident privacy

LTCHs shall adopt strategies to support resident sexual expression and intimacy, and policies and procedures for residents to indicate their need for privacy. Examples of such strategies may include

a) privacy rooms with lockable doors and card access;
b) privacy flags on resident doors; and
c) knock-and-wait-before-entrance practices.

Note: *LTCHs can include strategies related to sexual expression and intimacy in the resident care plan. These plans can consider the resident's behaviour and needs, physical and cognitive health, relationship and sexual history, risk of potential harm, family, built environment, and staff (including attitudes and comfort level).*

4.3.8 Seating accommodations

LTCHs should provide seating areas with furniture that can accommodate more than one person.

4.3.9 Consent and ethics

LTCH shall assess resident capacity and identify issues and ethical considerations related to consent.

4.3.10 Capturing resident information

LTCHs shall have clear guidelines for capturing and using information related to a resident's sexual privacy and expression.

Note: *See CAN/HSO 21001 for additional information on sexual expression and intimacy in the resident care plan in LTCHs.*

4.4 Relationship-building

4.4.1 Staff/resident

LTCH operators shall promote and support positive interactions between staff and residents by

a) ensuring staff have effective communication and relational skills necessary for PCC;
b) providing ongoing training in the relational and communication skills necessary for PCC;
c) ensuring supervisors, policies, and workplace culture allow staff time to be present and to relate to residents;
d) ensuring staff have access to support and mentoring related to the impact of stress; and
e) ensuring staff are trained and have skills in using the technologies necessary to provide communication accessibility for residents with sensory needs.

Notes:

1) *See CARF's* Aging Services Standards Manual *for guidance on person-centred long-term care communities, including business practices, care processes, and program-specific quality standards.*
2) *See CAN/HSO 21001 for additional information on staff competencies for the provision of compassionate, team-based care, and policies and procedures to support the mental health and well-being of staff in LTCHs.*

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4.4.2 Staff/family

LTCH operators shall take the following steps to promote and support positive interactions between staff and family members or EFCs:

a) provide oral and written orientation to the LTCH prior to placement in the LTCH that includes information about routines and relevant policies, lines of communication, and where to go with concerns;
b) provide ongoing education to staff about the family or EFC experience (e.g., grief symptoms) and equip them with skills to interact with families or EFCs effectively;
c) involve families or EFCs in decision-making and conferences;
d) make support available to family or EFCs as needed, whether individually or in groups;
e) encourage family or EFCs to join family councils; and
f) provide clear and timely information to families or EFCs about changes and improvements at the home that can have an impact on residents (e.g., operations, IPAC, care, renovations, design, laundry policies and procedures).

Notes:

1) *Effective relationship-building with families or EFCs acknowledges the critical role they play as members of the resident care team, and encourages LTCH staff to call on families or EFCs for assistance.*
2) *See CAN/HSO 21001 for additional information on supporting and respecting residents' choices to engage others in their care in LTCHs.*

4.4.3 Staff/staff

Staff from all disciplines should be well-coordinated internally and with external partners. Communication channels shall be firmly established, and staff shall work seamlessly to enhance the well-being of residents. Administration shall be held accountable for fostering teamwork and eliminating any hierarchy that can form among staff members.

4.4.4 Technology support

Opportunities for resident, family, EFC, staff, and community communication shall be cultivated using technology. Information and communications technology, assistive technology, and rehabilitative supports shall be engaged to optimize resident functional ability and their ability to interface with their environment.

4.5 Equity, diversity, and inclusion

Note: *See CAN/HSO 21001 for additional information on guiding principles for equity, diversity, and inclusion in care delivery.*

4.5.1 General

4.5.1.1 Respect for diversity

Every person within the LTCH circle of care (e.g., resident, staff, family, EFC) shall be supported in exercising their right to have their voice heard, and to be treated with respect and dignity regardless of age, gender, social status, language, culture, origin, religion, belief systems, sexual expression, sexual orientation, sexual identity, spiritual differences, and social determinants.

4.5.1.2 Organizational culture of inclusion

All persons within the LTCH circle of care shall be active participants in establishing an organizational culture that creates a sense of belonging, inclusion, acceptance, and recognition while supporting health equity and well-being.

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4.5.1.3 EDI in IPAC, operations, and design

The LTCH shall establish policies and procedures addressing EDI to enhance the effectiveness of the IPAC program, operations, and design of the LTCH.

4.5.1.4 Person-centred and inclusivity

EDI policies and procedures shall be developed from a person-centred perspective to contribute to positive health and quality of life outcomes for residents. IPAC, operations, and design of the LTCH shall be inclusive of age, gender, social status, language, culture, origin, religion, belief systems, sexual expression, sexual orientation, sexual identity, spiritual differences, and social determinants.

4.5.2 Organizational culture

4.5.2.1 Awareness and promotion

The LTCH and leadership team members shall enhance EDI through awareness measures and promotion of activities.

Note: *See Clause 6 for guidance on quality improvement related to EDI indicators.*

4.5.2.2 LTCH environment and design

The LTCH environment shall be inclusive, welcoming, and affirming for diverse groups in the staff and resident population. LTCHs shall support the outward appearance of being an EDI-aware home with policies and procedures in place to be an EDI-positive and affirming space.

Note: *Some examples of inclusive design elements include gender-neutral washrooms, décor, posters and signage. Inclusive policies and procedures can include asking for the resident's preferred pronouns and cultural traditions.*

4.5.2.3 Diverse cultures

LTCHs shall recognize and honour the diverse cultures that reside in their home throughout the year (e.g., dietary requirements, holidays and celebrations, awareness days, prayer accommodations). At admission, demographic information including the resident's culture and holidays celebrated shall be collected to increase inclusiveness of the LTCH.

4.5.2.4 Conflict resolution

LTCHs shall have policies and procedures for promptly addressing and resolving all conflict and bullying, including intercultural, among residents and team members as part of the organization's ongoing efforts to reduce discrimination.

4.5.2.5 Staff employment

LTCHs shall make an effort to employ staff who represent an array of diverse groups that reflect the resident demographic of the LTCH.

4.5.2.6 Feedback solicitation

LTCHs shall regularly seek feedback from employees and residents regarding their experiences of inclusion (e.g., exit interviews, annual reviews, and resident and employee satisfaction surveys including questions about equity, diversity, and inclusion).

Note: *See Annex B for a sample residential care survey.*

4.5.2.7 EDI concerns

Policies and procedures shall be in place for staff, residents, EFCs, and families to raise concerns about EDI.

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4.5.2.8 Response to EDI concerns

LTCHs shall have a structured approach in place for responding to resident and staff concerns regarding EDI (e.g., mediation process, ombudsperson, communication intermediary).

5 Operations

5.1 General

Notes:

1) *See CARF's* Aging Services Standards Manual *for guidance on person-centred long-term care communities, including business practices, care processes, and program-specific quality standards.*
2) *See CAN/HSO 21001 for additional guidance on service delivery and enabling a healthy and competent workforce.*

5.1.1 Person-centred operations

LTCHs shall establish operating policies and procedures to create an environment that focuses on the person-centred perspective. LTCHs should incorporate resident, EFC, family, and staff input, and consultation with all stakeholders, into the creation of these operating policies and procedures.

5.1.2 Collaboration in LTCH

Comprehensive LTC services shall be delivered by a TDAT of professionals and support staff, working in conjunction with residents, EFCs, and families, to meet the full range of resident needs.

5.1.3 Collaboration in healthcare system

LTCHs should establish formal and informal collaborations with other parts of the healthcare system and stakeholders such as local hospitals, community services, primary care, universities, ICPs, and local public health so that expertise and resources are shared to prevent avoidable hospitalizations, promote access to specialized supports (e.g., university programs, geriatric specialists, palliative care, spiritual health, mental health services), and in specific situations (e.g., infectious disease outbreaks, epidemics, and pandemics).

Note: *See CAN/HSO 21001 for additional information on coordinating care and integrated services in LTCHs.*

5.1.4 Organizational outbreak, epidemic, and pandemic preparation

Family and EFC representatives should participate in organizational outbreak, epidemic, and pandemic preparation, rehearsal, and response as well as ongoing and emergent planning (e.g., design, care, IPAC) and operational activities.

Notes:

1) *While this is desirable, local public health orders might be put in place that prevent family and EFC participation for safety reasons.*
2) *Caregivers participate in activities such as feeding, bathing and personal care, exercise and physical stimulation, social and emotional support, memory support, cognitive stimulation, communication assistance, and mobilization. In addition, they are encouraged to participate in domestic life activities such as laundry, cleaning, and decorating. Caregivers are attuned to changes in the resident's behaviour, mental state, and autonomy. These changes can signal a health problem such as delirium, infection, or acute physical and mental illness. Caregivers assist with early detection, which in turn facilitates early intervention and reduces overall impact of illness. Caregivers can also facilitate person-centred activities, such as resident councils and peer-to-peer support.*
3) *See Clause 11.3.3 for more guidance on outbreak, epidemic, and pandemic management.*

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5.2 Resident activity

5.2.1 Resident background

Staff shall get to know new and existing residents. They shall gain knowledge from the resident and their family or EFCs to get to know each resident as an individual.

Note: *Getting to know the resident is an operational need to make their lives a success in their new home.*

5.2.2 Resident identity

A resident's identity shall be known by staff interacting with them. Aspects of their identity may include but are not limited to

a) name and pronouns as indicated by the resident;
b) cultural and religious backgrounds;
c) sexual orientation;
d) gender identity;
e) sexual expression;
f) preferences (e.g., music, privacy, activity, routine, diet);
g) history and memories;
h) fears (e.g., comfort with visitation animals);
i) physical, sensory, communication, and cognitive abilities;
j) familiarity with and use of computers or other digital devices; and
k) health.

Notes:

1) *Learning about the resident enables staff to curate activities that will be meaningful to each resident no matter their communication and cognitive abilities, allowing each resident to feel a sense of self and feel appreciated for who they are as a member of their new household and community.*
2) *A resident's background or full history is not always available on admission. Residents are not always willing to share information about themselves, including their childhood memories and fears.*

5.2.3 Staff knowledge of resident

Each resident's identity, including their lifestyle habits (e.g., bedtime, wake time, preferred activities, and hygiene care), shall be shared with staff to help them understand the resident's preferences, likes, dislikes, and needs, and to minimize the stress of living in a new home and meeting new people during their stay.

5.2.4 Resident personal items

Staff should encourage residents, EFCs, and family to bring photos or personal items that will help the resident feel at home.

Note: *Photos and personal items can assist with relationship-building and serve as personalized decorations that can trigger positive memories and emotions.*

5.3 Visitors

5.3.1 Visitation policies and procedures

LTCHs shall establish policies and procedures for visitors, including EFCs, to help prevent and control the spread of microbial infections.

Note: *For some older adults, particularly those living in congregate settings and whose cognitive function does not permit them to understand IPAC considerations, the presence of an appropriately trained caregiver can facilitate adherence to IPAC procedures.*

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5.3.2 IPAC education

Visitor policies and procedures should include education about IPAC requirements (e.g., routine practices for non-isolated residents, hand hygiene, PPE donning and doffing, and additional precautions as required), including the rationale for compliance and consequences of non-compliance.

5.3.3 EDI considerations

Visitors should be subject to the LTCH's rules regarding respect for residents, i.e., residents should not be subject to the negative views of a visitor if they choose to demonstrate their sexual orientation or gender diversity.

5.3.4 Visitation scaling

Visitor policies and procedures shall have pre-defined considerations for scaling up or down based on outbreak, epidemic, or pandemic risks to help maintain a balance between the residents' quality of life and IPAC needs.

5.3.5 Visitation tracking

LTCHs shall have an operational plan pertaining to IPAC in place for visitor management during both regular operations (e.g., PPE, hand hygiene, and IPAC education) and catastrophic events that includes provisions prescribed by the AHJ. The operational plan shall include a tracking method (e.g., visitor log) for contact tracing purposes. The operational plan for visitor management should be reviewed by the TDAT at least once a year.

Note: *See Clause 11 for more details on catastrophic event management.*

5.3.6 Mitigating exposure

LTCHs shall have an operational plan in place that enables safe access to a resident while mitigating exposure to other residents within a building, to support visitation during outbreaks, epidemics, or pandemics (e.g., designated visitation rooms).

5.3.7 Visitor health and vaccination

The TDAT shall establish policies and procedures that uphold resident safety and prevent staff, family, EFCs, and visitors from entering the LTCH when they are ill with a transmissible enteric, skin, or respiratory infection, or lacking necessary vaccinations.

5.4 Environmental services

5.4.1 Clean and sanitary environment

EVS shall provide a clean and sanitary environment for every individual on the LTCH premises.

5.4.2 Quality services

Quality services shall be provided including environmental sanitation, laundry services, building operations and maintenance, shipping and receiving, inventory control, materials storage and management, waste management, design and décor, pest control, odour control, and program preparation.

Note: *See Clause 6.*

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5.4.3 Organizational liaison

An organizational liaison with EVS and housekeeping associations should be present to help enhance the quality of services.

5.4.4 Cleaning policies and procedures

Policies and procedures shall be developed and implemented for cleaning of the LTCH.

5.4.5 Housekeeping equipment and cleaning supplies

Policies and procedures shall be developed and implemented for management and maintenance of housekeeping equipment and cleaning supplies.

5.4.6 Pest control program

Policies and procedures shall have a preventive pest control program using the services of a licensed pest controller, including records indicating the dates of visits and actions taken. Immediate action shall be taken to deal with pests.

5.4.7 Laundry services

Policies and procedures shall be developed for laundry services.

Note: *See Clause 7.5.*

5.4.8 Internal and external maintenance services

Maintenance services shall be planned so that building components (including both interior and exterior finishes) and building systems are maintained to support a safe and clean environment. In addition to those outlined in Clause 9.1, schedules and procedures shall be in place for routine, corrective, and preventive maintenance of all equipment and devices (e.g., beds, furniture).

5.4.9 Hazardous substances

LTCHs shall properly label all hazardous substances at the home. Hazardous substances shall be kept inaccessible to residents, EFCs, and families at all times.

5.4.10 EVS and TDAT collaboration

EVS shall consult with TDAT for assistance and direction on proper waste management operations.

5.4.11 Decluttering

Decluttering of resident rooms and the nursing stations should occur on a regular basis (e.g., every two months). Nursing stations shall always be free of clutter.

5.5 Nutrition and food management

Notes:

1) *See CARF's* Aging Services Standards Manual *for guidance on person-centred long-term care communities, including business practices, care processes, and program-specific quality standards.*
2) *See CAN/HSO 21001 for additional information on meaningful mealtime experiences in LTCHs.*
3) *See Clause 7.4.7 for guidance on cleaning and disinfection of kitchen and dining areas.*
4) *See Clause 8.2.5 for guidance on kitchen, servery, and dining room design.*

5.5.1 Mealtime environment

LTCHs shall establish policies and procedures for residents to receive meals in an environment that promotes quality of life (e.g., warm meals, fresh produce).

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5.5.2 Resident, EFC, and family satisfaction

LTCHs shall gather operational feedback from residents, EFCs, and families regarding satisfaction with nutrition operations, the supporting environment, and suggested improvement measures.

5.5.3 Culturally appropriate meals

LTCHs shall accommodate dietary restrictions and create tailored and culturally appropriate meal plans.

5.5.4 Mealtime flexibility

LTCHs shall provide flexibility of mealtimes (e.g., respecting periods of awakening and sleeping of the residents) along with sufficient time to finish the meal.

5.5.5 In-room dining accommodations

Policies and procedures shall support in-room dining during outbreaks, epidemics, and pandemics as well as contingency plans for sourcing alternative nutritional meals.

5.5.6 Control measures

Control measures shall be in place to limit resident access to unauthorized or used items (e.g., serving ware, food items, used food trays).

5.6 Operational communications

5.6.1 Policy and procedure formats

Policies and procedures shall be available in paper and/or electronic formats. They may be available in text or visual form.

5.6.2 Communication vehicles and methods

The LTCH shall have a communications program that is accessible, incorporates appropriate communication vehicles, and meets the needs of residents, EFCs, family, and staff. There shall be a variety of communication modes and methods (e.g., websites, bulletin board postings, phone calls, family councils, email). Communication with EFCs, families, and TDAT shall be timely, clear, and consistent.

5.6.3 EDI considerations

Communication materials (e.g., brochures, signage, handbooks) shall be accessible to and inclusive of diverse groups and communication capacities (e.g., written in plain and gender-inclusive language, accompanied by pictures, translated into languages applicable for the residents of the LTCH, and include images representing diversity).

5.6.4 Auditory communication

Auditory communication (e.g., in-person and virtual spoken communication, audio announcements, alerting sounds, audio-visual instructional materials, audio entertainment) shall be accessible to people with hearing difficulties and inclusive of diverse groups (e.g., spoken clearly, translated into different languages, gender-inclusive language). As needed, auditory communication should be supported by complementary or alternative visual or tactile modalities of communication (e.g., speech-to-text, captioning/subtitles, speech-reading, and tactile devices). Interpretation services should be provided.

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5.6.5 Website accessibility

LTCH websites shall be accessible to, and inclusive of, diverse groups (e.g., accessibility functions, featuring images representing diversity).

5.6.6 Person-centred communication

LTCHs shall communicate IPAC, design, and operational issues, topics, and priorities in a way that is person-centred. Communication shall be timely, accessible, and clear.

5.6.7 Engagement and consultations

LTCHs shall have staff, resident, EFC, and family engagement and consultation. Engagement shall include diverse groups. During these consultations, staff shall share operational updates.

Note: *Communication accessibility is important whenever engaging and communicating with residents who require accommodations for sensory, cognitive, speech and language needs.*

5.6.8 Relationship and trust building

LTCHs shall promote relationship- and trust-building with residents, EFCs, and families via engagement.

Note: *Engagement is important for development, wayfinding, program design, building design, and renovation. It is important to understand the full landscape of the demographics within the LTCH so that programs and the built environment can be developed in a way that is resident- and family-focused.*

5.6.9 Sharing resident information

Practices to gather and share information about residents amongst the TDAT should be put in place, including but not limited to

a) developing and sharing a detailed history of residents at admission, including their identities and meaning of these to them, goals, preferences, interests, strengths and limitations, capacities, and social connections;
b) engaging EFCs and family in knowing and understanding the resident;
c) facilitating policies and procedures for EFCs, family, and staff to share their knowledge about residents and effective care practices;
d) engaging EFCs, families, and cultural organizations as appropriate to deepen their understanding of residents' cultures; and
e) implementing methods for documenting and sharing information about resident history, needs, and preferences on an ongoing basis.

Note: *See CAN/HSO 21001 for additional information on developing and implementing resident care plans in LTCHs.*

5.7 Transdisciplinary assessment team

5.7.1 TDAT composition and responsibility

The LTCH shall develop a TDAT that includes management, staff, medical lead or designate, and stakeholders of the LTCH. The TDAT shall oversee and be responsible for adherence to policies and procedures.

5.7.2 Documentation of policies and procedures

Formal and documented policies and procedures shall be undertaken by the TDAT to demonstrate compliance. All major decisions shall be formally documented in project design and operation documents.

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5.7.3 Risk assessment and management

The TDAT shall undertake an annual, formal, and comprehensive risk assessment and management exercise. This exercise shall be documented and consider all risk elements associated with the form and function of the LTCH. Changes to the original assessment shall be clearly justified and documented. The organization shall use a risk assessment and risk control plan that is applicable for its given context.

Note: *See CSA Z8000 for further guidance on risk assessment policies and procedures.*

5.7.4 TDAT for existing LTCH

For existing LTCHs, the TDAT should include but not be limited to

a) clinical representatives (e.g., advance nursing practice);
b) LTC operations (including EVS, nutrition, and food, and other support services such as laundry, maintenance, and material management);
c) HCW and LTCH staff;
d) engineers with healthcare expertise;
e) partner hospital liaison (e.g., connection or formal relationship with acute care);
f) local public health liaison;
g) ICP; and
h) OHS committee.

5.7.5 TDAT for new and renovated LTCHs

TDAT shall follow the guidance of CSA Z8000 for all new LTCH design and existing LTCH renovation.

5.7.6 Additional TDAT stakeholder considerations

Consideration shall be given to additional applicable representatives, including but not limited to residents, EFCs, families, and advocates who can speak to the residents' needs (e.g., local community representatives representing Indigenous, religious, cultural, or specific populations such as 2SLGBTQI+, BIPOC, and the disabled).

5.8 Contingency planning

Note: *See CARF's* Aging Services Standards Manual *for guidance on person-centred long-term care communities, including business practices, care processes, and program-specific quality standards.*

5.8.1 General

Each LTCH shall have a contingency plan that outlines how it can operate in varying circumstances including staffing and resource shortages.

5.8.2 Staffing shortages

Where catastrophic events (e.g., snowstorms and flooding, but also outbreaks, epidemics, and pandemics) create staffing shortages, plans for the following operations shall be assessed for implications in both the short term and long term:

a) staff re-assignment and re-deployment;
b) additional hours;
c) clinical management working;
d) use of EFCs to be engaged in resident care; and
e) use of contract or agency staff and volunteers.

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5.8.3 Resident care prioritizing

The contingency plan shall outline care priorities for residents, including where the available personnel resources should be utilized (e.g., where can contract, re-deployed staff, and EFCs be used, and for what tasks).

5.8.4 Equipment design

LTCHs should consider equipment designs that can be managed safely by one staff member in the event of lack of staff.

Note: *Increased virtual care and visiting, and appropriate room-based technology could allow residents to make and receive video calls to family and physicians to facilitate connection and social interaction. Assessment would improve capacity to respond to catastrophic events and major staff loss, as seen during an outbreak, epidemic, or pandemic.*

5.8.5 Resident and support connectivity

Contingency plans should include policies and procedures on how to maintain connections between residents and their supports, especially those residents who do not have advocates.

5.8.6 Virtual visitation

The LTCH shall establish virtual visiting policies and procedures in advance of catastrophic events, including having the technology available onsite to deploy virtual options as quickly as possible.

Note: *These policies and procedures would improve capacity to respond to catastrophic events and major staff loss, as seen during an outbreak, epidemic, or pandemic.*

5.9 Waste management

Note: *See CSA Z317.10 for more information on waste management policies and procedures. Waste handling includes the following components:*

a) *waste handling within the LTCH (generation, storage, collection, transportation, segregation, etc.); and*
b) *waste disposal to a licensed facility (landfill, transfer station, etc.).*

5.9.1 General

5.9.1.1 Waste management system

The waste management system shall incorporate requirements for packaging, collection, storage, handling, treatment, segregation, and disposal of waste materials within the LTCH.

5.9.1.2 Outbreak, epidemic, and pandemic planning

Waste management volumes and processes can be affected by an outbreak, epidemic, or pandemic. Documented plans, including training, shall therefore be required to support these scenarios.

Notes:

1) *Handling of waste materials is an important aspect of the daily operations within LTCHs for IPAC and resident safety.*
2) *Waste handling operations will vary depending on the nature of the facility, whether it's in an urban or rural location, and any special needs for remote locations.*
3) *See Annex C for information on governmental waste management.*
4) *Standards that govern best practice mostly related to internal operations include*
   a) *CSA Z317.10, which identifies specific requirements for handling of waste material within a healthcare setting (including unique requirements associated with LTCHs) including packaging, collection, handling, storage, and onsite treatment and disposal of health care waste materials;*

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b) *CSA Z317.12, which outlines the cleaning and disinfection of LTCHs providing healthcare services including but not limited to inpatient or outpatient services; and*
c) *CSA Z8000, specifically management of potentially infectious materials, including soiled medical devices, human waste and body fluids, and medical waste.*

5.9.2 Proper waste handling

5.9.2.1 Policies and procedures

LTCHs shall comply with

a) CSA Z317.10 for the proper handling, collection, storage, and disposal of waste, including the development of a facility-wide waste management plan that includes assisted living residence; and
b) other local requirements.

5.9.2.2 Waste management plan

The waste management plan shall include but not be limited to

a) provisions for proper PPE and hand hygiene for staff handling, transporting, storing, and disposing of waste material;
b) proper segregation of waste at point of generation, as outlined in CSA Z317.10;
c) proper waste containers identified for each waste stream, as outlined in CSA Z317.10;
d) scheduled waste removal to reduce odour and/or pest issues;
e) scheduled cleaning and disinfection of internal waste storage areas to reduce odour and assist with pest control and possible cross-contamination; and
f) scheduled cleaning and disinfection of internal and external waste receptacles to reduce odour and assist with pest control.

5.9.2.3 Outside agencies providing onsite care services

LTCHs that have outside agencies providing onsite care services (e.g., provincially funded or privately funded home care, nursing services, IV therapy, dentists, dental hygienists) shall outline waste management responsibilities and practices (e.g., proper disposal of sharps and biohazardous materials) to those outside agencies.

5.9.2.4 Internal auditing

Waste management operations should be internally audited on a scheduled basis as per Annex D.

5.9.3 Human waste management system

5.9.3.1 Human waste disposal and removal

The LTCH shall have in place waste management policies and procedures that follow best IPAC practices and AHJ guidelines for handling human waste disposal and removal.

5.9.3.2 Human waste disposal methods

LTCHs should factor in resident dignity and safety, frequency of use, IPAC considerations, cost efficiency, and feasibility when reviewing the options for human waste disposal methods.

Note: *Human waste disposal system options include the following:*

a) *Macerators or single-use products, which use a disposable pan/tray system within the commode and sometimes include a reusable support ring to support the disposable portion, require regularly scheduled maintenance as per manufacturer recommendations and should meet manufacturer design specifications.*

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b) *Washers-disinfectors, which use reusable pans/trays within the commode, require cleaning and disinfecting agents and a quality control/assurance program to monitor the reprocessing. They also require regularly scheduled maintenance as per manufacturer recommendations.*
c) *Absorbent bag/liners line the pail or tray of the commode.*

5.9.3.3 Waste disposal system

Human waste shall be disposed of into a closed waste disposal system (e.g., macerator, washer-disinfector, or absorbent bag or liner) in a soiled utility room.

5.9.4 Outbreak, epidemic, or pandemic waste practices

Note: *In the event of an outbreak, epidemic, or pandemic, not all waste is considered biomedical waste, and practices for the disinfection, landfill, and recycling of waste might vary and be able to continue depending on the type of disease.*

5.9.4.1 Contingency planning

LTCHs shall provide contingencies for the handling, transporting, storing, and disposing of waste material during an outbreak, epidemic, or pandemic.

5.9.4.2 Alternate waste disposal services

The LTCH shall provide alternate waste disposal service options when there is a disruption (e.g., outbreak, epidemic, pandemic) in the existing contracted services.

5.9.4.3 PPE disposal

LTCHs shall have established IPAC policies and procedures and accessible waste receptacles for doffing disposable PPE during day-to-day operations as well as during isolations, outbreaks, epidemics, and pandemics.

Notes:
1) *Refer to CSA Z8000.*
2) *Follow IPAC recommendations for the types of containers, carts, and disposal containers during normal operations and during an outbreak, epidemic, or pandemic.*

5.9.4.4 Waste management operations and training materials

During isolations, outbreaks, epidemics, and pandemics, if applicable and required, the LTCH shall have waste management operations and training materials in place that account for
a) the increased volume of PPE and other disposables;
b) additional special handling considerations for the disposal material; and
c) additional waste types created.

Note: *Some LTCHs do not modify their waste management operations and practices during an outbreak, epidemic, or pandemic based on their AHJ.*

5.9.4.5 Disposal methods

LTCHs might need to shift their methods of disposal during an outbreak, epidemic, or pandemic. Materials that were reusable during normal operations could become disposable during an outbreak, epidemic, or pandemic. Conversely, materials that would be disposable during normal operations might become reusable during an outbreak, epidemic, or pandemic. A risk assessment for safe reuse of single-use items shall be done in consultation with the TDAT.

Note: *LTCHs should be aware of AHJ regulations concerning the proper disposal of waste during an outbreak, epidemic, or pandemic.*

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5.9.4.6 Waste management expert liaison

LTCHs should have a liaison with waste management experts who can assist in providing expertise on waste management operations.

Notes:

1) *Refer to Clause 11 for guidance on catastrophic event management*
2) *Refer to Clause 7 for guidance on IPAC, cleaning and disinfection, hand hygiene, and PPE operationalization.*

5.10 Antimicrobial stewardship

LTCHs should incorporate the following comprehensive steps for an ASP:

a) formation of a comprehensive ASP team that should include strong leadership, a resourceful program lead, supportive medical and nursing leads, and pharmacy and IPAC expertise;
b) establishing appropriate antibiotic use criteria and guidelines for common infections encountered in LTC;
c) selecting antimicrobial stewardship strategies that are shown to improve antibiotic use and are reviewed and analyzed for feasibility within the LTCH. Selected changes for implementation may include strategies to prevent unnecessary antibiotic starts, improve details of antibiotic prescribing, and encourage timely review of prescribed antibiotics;
d) establishing measures and clinical outcomes that should be monitored with changes to antibiotic use. Measures may include process adherence, antibiotic starts, and antibiotic days of therapy; and
e) testing and sustaining changes, which should be tested through PDSA cycles and updated with new research when appropriate. Changes should be sustained through continuous quality improvement and feedback to maintain a successful and robust ASP.

Note: *Refer to Public Health Ontario's Antimicrobial Stewardship Essentials Checklist in Long-Term Care for more information on implementing an ASP.*

5.11 Medication management

5.11.1 Medication cart

Policies and procedures shall be in place for the cleaning and disinfection of medication carts and their contents.

5.11.2 Supply, storage, and dispensing of medication

Policies and procedures shall be in place for appropriate supply, storage, and dispensing of medications. Medications shall be inspected regularly to identify expiration dates or damage.

5.11.3 Medication labelling and storage

Single-use resident medication and medication administrative devices shall be labelled and stored in individual containers within a locked medication cart.

5.11.4 New innovative technologies

LTCHs shall make efforts to collaborate and be aware of new innovative technologies in support of emerging trends being adopted by pharmacies, service providers, and other stakeholders that allow distribution of medication, such as pill packs and other means to control dosages, adherence, mishandling, contamination, and human error.

5.11.5 Staff and resident safety

LTCHs shall implement procedures to protect staff and residents from contact with known hazardous medications during preparation, transportation, administration, and disposal.

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6 Quality improvement

Notes:

1) *See CARF's* Aging Services Standards Manual *for guidance on person-centred long-term care communities, including business practices, care processes, and program-specific quality standards.*
2) *See CAN/HSO 21001 for information on measuring the quality of life, health, and well-being of residents and promoting quality improvement.*

6.1 General

6.1.1 Quality indicators

LTCHs should meet or exceed quality indicator requirements of the AHJ.

6.1.2 Continuous improvement

LTCHs shall strive for continuous improvement, including through benchmarking. LTCHs shall monitor outcomes of analyses and determine areas needing improvement.

6.1.3 Quality improvement strategies

LTCHs shall implement a quality system, and goals and strategies, for quality improvement.

6.1.4 EDI policies and procedures

EDI policies and procedures shall be regularly updated to incorporate evolving understandings. This may be accomplished by gathering information on EDI via targeted stakeholder engagement, surveys, and dedicated focus groups and discussions. LTCHs shall implement a procedure to investigate whether IPAC measures disproportionately affect specific cultural groups and if so, what is the associated cause for the affect.

6.1.5 IPAC-related performance improvement

IPAC-related measures shall not disproportionately affect persons from specific backgrounds, beliefs, or cultures unless there is a demonstrable epidemiological rationale for those measures.

Analysis of IPAC-related performance improvement data undertaken by the LTCH shall be conducted with the intent of determining the impact of IPAC-related measures on different stakeholder groups (e.g., staff, residents, community). The information gathered from the analysis shall be used to determine any possible correlations between those stakeholder groups and IPAC-related measures (e.g., impact of outbreaks, results of IPAC audits, infection control-related incidents including surveillance trends for antibiotic-resistant organisms).

6.1.6 Trend reporting

Reporting policies and procedures should include trends and rolling averages. Action plans shall be developed to assist in management of trends (e.g., falls, hand hygiene rates) that are above or below baseline for quality indicators.

6.1.7 Internal and external reporting

LTCHs shall have analysis and reporting policies and procedures that include internal and external reporting. A plan shall be established that demonstrates quality improvement initiatives.

6.1.8 Reporting frequency

Analysis and reporting shall at a minimum be conducted quarterly by the designated LTCH personnel.

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6.2 Data collection

6.2.1 Policies and procedures

LTCHs shall have a policy and procedure for outlining data collection requirements and accountabilities.

6.2.2 EDI data collection

LTCHs shall establish policies and procedures to collect EDI data appropriate to their resident demographics and the external environment. LTCH shall analyze the data to determine any areas of disparity and use this data in correlation with IPAC data to measure results.

6.2.3 HAI surveillance and reporting

LTCHs shall establish

a) a HAI surveillance program; and
b) internal and external reporting policies and procedures based on provincial/territorial requirements and guidelines.

Note: *See PHAC's* HAI Surveillance Case Definitions*, 2020.*

6.2.4 Data result communication

A reporting process or communication plan shall be developed to demonstrate quality improvement initiatives based on trends in data collected. LTCHs shall communicate data results to all applicable stakeholders in an accessible and clear manner.

6.2.5 New innovative technologies

LTCHs shall strive to be aware of new innovative technologies that facilitate efficient internal monitoring, data collection, management, and reporting in such a way that encourages possible avenues of external sharing of non-confidential information in collaboration with stakeholders for the purpose of data-driven research initiatives for improved outcomes in health care.

6.3 Quality auditing and process improvement

Note: *See Annex E for an auditing tool.*

6.3.1 Internal auditing

LTCHs shall complete internal auditing to select additional quality indicators that are strategically aligned with organizational priorities and serve the current and future needs of the resident.

6.3.2 Quality auditing dashboard

A sharable quality auditing dashboard should be utilized.

6.3.3 Audit report sharing

Audit reports shall be publicly posted and accessible to residents, EFCs, and family.

6.3.4 Building performance auditing

LTCHs shall implement a supplemental internal auditing program using a POE to obtain feedback on the functional performance of the LTCH to inform design, construction, and operation. The POE shall be used to assess building performance at regular and ongoing intervals. POEs may be accomplished by gathering information on building performance via targeted stakeholder engagement, surveys, focus groups, and discussions, as well as in situ measurements (e.g., building systems data such as HVAC

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operation, energy and utility data, access control, resident exploring, LTCH clinical system data such as incidents, falls, HAIs). POE findings shall be used to inform building operations and future renovations or additions to LTCHs, and shared with, at a minimum, the LTCH owner, operator, management, residents, staff, design team, and constructor.

Note: *See CSA Z8003 for more guidance on POE.*

6.3.5 IPAC and EVS auditing

Audit elements related to IPAC and EVS should demonstrate compliance with IPAC standards and guidelines.

Notes:

1) *See Clause 7.1 for the IPAC program and Clause 5.4 for the EVS program.*
2) *LTCHs in Canada should be aware of all IPAC regulations from their AHJ.*

6.4 IPAC auditing

Note: *See CSA Z317.12 for more guidance on auditing.*

6.4.1 IPAC quality management and auditing system

LTCHs shall develop a quality management system and auditing policies and procedures for their IPAC program with leadership from a TDAT.

6.4.2 Frequency and auditor considerations

An IPAC program audit shall be conducted at least once a year, and more often for specific situations. A third party may be used to complete the organizational audit. Auditors shall be credible, objective, precise, and motivating.

6.4.3 Audit results

Audit results shall be reported to the EVS and unit leadership for review and planning of quality improvement actions. Results shall be shared quarterly to quality improvement, IPAC, and leadership committees.

6.4.4 Auditing program

The auditing program shall include

a) visual audits;
b) environmental marking audits, which can aid in educating staff to clean high-touch surfaces thoroughly;
c) observation audits, which can aid in educating staff to perform cleans in the correct order and according to best practice; and
d) housekeeping cart and closet audits, which can aid in ensuring these areas are maintained in a standardized manner according to best practices; are kept free of food, drink, and personal items for staff safety; and meet requirements of the relevant AHJ.

6.4.5 IPAC quality indicators

IPAC quality indicators and auditing requirements for LTCH should include

a) hand hygiene;
b) routine practices and additional precautions;
c) PPE donning and doffing;
d) environment and equipment cleaning and disinfection (e.g., communal showers, dining rooms); and

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e) surveillance indicators for infection including
   i) legislated reportable diseases;
   ii) organization mandatory reporting;
   iii) accreditation requirements, if applicable;
   iv) AMR/AROs; and
   v) HAIs important to the organization's service and resident population (e.g., CDI, norovirus, UTI, scabies, and soft tissue infections in LTC); and
   vi) indicators developed by the Resident Committee on quality-of-life matters and that include EDI benchmarks.

Syndromic surveillance indicators might be recommended in some jurisdictions and have the added benefit of detecting important HAIs, such as CDI.

Note: *Audit tools for IPAC indicators are available for paid members of IPAC Canada.*

6.5 Risk management

The TDAT shall develop a risk identification and mitigation plan and provide training to all staff on these strategies.

The plan shall consider the following:

a) a formal internal and external communication plan;
b) establishment of an emergency building security protocol to manage the movement of visitors, EFCs, family, and support contractors;
c) a formal resident movement management plan to identify all movement of residents from one area of the LTCH to another, as well as leaving the LTCH either with designated formal emergency response personnel or designated family members and EFCs. At admission, this plan shall be provided to the resident, family, and EFCs;
d) establishment of a clear network and agreements in principle of required support agencies and key contacts that could be involved in catastrophic events. These may include
   i) a partner hospital;
   ii) emergency response departments/agencies;
   iii) utility companies;
   iv) support services partners (e.g., food services, laundry, waste management, linens, PPE, housekeeping, building infrastructure maintenance supplies);
   v) alternative emergency housing (e.g., another LTCH, hospitals, schools, community buildings, hotels);
   vi) transportation agency in the event of an evacuation;
   vii) alternative utility providers (e.g., vendors of portable generators, portable essential HVAC systems, temporary potable water sources, fuel suppliers); and
   viii) regional health authorities; and
e) an LTCH risk management system that includes policies, skill sets, training, and tools such as
   i) risk register;
   ii) accountability and responsibilities; and
   iii) risk assessments, analysis, and reporting.

7 Infection prevention and control

Note: *See CAN/HSO 21001 for additional information on infection prevention and control practices that support the delivery of care in LTCHs.*

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7.1 IPAC program structure

7.1.1 Spread of microorganisms

LTCHs shall be designed and operated to prevent exposure to and control the spread of microorganisms.

7.1.2 Policies and procedures review and updating

IPAC policies and procedures shall be reviewed by an ICP annually or more frequently when necessary (e.g., during outbreaks, epidemics, or pandemics). IPAC policies and procedures shall be revised as needed (e.g., when practices from AHJ are updated).

7.1.3 Evidence based IPAC program

The IPAC program shall be based on best practices, guidelines, and recommendations from national, provincial/territorial, and local bodies and international agencies with respect to LTC, as well as incorporate significant findings from the current scientific literature.

7.1.4 IPAC trained staff representative

Each LTCH shall have an IPAC-trained staff representative who is qualified to advise and assist in IPAC policies and procedures. The IPAC-trained representative should be a dedicated role based on the organizational risk assessment.

Note: *See Annex F for a sample IPAC risk assessment.*

7.1.5 LTCH culture, scope, and foundational framework

The IPAC program should describe the culture, scope, and foundational framework necessary for the development of a successful IPAC program.

Note: *For more information on fundamental aspects of IPAC programs, see IPAC Canada's Program Standard.*

7.1.6 IPAC program elements

IPAC program elements shall include

a) IPAC program impact, collaboration, and engagement that takes into account the following:
   i) development of relationships with other departments within the organization (e.g., OHS, EVS) as well as between internal and external partners (e.g., residents, families, volunteers, EFCs, contracted services, local public health);
   ii) an OHS program for healthcare providers related to prevention of, exposure to, and infectious transmission of microorganisms;
   iii) timely access to microbiology laboratory reports and expertise; and
   iv) active participation in facility maintenance standards and all phases of facility design, and construction/renovation project review within the LTCH (see CSA Z317.13);
b) IPAC education that takes into account the following:
   i) educational programs tailored to the IPAC program priorities, services, and resident populations;
   ii) core competencies continuing education for all staff in IPAC at onboarding and annually; and
   iii) education for residents, EFCs, families, volunteers, and visitors;
c) IPAC surveillance program that takes into account the following:
   i) targeted indicators that address the at-risk population and legislated requirements;
   ii) in collaboration with TDAT, staff immunization is up to date;
   iii) timely dissemination of results to persons who require the data to make improvements;
   iv) provincial and territorial reportable disease reporting to local public health;

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v) review of practices for reprocessing of reusable equipment;
vi) review of practices for environmental cleaning and disinfection;
vii) product review and evaluation from an IPAC perspective;
viii) review of care policies and procedures for practices impacting on IPAC; and
ix) continuous quality improvement activities related to HAIs and IPAC activities;

d) antimicrobial stewardship;
e) hand hygiene program (see Clause 7.2);
f) resident flow that takes into account the following:
   i) decision-making for resident placement, accommodation and flow when affected by an infectious disease; and
   ii) a resident health program that addresses IPAC in LTCHs (e.g., immunization);
g) outbreak, epidemic, and pandemic management that takes into account the following:
   i) detection;
   ii) identification;
   iii) investigation;
   iv) response control (e.g., resident and staff cohorting); and
   v) stakeholder communication (e.g., external reporting);

   Note: *See Clause 11 for guidance on catastrophic event management.*
h) management of emergencies, disasters, and major incidents (see Clause 11);
i) role of OHS in the IPAC program that takes into account health and safety protocols related to the IPAC program that comply with relevant national/ provincial/territorial legislation, guidelines, and best leading practices to prevent exposures to and transmission of infectious or hazardous agents or illness;
j) IPAC program policies and procedures that takes into account the following:
   i) up-to-date, evidence-based protocols and procedures that align with organizational priorities and educational programs designed to prevent exposure and manage the risk of transmission of infectious agents or illness; and
   ii) a system of precautions to reduce the risk of transmission of infectious agents (i.e., RPAP);
k) IPAC program research initiatives that takes into account the following:
   i) quality improvement and research incorporated into the IPAC program to evaluate the IPAC program and make ongoing improvements; and
   ii) participation in research activities for programs affiliated with academic health science centres;
l) outbreak/epidemic/pandemic management that takes into account the following:
   i) LTCHs shall refer to their AHJ for guidance;
   ii) an outbreak/epidemic/pandemic plan is established that is tailored to the needs of the LTCH while following AHJ for guidance and is shared with staff, student placements, volunteers, and visitors as appropriate;
   iii) OMT has been identified specific to an outbreak/epidemic/pandemic response plan. Persons involved may include a director of care/manager, medical director, ICP, local public health liaison, EVS, OHS experts, and any other LTCH-specific leadership roles;
   iv) roles and responsibilities of HCWs and staff are clearly stated and understood including any shifts/transitions in roles and responsibilities during an outbreak/epidemic/pandemic;
   v) “tabletop” or drill exercises are completed to practice implementing plans/protocols, especially those related to outbreaks, epidemics, and pandemics; and
   vi) rooms/areas for isolating residents, including for new admissions and transfers, are identified and taken into consideration when scheduling staff, cleaning, meal delivery, etc.; and
m) communication policies and procedures both internal and external to the LTCH (see Clause 5.6).

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7.2 Hand hygiene

Note: *Hand hygiene is the most important method to help prevent HAIs in residents and staff. Availability of traditional hand hygiene facilities (e.g., designated handwashing sinks and ABHRs) encourages the practice of good hand hygiene.*

7.2.1 General

7.2.1.1 Hand hygiene responsibility

Hand hygiene shall be the responsibility of the organization and all individuals involved in health care (e.g., contractors, vendors, visitors, EFCs, family). Hand hygiene audit results shall be reported as indicated in Clause 6.3.

7.2.1.2 Current hand hygiene standards

LTCHs shall follow the most current hand hygiene standards of their AHJ, or in their absence, a widely accepted hand hygiene guideline.

Notes:

1) *See Clause 8.1.2 for information on hand hygiene sink design considerations.*
2) *See CSA Z317.12 for more on hand hygiene policies and procedures.*
3) *Examples of national and international guidelines on hand hygiene that are commonly used include WHO* Guidelines on Hand Hygiene in Health Care *and PHAC's* Hand Hygiene Practices in Healthcare Settings.

7.2.1.3 Hand hygiene method

Hand hygiene should be performed with ABHR, preferably at the point of care.

Hand hygiene shall be performed as follows:

a) before and after contact with a resident (i.e., hand hygiene shall be performed before gloves are donned and again after gloves are doffed whenever gloves are worn);
b) before and after contact with the resident environment (e.g., inanimate objects in the resident's vicinity, including medical equipment and environmental surfaces, such as bed tables or door handles) or after contact with items known or considered likely to be contaminated (e.g., bedpans, urinals, wound dressings), even if gloves are worn;
c) before moving to a clean-body site from a contaminated-body site during care of the same resident;
d) after known or potential contact with blood, body fluids, respiratory and/or other secretions and excretions, exudates from wounds, mucous membranes, or non-intact skin, even if gloves are worn and regardless of whether the source is the resident or HCW;
e) immediately after removing gloves to prevent contaminating other residents, resident-care items, or environmental surfaces;
f) before any procedure requiring aseptic technique (e.g., wound care); and
g) before feeding residents or preparing food or oral medications.

7.2.1.4 Point-of-care ABHR

Hand hygiene with point-of-care ABHR shall be the standard of care for all LTCHs.

Notes:

1) *ABHR is the preferred method of hand hygiene when hands are not visibly soiled. If hands are visibly soiled, the soap and water method is required. The soap and water method is the preferred method when a resident is on contact precautions for* C. difficile*.*
2) *Fire code requirements limit the amount of alcohol that can be stored within any fire compartment. Placement of ABHR and storage volumes must be reviewed and comply with all fire code requirements.*

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7.2.1.5 ABHR requirements

Hand hygiene shall be performed at the point of care. When hands are not visibly soiled, ABHR containing 70% to 90% alcohol should be used. When hands are visibly soiled, hands shall be washed with soap and water.

Notes:

1) *PHAC's* Hand Hygiene Practices in Healthcare Settings *recommends 60% to 90% alcohol; however, 70% is preferred.*
2) *In LTCHs, "point of care" can include the bedside, a resident's chair, or common areas.*

7.2.1.6 Risk factor considerations

The placement of ABHR and alternate access shall be considered in environments where persons with cognitive impairments or addictions might ingest the product, which can lead to serious health risks.

Note: *See Clause 8.1.2.5 about placement of ABHR.*

7.2.1.7 Hand hygiene sinks

Hand hygiene sinks shall be dedicated to that purpose and not used for any other purpose. Sinks used for the cleaning of EVS equipment and the disposal of waste fluids (e.g., IV fluids, lipids, enteral feeding products, used antiseptics) shall not be used for hand hygiene.

Note: *Resident washroom sinks are not considered a dedicated hand hygiene sink.*

7.2.2 Hand hygiene program

Notes:

1) *See IPAC Canada's Program Standard.*
2) *See Government of Canada's* Hand Hygiene Practices in Healthcare Settings.

7.2.2.1 Collaborative and feedback-informed hand hygiene program

LTCHs shall have a hand hygiene program in place that involves input and collaboration from staff, residents, EFCs, and families. This program should be audited and monitored on a scheduled basis as determined by the LTCH's IPAC program, with effective feedback mechanisms for staff, residents, EFCs, and families.

7.2.2.2 Hand hygiene audit results

A summary of compliance results of hand hygiene audits shall be posted in areas where staff, residents, EFCs, and families are able to access. Opportunities for all to participate in hand hygiene strategies, as well as in review and improvement of hand hygiene results, shall be made available.

7.2.2.3 Hand hygiene education programs

LTCHs shall have hand hygiene education programs delivered as part of orientation and reviewed yearly and as required based on local context. This education shall be documented to allow for audits.

Education programs should include but not be limited to the following topics:

a) why hand hygiene is so important;
b) the moments when hand hygiene shall be performed;
c) how to perform hand hygiene;
d) up-to-date hand hygiene practices;
e) hand care and prevention of dermatitis;
f) factors that have an impact on the effectiveness of hand hygiene; and
g) how hand hygiene practices are the responsibility of everyone in LTC.

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7.2.2.4 IPAC safety coaches or champions

LTCHs should have safety coaches or IPAC champions assigned to encourage and support hand hygiene compliance for staff, residents, EFCs, and families.

Notes:

1) *Safety coaches serve as role models for the organization and can be instrumental in driving safety-related change in LTC.*
2) *See CSA Z317.12 for more on resident, EFC, and family engagement.*
3) *Resident, EFC, and family engagement has been shown to increase resident safety by identifying risks and innovations, playing a role in reducing transmission of infections, and increasing hand hygiene rates in HCWs when they are invited to monitor hand hygiene.*

7.2.3 Resident hand hygiene

7.2.3.1 Education and assistance

LTCHs shall place a priority on educating residents, EFCs, and families about hand hygiene. Education shall be provided to residents, their EFCs, and families on the importance and acceptable methods of performing hand hygiene. Residents who cannot perform hand hygiene shall be assisted with performing hand hygiene.

7.2.3.2 Visual placement and access

Special considerations to encourage hand hygiene for residents shall include but not be limited to

a) visual placement and unencumbered physical access to ABHR (e.g., line of sight on high-contrast surfaces); and
b) visual placement and unencumbered physical access to sinks, soap dispensers, linens, and paper towel dispensers in both standing and seated (e.g., wheelchair) positions.

Notes:

1) *LTCHs can consider installing automated ABHR, soap, and paper towel dispensers.*
2) *It is important for resident washrooms to have personal linens for resident use and paper towel dispensers for EFC and family use.*
3) *A safety risk assessment, with guidance from AHJ, is important to determine the placement of ABHR.*

7.2.3.3 Hand hygiene cadence

Resident hand hygiene shall occur before and after eating, after toileting, and as needed (e.g., if hands are visibly soiled, after working in garden areas, when returning from a day outing, prior to preparing meals in shared kitchens).

7.3 Personal protective equipment (PPE)

Note: *See PHAC's* Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Healthcare Settings *for more information.*

7.3.1 General

7.3.1.1 PPE standards

LTCHs shall have appropriate PPE supply and access, as well as cleaning and disinfection policies and procedures that are in compliance with CSA Z8000, CSA Z317.12, CSA Z94.3, and CSA Z94.4.

7.3.1.2 PPE policies and procedures

LTCHs shall establish policies and procedures for

a) adequate resourcing;

b) training;
c) audits and feedback;
d) safety and PPE coaches;
e) buddy programs;
f) safe donning and doffing locations; and
g) safe disposal of used PPE.

7.3.1.3 Whistleblower protection

Whistleblower protection should be incorporated into the policies of the LTCH with respect to IPAC specifically. Every staff member should feel safe to point out omissions and report re-occurrences to the manager. Reporting to external organizations should not be penalized. LTCHs should have mechanisms in place to help stakeholders make anonymous reports of IPAC concerns.

7.3.1.4 Point-of-care resident risk assessment

PPE shall be worn according to the point-of-care resident risk assessment and in accordance with RPAP.

7.3.1.5 PPE supply

PPE shall be supplied to staff, EFCs, and visitors, and the PPE to be used based on the point-of-care risk assessment. Visitors requiring use of PPE shall be trained on safe donning and doffing prior to use.

7.3.1.6 PPE committee

The LTCH shall have a PPE Committee for evaluation, selection, and usage of PPE. Membership shall include HCWs, ICP, occupational health representatives, and purchasing personnel. PPE selection shall comply with guidelines from AHJ.

7.3.1.7 PPE accessibility

PPE shall be readily accessible for staff, available at point of care outside of resident rooms, and stored in a manner that prevents contamination (e.g., covered carts, closed cabinets).

7.3.1.8 PPE storage

LTCHs shall designate clean storage space for PPE supplies. There should be an adequate supply of PPE at all times.

Note: *LTCHs can refer to the Centers for Disease Control and Prevention's* PPE Burn Rate Calculator *for more direction of how much and what type of PPE to have on hand.*

7.3.1.9 PPE inspection

LTCHs shall inspect PPE supplies and remove any damaged items. LTCHs shall rotate stock to reduce risk of use of expired supplies.

7.3.1.10 PPE fitting

LTCH staff shall be properly fitted for items such as eye protection, masks, respirators, gloves, and gowns.

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7.3.2 Donning and doffing

7.3.2.1 Policies and procedures

PPE donning and doffing sequences, including how and when to use them, shall be included in IPAC policies and procedures.

7.3.2.2 Education

LTCH shall provide PPE donning and doffing education to all staff, students, volunteers, and essential care providers upon onboarding and yearly thereafter.

7.3.2.3 Auditing and reporting

The application of PPE donning and doffing policies and procedures shall be audited regularly, with the results reported to the TDAT. Practice improvement activities shall be documented.

7.4 Cleaning and disinfection

7.4.1 General

7.4.1.1 Cleaning and disinfection standards

The TDAT shall create cleaning and disinfection policies and procedures in compliance with CSA Z317.12. These policies and procedures shall include but are not limited to

a) soliciting and incorporating input from residents, EFCs, and families to inform cleaning and disinfection processes;
b) assessing residents', EFCs', and families' satisfaction with cleaning and disinfection policies and procedures;
c) quality management system and auditing;
d) cleaning and disinfection technologies;
e) education, training, and monitoring;
f) cleaning and disinfection of specialized areas;
g) care, maintenance, and storage of PPE related to cleaning;
h) health and safety during cleaning and disinfection procedures;
i) pest control management;
j) cleaning and disinfection of sinks and drains; and
k) waste handling.

7.4.1.2 Policies and procedures

The TDAT shall create cleaning and disinfection policies, procedures, and training that include time allotted for

a) routine daily cleaning;
b) enhanced cleaning; and
c) discharge cleaning.

The policies and procedures shall be kept in a standardized, readily accessible location and be made available for staff reference.

Notes:

1) *It is up to the EVS to determine a cleaning schedule based on the risk assessment and home considerations (e.g., resident demographics).*
2) *Enhanced cleaning is more extensive and higher frequency of cleaning. See CSA Z317.12 for more guidance.*
3) *Refer to PIDAC and CSA Z317.2 for more on cleaning and disinfection policies and procedures.*

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7.4.1.3 Cleaning and disinfection schedule

All common areas, both resident and staff (e.g., lounge spaces, locker rooms, showers and change areas, meditation rooms), shall be on a regular cleaning and disinfection schedule.

Note: *It is up to the EVS to determine a cleaning schedule based on the risk assessment and home considerations (e.g., resident demographics).*

7.4.1.4 Dusting

Dusting should be done at a time when residents are not in the associated room. Dry dusting shall not be performed; only damp dusting shall be permitted.

7.4.1.5 Evidence-based guidelines

The LTCH shall adopt national (e.g., PHAC) or provincial/territorial best practice guidelines for cleaning and disinfection that are based on emerging scientific evidence. These guidelines shall be reviewed on a regular basis and incorporated into the LTCH's cleaning and disinfection policies and procedures.

7.4.1.6 New and emerging technologies

New and emerging technologies shall be reviewed on a regular basis and should be incorporated as applicable in cleaning and disinfection policies and procedures.

Notes:

1) *New and emerging technologies do not replace manual cleaning or disinfection. There are number of new and emerging technologies that might provide promising cleaning and disinfection solutions, such as improved hydrogen peroxide-based liquid surface disinfectants or cold atmospheric pressure plasma.*
2) *See Clause 7.6 for more on new and emerging technologies.*

7.4.2 Cleaning and disinfection products

7.4.2.1 Selection of cleaning and disinfection products

Cleaning and disinfection policies and procedures shall incorporate evidence based on best practice guidance, IPAC principles, and health and safety requirements in the selection of cleaning and disinfectant products. LTCHs shall purchase Health Canada-approved cleaning and disinfection products that have drug identification numbers or natural product numbers.

7.4.2.2 Selection standardization

The TDAT shall standardize the selection of cleaning and disinfection products.

7.4.2.3 Purchasing products

MIFUs shall be reviewed before products (e.g., cleaning products, cleaning tools, equipment) are purchased to ensure the LTCH can comply with the cleaning, disinfection, and preventative maintenance requirements of each product.

LTCHs shall not purchase reusable products (e.g., blood pressure cuff, slings) if they cannot perform the cleaning, disinfection, and maintenance so that they can safely be shared between resident use.

With shared products already in use, the LTCH shall review the cleaning and disinfection label to ensure the products can safely be shared between residents prior to purchase of products.

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7.4.2.4 MIFUs

Duration of use, and cleaning and disinfection processes, shall be followed in accordance with the MIFU of the cleaning and disinfection products.

Note: *See CSA Z317.12 for guidance on MSE and cleaning and disinfection processes.*

7.4.2.5 Automated dispensing systems

The use of automated dispensing systems or ready-to-use products shall be preferred over manual dilution. Automatic dispensers shall be calibrated according to the MIFU. Calibration may be completed by a third-party company. Compliance and auditing of product use and dilution systems should be completed and logged.

7.4.2.6 Inspection and verification

Automatic disinfectant, chemical, and detergent units shall be regularly inspected, and chemical concentration verified, by the LTCH or the manufacturer's designated third-party company.

7.4.3 Care and storage of cleaning, disinfection, and medical supplies

7.4.3.1 Supply placement

Supplies shall be removed from cardboard shipment containers prior to placement in clean storage areas.

Note: *See CSA Z314.18 for more on clean and sterile storage areas.*

7.4.3.2 Resident considerations

Storage procedures, including limiting access to all or certain supplies, shall take into consideration the resident population and demographics.

Note: *Storage procedures are important for resident safety, staff safety, inventory control, and preventing misuse (e.g., poisoning from ingestion of products).*

7.4.3.3 Storage area access

Access to storage areas shall be limited to designated staff.

7.4.3.4 Supply stock rotation

LTCHs shall rotate supply stock to reduce potential use of expired stock.

7.4.3.5 Storage location cleaning and disinfection

Storage location shall be cleaned and disinfected on a regular schedule.

Notes:

1) *See CSA Z317.12 for more on storage of clean supplies, and cleaning and disinfection record-keeping.*
2) *It is up to the EVS to determine a cleaning schedule based on the risk assessment and home considerations (e.g., resident demographics).*

7.4.4 Resident rooms

7.4.4.1 Resident personal items

The TDAT shall conduct a risk assessment to determine which items in the resident's room are required to be cleaned and disinfected and by whom. Cleaning and disinfection shall be documented. Items that

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the operator has deemed the responsibility of the resident, EFC, or family shall be managed by the resident, EFC, or family or removed from the LTCH.

Note: *It is up to the EVS to determine a cleaning schedule based on the risk assessment and home considerations (e.g., resident demographics).*

7.4.4.2 Personal items management

Items that are brought into the home by residents for their bedrooms shall not be shared between residents.

Note: *See Clause 8.2.2 for more guidance on resident bedroom design and personal items.*

7.4.5 Washrooms

7.4.5.1 General

7.4.5.1.1 Cleaning and disinfection standards

Washroom cleaning and disinfection policies and procedures shall be in compliance with CSA Z317.12.

7.4.5.1.2 Policies and procedures

LTCHs shall have policies and procedures addressing cleaning and disinfection for resident washrooms, communal showers, visitor washrooms, and staff washrooms.

7.4.5.1.3 Cleaning and disinfection frequency

All washrooms, regardless of whether they are in resident care areas, shall be cleaned and disinfected daily and at a higher frequency as required.

7.4.5.1.4 Bedpans and urinals

Cleaning and disinfection of bedpans and urinals shall

a) not be done manually;
b) be cleaned and disinfected in compliance with CSA Z314; and
c) be performed in a soiled utility room, and not in a resident washroom.

Note: *See Clauses 5.9.3.2 and 5.9.3.3 for information about macerators.*

7.4.5.2 Resident washrooms

7.4.5.2.1 Enhanced cleaning and disinfection

Enhanced cleaning and disinfection for residential washrooms shall be required

a) for residents colonized or infected with organisms that can persist for a prolonged time within the resident care environment;
b) for residents colonized or infected with organisms that are resistant to standard disinfectants;
c) for residents at greater risk for contaminating the environment (e.g., diarrhea, residents on contact or droplet precautions);
d) during outbreaks, epidemics, or pandemics in consultation with the OMT;
e) for decreasing bioburden; and
f) for situations where washrooms are being used by more than one resident (e.g., overcrowding).

Notes:

1) *It is up to the EVS to determine a cleaning schedule based on the risk assessment and home considerations (e.g., resident demographics).*
2) *Enhanced cleaning is more extensive and higher frequency of cleaning (see CSA Z317.12).*

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7.4.5.2.2 Toilet brushes and swabs

Toilet brushes and swabs shall be dedicated to each resident washroom toilet and shall be discarded

a) upon resident discharge;
b) daily for enteric symptomatic residents (e.g., diarrhea, vomiting); and
c) routinely when visibly soiled, tattered or worn.

Toilet brushes and swabs shall be stored based on the resident assessment. Toilet brushes and swabs should be stored in the resident washroom in a safe location, or discarded after each use.

Notes:

1) *See CSA Z317.12 for guidance on storage of cleaning equipment for toilets.*
2) *See PIDAC Annex C,* Testing, Surveillance and Management of Clostridium difficile*.*

7.4.5.2.3 Cloth identification

LTCHs shall have a system in place to identify the cloth for use in washroom cleaning and disinfection (e.g., labelling, a colour-coded system such as “red for bed and blue for the loo”).

7.4.5.2.4 Cleaning equipment

Single-use cleaning equipment (e.g., brush, swab, wipes) should be used to clean tubs and showers after each use. If reusable equipment is used, the LTCH shall have policies and procedures regarding usage, storage, integrity inspection, cleaning, and disinfection.

7.4.5.2.5 Reusable tub brushes

Should reusable tub brushes be used, they shall be

a) inspected for integrity before use;
b) thoroughly rinsed, hung to dry, and stored safely after each use; and
c) discarded routinely when visibly soiled, tattered, or worn.

7.4.5.2.6 Communal showers

Communal showers, including tubs and showers, shall be cleaned and disinfected daily, and after each resident use. The following cleaning and disinfection policies and procedures shall apply:

a) assignment of responsibility for between-use cleaning and disinfection (for the continuum of hours the equipment is in use);
b) discharge clean after residents with known AROs, other transmissible pathogens, or on additional precautions;
c) cleaning and disinfection frequency log to be posted on each shower door (including times and signature);
d) a written schedule and task assignment for restorative/maintenance cleaning and disinfection; and

   Note: *Restorative and maintenance cleaning and disinfection is a procedure that cleans and disinfects not only the high-contact surfaces but every surface, including the build-up of solids in and around any wheel portions of the equipment.*
e) availability of tools to clean and disinfect MSE (e.g., procedures, cleaning and disinfection products, and accessories).

Note: *It is up to the EVS to determine a cleaning schedule based on the risk assessment and home considerations (e.g., resident demographics).*

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7.4.5.3 Visitor washrooms

7.4.5.3.1 Frequency of cleaning

Visitor washrooms shall be cleaned regularly at least once per day or as needed.

Note: *See Clause 7.6 for more on cleaning and disinfection.*

7.4.5.3.2 Washroom restrictions

Visitors shall not use resident washrooms.

Note: *See Clause 8.1.3 for more on visitor washrooms.*

7.4.6 Equipment

7.4.6.1 Shared medical equipment

Shared medical equipment (e.g., bath lifts, slings) used in the LTCH, including purchased, rented, borrowed, or donated equipment and equipment used for research purposes, shall be cleaned and disinfected between each resident use according to the MIFUs.

7.4.6.2 Dedicated shared medical equipment

If shared medical equipment is comprised of materials that cannot be adequately cleaned and disinfected (e.g., slings), they shall be dedicated to a single resident and a laundering schedule shall be established for the item.

7.4.6.3 External contractors

External contractors shall have appropriate policies and procedures for the cleaning and disinfection of medical equipment delivered for resident use.

7.4.6.4 Item-specific MIFUs

LTCHs shall have item-specific MIFUs for cleaning and disinfecting all medical and research equipment.

7.4.6.5 Cleaning and disinfection equipment

Reusable equipment used for cleaning and disinfection (e.g., mop handles, housekeeping carts) shall be cleaned and disinfected on a daily basis.

7.4.6.6 Plastic coverings

Plastic coverings for equipment shall be

a) disinfected or discarded between individual resident use;
b) disinfected on a regular basis if the equipment within the care environment is for non-resident care; and
c) discarded and replaced when damaged or if designed for single use.

Notes:

1) *Some LTCHs might have equipment that cannot be properly cleaned (e.g., x-ray machines) and thus a plastic covering can be used.*
2) *It is up to the EVS to determine a cleaning schedule based on the risk assessment and home considerations (e.g., resident demographics).*

7.4.6.7 Electronic equipment

Electronic equipment that cannot be cleaned and disinfected shall not be purchased, installed, or used in the LTCH.

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7.4.6.8 Nurse call buttons or cords

Nurse call buttons or cords shall be cleaned and disinfected. If cords are used, material shall be non-porous, wipeable, and resistant to breakdown from cleaning.

Note: *It is up to the EVS to determine a cleaning schedule based on the risk assessment and home considerations (e.g., resident demographics).*

7.4.7 Kitchen and dining area

7.4.7.1 Policies and procedures

Policies and procedures shall be developed for

a) cleaning and disinfection of kitchen equipment and dining areas;
b) frequency of cleaning; and
c) safe food handling.

7.4.7.2 Multi-use items

Multi-use items (e.g., salt and pepper shakers) shall be cleaned and disinfected between table settings and meals.

7.4.7.3 Frequency of cleaning

Tables (e.g., dining table, overbed table) shall be cleaned and disinfected between each resident.

Note: *It is left to the LTCH to decide whether tablecloths can be used.*

7.4.7.4 Outbreaks, epidemics, and pandemics

Cleaning and disinfection policies and procedures regarding the kitchen and dining areas shall explore methods to reduce risk of infection during outbreaks, epidemics, and pandemics.

7.5 Laundry

Notes:

1) *Refer to CSA Z314 for more details on laundering.*
2) *The laundry services provided by the LTCH can be in-house, outsourced to a commercial health care laundry company, or a combination of both (e.g., textiles done by third party while LTCH handles resident clothing).*

7.5.1 General

7.5.1.1 EFC, family, and resident collaboration

LTCHs shall meet with residents, EFCs, and families at admission to discuss available laundry services, including policies and procedures for resident and non-resident items. LTCHs may offer EFCs, families, and residents the option to do their own personal laundry.

7.5.1.2 Policies and procedures

LTCHs shall establish policies and procedures for laundry services, including safe work practices for processing of soiled and clean laundry so that laundered textiles remain hygienically clean. These policies and procedures should consider but not be limited to

a) area design, including adequate ventilation;
b) provisions for strict separation of soiled laundry from clean laundry;
c) detergent dispensing;
d) temperature regulation;
e) handling;

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f) transport,
g) receiving, storage, and handling of soiled laundry; and
h) transport and storage of clean textiles.

Note: *Laundry in LTCHs includes textiles (e.g., sheets, towels, face cloths, pillowcases, blankets), reusable isolation gowns provided by the LTCH, and resident clothing.*

7.5.1.3 Staff training and education

Staff shall be trained and educated on the LTCH's laundry programs, policies, and procedures.

7.5.1.4 Scheduled cleaning and disinfection

LTCHs shall have regularly scheduled cleaning and disinfection for the laundry room, as well as regularly scheduled maintenance for all laundry room equipment. All areas including the clean laundry area, wash area, and soiled sort area shall be cleaned and disinfected daily in the following order:

a) clean area;
b) dirty area; and
c) most soiled area.

Note: *It is up to the EVS to determine a cleaning schedule based on the risk assessment and home considerations (e.g., resident demographics).*

7.5.1.5 Staff and resident instruction

Staff and residents shall be instructed in the procedures for safe use of a domestic washer and dryer.
Staff shall be instructed in the procedures for safe use of a commercial washer and dryer.

Note: *Some residents cannot use washers and dryers without family or EFC assistance.*

7.5.1.6 Commercial washers and dryers

If the LTCH is using commercial washers and dryers, then the supplier of the cleaning products or a third-party company shall inspect their laundry program, including dispensing of detergents.

Notes:

1) *Third-party companies develop specific programs, policies, and procedures that are appropriate for different types of textiles (e.g., bedsheets, curtains, PPE, slings).*
2) *Commercial washers are needed for textiles provided by the LTCH so that the appropriate temperatures are reached to clean and disinfect appropriately. Textiles include bedsheets, covers, curtains, and PPE.*

7.5.2 Handling of laundry

7.5.2.1 Soiled laundry handling

Care shall be taken in the handling of soiled laundry to prevent dispersal of microorganisms. The following procedures shall be observed:

a) Staff handling soiled laundry shall wear PPE as required.
b) Soiled textiles shall be handled as little as possible, at the point of use, with minimum agitation and shaking.
c) Staff shall gently remove one piece of laundry at a time to avoid dispersal of microorganisms and skin cells.
d) Staff shall check each piece of laundry for foreign objects (e.g., sharps, dentures, hearing aids) at point of use prior to being placed in a soiled textile hamper.
e) Staff shall remove heavy soiling, then fold linen into itself containing the heavy soiling in the centre before placing laundry in soiled textile hamper.
f) Soiled laundry shall be placed directly into the soiled laundry hamper or container and not on the floor, windowsill, chair, etc.

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7.5.2.2 Laundry bag use

Laundry bags shall be strong enough to hold the contents and be leak-resistant. Soiled laundry bags shall not be overfilled.

7.5.2.3 Soiled textile storage time

Soiled textiles shall be stored for as short a time as possible between use and laundering to minimize staining, odours, and growth of microorganisms.

7.5.2.4 Dissolvable laundry bags

Dissolvable laundry bags may be used.

7.5.2.5 Reusable laundry bags

If reusable laundry bags are used, they shall be laundered after each use and should be included in the LTCH's laundry policies and procedures.

7.5.2.6 Heavily soiled laundry

Segregation and special considerations shall be taken in the handling of heavily soiled laundry (e.g., special washing or discarding).

7.5.3 Laundry carts

7.5.3.1 Operations

Operations related to laundry carts shall be documented and followed regarding

a) where dirty carts come into the laundry room;
b) sorting of carts;
c) cleaning and disinfection of carts with appropriate products; and
d) transport and storage of clean carts.

7.5.3.2 Cart covers

Carts used to store clean textiles in households shall have covers if in transport and if being stored in hallways.

7.5.4 Laundry chutes

7.5.4.1 Cleaning and disinfection

Where laundry chutes are incorporated, they should be properly designed, maintained, and regularly cleaned and disinfected to minimize cross-contamination and aerosol dispersion from contaminated laundry. Existing LTCHs that have laundry chutes shall have scheduled cleaning and disinfection, decontamination, and maintenance. Any system design to transport soiled laundry shall be evaluated for IPAC considerations.

Note: *Refer to CSA Z8000 for additional guidance on laundry chute design.*

7.5.4.2 Policies and procedures

If it is necessary to use a laundry chute, policies and procedures shall be established, in consultation with ICP, for its use.

Note: *Although convenient, laundry chutes can jeopardize safety because of*

a) *potential IPAC hazards caused by leaks or broken bags;*

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b) *difficulty of cleaning, disinfection, and repair;*
c) *potential damage to textiles from sharp edges or leaked fluids; and*
d) *access control (e.g., risk of access by children).*

7.5.5 Resident items

7.5.5.1 Separation, labelling, and segregation

LTCHs shall have policies and procedures for separation, labelling, and segregation of resident clothing from shared textiles.

7.5.5.2 Loss and damage prevention

LTCHs should have policies and procedures to prevent loss and damage to resident clothes and personal items (e.g., blankets).

7.5.5.3 Laundering policies and procedures

Laundering of resident personal items (e.g., clothing and blankets)
a) shall be done separately if using a domestic grade washing machine; and
b) may be combined with other textiles if using a commercial washer that uses heat or chemicals to reduce microbial load on the clothing.

7.5.5.4 Domestic washers and dryers

Domestic washer and dryers shall be reserved for resident clothing only.

7.5.5.5 Domestic washer and dryer disinfection

After each load, the domestic washer and dryer shall be disinfected on the outside of the machines.

7.5.6 Non-resident items

7.5.6.1 Reusable textiles

LTCHs shall evaluate and purchase reusable textiles (e.g., linens and microfibres) with MIFUS that can withstand laundering processes.

7.5.6.2 Commercial washers and dryers

All reusable textiles shared between residents shall be laundered in commercial washers and dryers.

7.5.6.3 Outsourcing

Laundering of reusable textiles may be outsourced.

7.5.6.4 Domestic washer and dryer restrictions

Domestic washers and dryers shall not be used to launder reusable textiles.

7.5.6.5 Reusable isolation gowns

LTCH shall confirm with gown suppliers the number of washes that reusable isolation gowns can endure. LTCHs should track the number of washes for the gowns. If there is no way to track the number of washes in order to know when to add the repellency chemical, then a maintenance dose of the

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chemical should be added to each wash load of isolation gowns. Gowns should be discarded if any there are any signs of wear (e.g., fraying, thinning of material)

Note: *Level 2 reusable isolation gowns have a repellency coating that is diminished with each wash. Some might be diminished after 50 washes, while others less or more. The gowns provide protection based on the weave of the product. The number of washes and type of weave determine when the gowns must be recharged though a chemical process.*

7.6 New and emerging technologies

Notes:

1) *CSA EXP06 provides guidance in evaluating new materials and technologies in the physical environment.*
2) *See CARF's* Aging Services Standards Manual *for guidance on person-centred long-term care communities, including business practices, care processes, and program-specific quality standards.*

7.6.1 Cleaning and disinfection systems

LTCHs considering the use of cleaning and disinfection systems (e.g., chemical disinfectant vapour or mist systems; mobile, manual, and automatic UV room disinfection) shall evaluate the following in collaboration with the TDAT:

a) independent, evidence-based data that demonstrates the effectiveness of the technology;
b) potential impacts to the health and safety of residents, visitors, and personnel when the system is operating (e.g., use of PPE, HVAC system, sealing room, signage);
c) compatibility with surfaces after repeated exposure (e.g., compatibility of plastic and polymer surfaces);
d) the level of microorganism reduction;
e) turnaround time and impact on occupancy and workflow;
f) likelihood of achieving the intended outcome; and
g) the feasibility of using this technology in the practice setting.

Note: *See CSA Z317.12 for information on the following cleaning and disinfection technologies:*

1) *UV light C (UVC) disinfection;*
2) *visible light disinfection;*
3) *air disinfection using UVGI;*
4) *self-sanitizing surfaces; and*
5) *photocatalytic disinfection.*

7.6.2 Self-sanitizing surfaces

The LTCH design team in collaboration with the TDAT may consider the use of self-sanitizing surfaces for use in high-risk areas (e.g., nurse station counters, overbed and bedside tables, handrails).

7.6.3 Cleaning and disinfection agents

LTCH-approved cleaning and disinfection agents shall be compatible with self-sanitizing surfaces.

7.6.4 Tagging system

LTCHs shall have a tagging system or a way to log that shared equipment has been cleaned and disinfected.

7.6.5 Disinfectant location

Disinfectants (e.g., wipes) shall be provided close to, or attached to, shared equipment to support cleaning and disinfection.

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7.6.6 Manual cleaning and disinfection

NTDS shall not replace manual cleaning and disinfection processes or frequencies but are meant to supplement their effectiveness.

Selected NTDS shall be used only immediately after the area has been cleaned and disinfected.

Note: *NTDS are intended to supplement routine cleaning and disinfection of surfaces and spaces.*

7.6.7 NTDS use

LTCH shall have a policy and procedure outlining how to use the NTDS. The use of NTDS shall follow best practices for cleaning and disinfection. The LTCH should refer to federal and provincial/territorial guidelines or peer-reviewed scientific studies before selecting NTDS.

Note: *See* PIDAC's Best Practices for Environmental Cleaning for Prevention and Control of Infections in All Health Care Settings.

7.6.8 NTDS selection

Considerations for selection and use of NTDS shall include

a) evidence-based review of the different technologies and concepts of NTDS;
b) that the NTDS be Health Canada-approved for use in LTCHs;
c) decontamination effectiveness;
d) cost, including equipment and consumables for both manual cleaning and NTDS;
e) timing, including manual cleaning and cycle time;
f) human resources for both operating the unit and manual cleaning;
g) education needs;
h) access to rooms (down time);
i) safety; and
j) risk benefit for use.

8 Design

Notes:

1) *See Annex G for a visual representation of an example of a LTCH layout.*
2) *See CAN/HSO 21001 for additional guidance on providing a home-like environment.*

8.1 Facility-wide functional requirements

8.1.1 General

8.1.1.1 Community involvement and connectivity

LTCHs should promote optimal opportunities for community involvement. The location for a LTCH should be selected with emphasis on connectivity with a surrounding community, including residential land uses, community amenities such as parks or recreation centres, and access to transit.

8.1.1.2 2SLGBTQI+ design

LTCHs shall accommodate 2SLGBTQI+ design throughout the LTCH.

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8.1.1.3 Everyday activities

The LTCH shall be designed and constructed to optimize everyday activities of residents, EFCs, families, staff, and visitors with various levels of physical, cognitive, and sensory abilities, and to protect the physical and psychological health of staff.

The layout and design of the LTCH shall facilitate the safe and efficient operational profile described in Clause 5.

Notes:

1) *See CSA Z8000 for additional design and detailed room requirements.*
2) *See CSA B651 for more on accessibility considerations.*
3) *See federal, provincial/territorial, and local laws for regulatory and building codes that might apply.*

8.1.1.4 Person-centred design

The built environment and layout should maximize the dignity, privacy, and autonomy of residents, with the inclusion of built-in elements to provide support for visitors and enhance the programs and care provided by staff.

Note: *It is important to allow persons living with dementia to move freely and safely with opportunities to stop and rest.*

8.1.1.5 Residential design

The LTCH design and layout shall be residential in nature and should promote an acceptable quality of life as measured by the quality of care instrument adopted by the LTCH.

Notes:

1) *See Clause 4 for guidance on organizational commitments including PCC and EDI.*
2) *See CAN/HSO 21001 for additional information on access to nature and quality of life in LTCHs.*

8.1.1.6 Intergenerational relationships

LTCH facilities and grounds should encourage intergenerational relationships.

Note: *Creating partnerships in the community is vital for not only the well-being of the resident but also for those in the community who choose to participate. Examples include*

a) *incorporating a daycare and a playground for children of staff members, and creating multi-generational programming so that older adults and children can interact in a meaningful way;*
b) *creating an afterschool reading, music, and art program; and*
c) *partnering with a local dental school to run an oral care program.*

8.1.1.7 User group needs

When planning for a new build or major renovation, a procedure shall be included to identify and resolve possible conflicts between the operational and accessibility needs of different user groups.

Note: *In some situations, a design solution intended to help one user group can inadvertently create a barrier for other groups.*

8.1.1.8 Technological innovation

The planning and design process for new construction, additions, and renovations shall include accommodations for potential evidence-based technological innovation.

8.1.1.9 Accessibility

All spaces shall be designed to facilitate optimal accessibility and allow family, EFCs, visitors, and staff to assist residents whenever possible.

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8.1.1.10 Indoor and outdoor spaces

The design shall include public indoor spaces (e.g., café) and outdoor spaces (e.g., garden pathways).

8.1.1.11 Resident demographics

Newly constructed or renovated LTCHs shall be designed to accommodate current and projected local, regional, and provincial/territorial resident demographic profiles.

8.1.1.12 IPAC practices

The LTCH shall be designed to minimize the potential transmission of microorganisms by air, water, or contact with surfaces, and shall provide the necessary equipment, physical supports, and spaces to carry out routine IPAC practices.

Note: *See CSA Z8000 for more on IPAC design considerations.*

8.1.1.13 Windows and views of the outdoors

When planning a new LTCH or renovating an existing one, the layout shall incorporate windows or views of the outdoors in all resident areas (e.g., resident bedrooms, multi-purpose rooms). Public spaces should have access to windows or views of the outdoors for added flexibility.

8.1.2 Hand hygiene

Note: *See CSA Z8000 for the recommended location and placement of hand hygiene sinks and waterless hand hygiene stations.*

8.1.2.1 Sinks and ABHR product development

New and existing LTCHs shall determine and plan the location of the hand hygiene sinks and ABHR, via an organizational risk assessment in consultation with TDAT, consistent with the ICRA, and in accordance with CSA Z8000 and CSA Z317.1.

8.1.2.2 Dedicated hand hygiene sinks

HCWs shall have access to dedicated hand hygiene sinks.

8.1.2.3 Collaboration with staff, residents, EFCs, and families

LTC staff, residents, EFCs, and families should work collaboratively to encourage innovative approaches and strategies to optimize resident safety with the need for strategic placement of hand hygiene products and equipment.

8.1.2.4 ABHR accessibility

ABHRs shall be accessible to staff, residents, EFCs, visitors, and families.

8.1.2.5 ABHR placement

ABHRs shall be placed at the point of care near the resident and HCW, using one or more of the following means:

a) attached to the resident’s bedside;
b) attached to a physical element (e.g., wall);
c) attached to resident equipment; or
d) carried by the HCW.

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8.1.2.6 New or renovated LTCH

When planning a new or renovated LTCH, the layout of the facility shall highlight

a) the location of hand hygiene sinks in the LTCH, and the placement of the sink(s) within each room location and in relation to counters and other related fixtures;

   Note: *See CSA Z8000 for recommended location and placement of hand hygiene sinks and waterless hand hygiene stations.*

b) hand hygiene sink design; and

   Note: *See CSA Z317.1 for guidance on hand hygiene sink design.*

c) the location of waterless hand hygiene stations.

8.1.3 Visitor washrooms

8.1.3.1 Washroom location

A staff and guest two-piece washroom may be provided in each neighbourhood and within close proximity of the household entrance.

Note: *If possible, these washrooms should be included inside the household but dedicated to staff and visitors.*

8.1.3.2 Resident room proximity

LTCHs should allocate space on each floor for visitor washrooms that are within reasonable walking distance to resident rooms. Training and signage explaining the risk factors of visitors using resident washrooms should be incorporated.

8.1.4 Outdoor spaces

Notes:

1) *See Annex H.*
2) *See Clause 8.2.4 for outdoor spaces in households.*

8.1.4.1 Resident and visitor consideration

All building landscapes shall be designed with the resident and the visitor in mind as the primary users.

Note: *Outdoor spaces are also important to support staff physical and mental health (e.g., staff breaks).*

8.1.4.2 Access and accessibility

LTCHs shall provide easy access to safe and secured outdoor spaces, which may include an enclosed courtyard or a safe patio, balcony, or deck to reduce falls, trips, and hazards.

Notes:

1) *A connection to nature improves well-being and can reduce stress, expedite healing, and increase cognitive functions. Biophilia is the innate relationship between humans and nature. Biophilic design can be introduced into a space by*
   a) *bringing nature and natural materials into the space;*
   b) *including images and patterns that reflect or mimic forms in nature;*
   c) *creating spaces that are inspired by our relationship to nature such as*
      i) *canopies that provide refuge/shelter;*
      ii) *long views or vistas; and*
      iii) *architectural details that arouse mystery and encourage discovery.*
2) *See 14 Patterns of Biophilic Design (https://www.terrapinbrightgreen.com/report/14-patterns) for recommendations.*

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8.1.4.3 Home garden environment

A home garden environment shall be incorporated into outdoor spaces. The home garden shall include

a) walking paths to multiple destinations (e.g., fountain plaza, artificial beach, greenhouse);
   Note: *Consider use of different finishes, not just concrete pathways.*
b) benches and frequent rest stops;
c) common areas;
d) private areas for contemplation and meditation, or to be shared with family, EFCs, and friends;
e) spatial understanding; and
f) gardening areas.

Note: *A home garden environment in outdoor spaces can provide different options of healthy habits for the residents. It provides a calm and tranquil environment that helps facilitate rest and enhanced emotional well-being.*

8.1.4.4 Grounds and pathways

Accessible and levelled grounds and pathways shall be incorporated throughout the property.

Note: *See CSA B651 for more on pathway design.*

8.1.4.5 Outdoor activities

Outdoor spaces should provide an opportunity for a range of activities (e.g., gardening, exercise, sitting at a picnic bench, watering flowers, playing chess) that foster independence.

8.2 Household

8.2.1 General

8.2.1.1 Household design

Resident rooms should be clustered within small communal households. The number of resident rooms clustered in a household shall be determined by the program requirements.

Note: *A large LTCH includes multiple households that share common areas. This is referred to as a neighbourhood. The neighbourhood(s) is supported by the broader LTCH community which includes spaces such as lobbies, meeting rooms, and service areas. See Clause 8.4 for LTCH community. A small LTCH can include only one household.*

8.2.1.2 Small home model

Resident households shall be based on a small home model where residents share the communal activities of day-to-day living with a limited number of residents.

Notes:

1) *LTCHs should strive to strike a balance between making the LTCH feel and look like a home and maintaining the safety of the residents.*
2) *CSA Z8004 recommends that clusters of 10 to 12 resident rooms in each household be considered.*

8.2.1.3 Household spaces

The resident household shall have a variety of spaces to encourage an active communal lifestyle. Some examples of different spaces that the resident household may include are

a) foyer (e.g., household entrance lobby);
b) private resident bedrooms, each with a sitting area and an ensuite washroom;
c) library;
d) computer workstation with internet access;
e) small TV room/den;

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f) a larger group living room;
g) dining room (e.g., traditional family style table plus two individual tables);
h) kitchen and/or servery;
i) kitchen administrative area;
j) resident-shared washroom visible from communal living area;
k) resident laundry;
l) clean linens cabinets and storage rooms;
m) service closets as required;
n) activity room, which can be part of lounge areas;
o) equipment niches; and
p) work areas for the care team.

8.2.1.4 AIRs

Resident rooms and washrooms requiring airborne precautions shall be designed as AIRs in accordance with CSA Z8000 and incorporate HVAC requirements in accordance with CSA Z317.2. For existing LTCHs with multi-resident bedrooms, a single bedded room shall be incorporated on each resident household or within each neighbourhood and shall be designed as AIRs.

The single room may be used as a short-term palliative care bedroom to allow management of residents with transmissible infections or as an activity and multi-purpose room (e.g., for ritual and prayers).

The single bedded room should be of a residential character (e.g., personal belongings, windows) and provided with a nurse call system.

8.2.2 Resident bedroom

8.2.2.1 Resident bedroom accommodations

All resident bedrooms in new LTCHs should be designed to accommodate single-resident bedrooms. Two-person or adjoining resident bedrooms may be considered where this is the desired arrangement of the residents (e.g., siblings, spouses, friends).

Notes:

1) *Single-bed occupancy in healthcare settings has been shown to reduce the potential for transmission of organisms and therefore decrease the risk of infection, decrease medication errors, and improve overall safety for both residents and staff.*
2) *The LTCH resident bedroom is the core of residents' personal requirements accommodating the basic life needs of privacy, sleeping, grooming, and dressing. It meets the needs of resident safety and comfort while promoting independence and dignity.*

8.2.2.2 Bedroom customization

All residents should have the opportunity to customize their bedroom space, which might require accommodating personal belongings (e.g., furniture and decor) in accordance with LTCH policy and input from the TDAT.

The room shall be adapted to best meet the care needs of each resident and to optimize their quality of life (e.g., grab bar placement and controls, thermal controls, mirror placement).

8.2.2.3 Multi-resident bedrooms

For existing LTCHs where multi-resident bedrooms are present, the LTCH shall accommodate a maximum of two residents. Clinical justification for multi-resident bedrooms shall meet the provisions in CSA Z8000.

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8.2.2.4 Resident bedroom design

Resident bedrooms shall be designed in accordance with CSA Z8000. Room design considerations shall include

a) spatial configuration and customization;
b) temperature control;
c) acoustic control;
d) lighting; and
e) wayfinding.

The space provided for each resident bedroom area shall comply with CSA Z8000 regarding minimum clearances of space at the sides and foot of the resident bed or care area.

8.2.2.5 IPAC risk assessment

An IPAC risk assessment should be carried out for each resident bedroom, common area, and washroom before new residents move into the household.

8.2.2.6 Materials and furnishings

Resident bedrooms should incorporate materials that are easy to clean and disinfect while also warm and inviting. The LTCH may accept resident-owned furniture that is made of cloth material as long as the item

a) is not shared between residents;
b) remains in the resident bedroom;
c) is not donated back to the LTCH; and
d) does not pose a risk or barrier to a resident's ability to perform a sit-to-stand motion or impedes their ability to be continent.

Cloth furniture shall be steam cleaned or shampooed on a scheduled basis.

Note: *It is beneficial for LTCHs to have steam cleaning and shampooing tools to support the cleanability of personal belongings.*

8.2.2.7 Resident separation dividers

Use of resident separation dividers (e.g., privacy curtains) should be limited in LTCHs.

Where resident separation dividers are used in existing LTCHs, they shall be laundered when visibly soiled or during a discharge clean. Efforts shall be made to remove resident separation dividers in new or renovated LTCHs with private rooms.

Resident separation dividers should be cleaned in accordance with the manufacturer's instructions and on a scheduled basis.

LTCHs should change resident separation dividers regularly (e.g., monthly).

Note: *Single-resident bedroom design would not require a separation divider. Resident separation dividers act as a vehicle of transmission and are high-touch surfaces.*

8.2.3 Resident washrooms

8.2.3.1 Resident washroom design

Each resident bedroom should have a dedicated three-piece washroom.

Note: *See CSA Z8000 for guidance on resident washroom design and construction.*

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8.2.3.2 Washroom placement

The washroom should be as close as possible to the bed to facilitate access.

8.2.3.3 Washroom elements

Elements within the washroom (e.g., sinks, showers) shall be designed so that they are accessible and enable a resident to be able to use them effectively in a manner that supports their independence and needs.

Note: *See CSA B651 for more design considerations.*

8.2.3.4 Design applicability

LTCHs should consider washroom layouts and designs that are appropriate for the resident population (e.g., persons with dementia, residents receiving complex care).

8.2.3.5 Shared resident areas

A dedicated resident washroom may be provided within shared resident areas of the LTCH.

8.2.4 Outdoor spaces

8.2.4.1 Outdoor access

All residents shall have direct access to the outdoors without having to leave the household.

8.2.4.2 Multi-level LTCHs

All new LTCH builds shall incorporate outdoor space on each level of the LTCH (e.g., outside deck).

8.2.4.3 Gardens

Outdoor facilities should include gardens for private reflection and group activities. There are three forms of gardens that LTCHs should incorporate

a) sensory;
b) therapeutic; and
c) horticultural.

Notes:

1) *See Figures H.1 to H.3 in Annex H for visual representations of LTCH gardens.*
2) *Providing easy access to outdoor areas can have a positive impact on resident outcomes such as nutrition intake, positive sleep hygiene, seasonal associated disorders, apathy, and sundowning.*
3) *Additional outdoor area requirements can be found in CSA Z8000 (e.g., accessibility, observability, and linkages to the functional program).*

8.2.5 Kitchen, servery, and dining area

Note: *Some LTCHS have two types of kitchens, a community kitchen where bulk cooking is done (e.g., main courses) and a household kitchen where additional sides and complementary cooking is done.*

8.2.5.1 Communal tables

Large, accessible, and height-adjustable communal tables shall be available to accommodate group dining activities. Space shall be available for residents who require assistance during meals.

8.2.5.2 Resident demographics

Functional programming of dining spaces, seating plans, and procurement of seating styles shall reflect the demographics of the LTCH such that individuals of varying mobility (e.g., with walkers and

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wheelchairs) or persons of varying sizes have sufficient space to circulate and/or park their personal equipment.

Note: *Such measures can reduce the risk of resident accidents, staff injury, and inadvertent contact transmission from high-touch surfaces related to clutter and crowding.*

8.2.5.3 Seating and space

Comfortable, safe, and appropriate seating or wheelchair space shall be available for ambulatory residents.

8.2.5.4 Table dressings

Tables should be dressed in a residential style.

8.2.5.5 Table coverings

Table coverings that provide good contrast between the plate and the table surface should be used.

8.2.5.6 Tableware selection

The selection of tableware should be comfortable and familiar to residents. Decisions about tableware and table settings should take into account the demographics of the LTCH, accessibility requirements, and cultural considerations.

Note: *A positive dining experience can be achieved through colour contrast of the table surface, tableware design, and plating of food, as well as tactile qualities of the table setting.*

8.2.5.7 Warming stations

Access to warming stations shall be provided to families and EFCs who bring in food for the enjoyment of their relatives or for group activities hosted in the household.

8.2.5.8 In-room dining

Design requirements shall support in-room dining in the event the resident becomes ill with a transmissible enteric illness or respiratory infection.

Note: *See CSA Z8000 and CSA Z317.2 for more information on design requirements.*

8.2.6 Laundry areas

Note: *Two laundry areas are required, one within the household, and one within the community. See Clause 8.3.6 for details on the neighbourhood laundry room.*

8.2.6.1 Residential style laundry room

A small, two-machine (i.e., washer/dryer), residential-style laundry room should be located in the household for residents, EFCs, and family to do their own personal laundry.

8.2.6.2 Accessibility and socialization

The laundry room shall be accessible. It may resemble a small lounge or café-style laundromat where residents can socialize and visit with each other or EFCs, family, and friends.

8.2.7 Resident exploring

Strategies shall be used to minimize the risk of residents with cognitive impairments or behaviours from leaving the household.

Note: *When approved by AHJ, doors can be disguised by concealing door hardware, and by using wall murals.*

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8.3 Neighbourhood and shared programming

8.3.1 General

8.3.1.1 Common areas

A group of households may share common areas that provide additional support to each of the households.

8.3.1.2 Active communal lifestyle

The neighbourhood shall support an active communal lifestyle.

8.3.2 Storage

Note: *Storage rooms are often incorporated in the household and/or neighbourhood.*

8.3.2.1 Policies and procedures

LTCHs shall

a) incorporate storage policies and procedures that consider point-of-use access;
b) maintain clear width of corridors and aisles.

Note: *See CSA Z317.12 for more information on care and storage of supplies.*

8.3.2.2 Locations

Storage locations shall include but are not limited to

a) resident areas;
b) PPE areas;
c) clean utility/supply rooms;
d) soiled utility rooms;
e) household or central equipment storage rooms;
f) housekeeping closets;
g) equipment rooms;
h) waste holding areas; and
i) loading docks.

8.3.2.3 IPAC considerations

Storage of supplies shall be in a location that is accessible for staff and minimizes the risk of contamination of clean supplies from resident and visitor traffic.

Storage procedures and design considerations shall be implemented to reduce potential cross-contamination with clean supplies.

Note: *Although soiled utility rooms can house soiled items, this is also where human waste is disposed for those who need assistance and cannot use a washroom. It is against IPAC guidelines to dispose of bedpan, urinal, or emesis waste in the resident's washroom.*

8.3.2.4 Access

Access to staff storage locations shall be restricted to staff only.

8.3.2.5 Supply and storage requirements

LTCHs shall have adequate supplies on hand to support operations and resident care, particularly when outbreaks, epidemics, or pandemics are anticipated or in progress. To support this need, architectural

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programming and planning of LTCHs shall include estimates and studies on storage design to accommodate supply requirements during outbreak, epidemic, or pandemic conditions.

Note: *See Clause 11 for more guidance on catastrophic event management.*

8.3.3 Staff rooms

8.3.3.1 Conference and meeting space

Neighbourhoods should have a dedicated staff conference and meeting space with a view to the corridor. Acoustic privacy shall be maintained to allow for confidential conversations.

8.3.3.2 Staff room design

Staff rooms shall be designed for rest.

8.3.3.3 Staff room elements

Staff rooms shall include:

a) lockers;
b) a two-piece washroom;
c) reclining seating;
d) a dining table for shared meals;
e) a view to the outdoors;
f) a general-purpose sink;
g) a coffee station; and
h) a warming station (e.g., microwave and toaster oven) that may be placed behind lockable closed doors. Full instructions of how appliances work shall be provided and updated regularly.

8.3.4 Bathing room

Notes:

1) *While it is preferable to have a dedicated bathing room, or tub room, in each household, it is often not feasible. The next best solution is to locate it between households in the shared core of the neighbourhood. The LTCH can choose to include a shower room in the household and bathing room in the neighbourhood. This might cause design challenges because the designer must provide private access to the tub room without having to bring a resident through public spaces, requiring a back entry into the core where two or more households have access without going through the public zones.*
2) *A bathing room is not to be confused with a salon (e.g., aesthetician services) or therapeutic spa (e.g., massage), which can be included in the LTC community.*

8.3.4.1 Bathing room design

LTCHs shall have a bathing room to assist bathing and with extreme incontinence episodes.

Note: *See CSA Z8000 for guidance on bathing room design.*

8.3.4.2 Bathing room use

The bathing room shall be used by one resident at a time.

8.3.4.3 Temperature control

Bathing rooms shall have a constantly controlled ambient temperature.

Note: *See CSA Z317.2 for more on bathing room design.*

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8.3.5 Multi-purpose rooms

Note: *Multi-purpose rooms can be present throughout the LTCH (e.g., household, neighbourhood, community). They can differ in their use and size in different LTCHs.*

8.3.5.1 Shared multi-purpose room design

Shared multi-purpose rooms for private family gatherings or group activities (e.g., spiritual space, activity room, meeting room, social gathering room) shall be available and accessible outside the household. Shared multi-purpose rooms might require assistive listening systems.

8.3.5.2 Multi-purpose room uses

LTCHs shall provide

a) small multi-purpose rooms where residents and visitors can easily gather to socialize in more private settings or decentralized settings;
b) larger multi-purpose rooms to allow residents and visitors to gather in larger groups and support physical distancing when required; and
c) multi-purpose rooms that can be used for simulation and training purposes.

Note: *See CSA Z8000 for more on design of communal areas.*

8.3.5.3 Outdoor patio

An outdoor patio should be present off the dining or living area.

8.3.6 Laundry areas

A commercial laundry area should be located in the LTCH community. In LTCH communities that have a commercial laundry area, it shall be used only for non-resident items (e.g., dining linens, bed linens).

Note: *See CSA Z8000 for guidance on commercial laundry area design (e.g., soiled sort areas, wash areas, clean laundry areas, storage areas).*

8.4 LTCH community

Note: *The LTCH community is the hub that connects each neighbourhood and individual households to a common area. This area is frequently referred to as the "downtown" space in a LTCH.*

8.4.1 Communal lifestyle

The LTCH community shall support an active communal lifestyle.

8.4.2 Community spaces

The LTC community may include the following types of spaces:

a) main building entry;
b) community core lobby (e.g., fireplace lounge);
c) public café;
d) bowling;
e) movie theatre;
f) meeting rooms;
g) administration;
h) resident services (e.g., hair salon, visiting professional);
i) staff spaces and locker rooms, which may also be in the neighbourhood;
j) multi-purpose rooms;
k) tuck and rental shops;
l) central kitchen;

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m) central laundry;
n) maintenance facilities and repair shops;
o) loading docks and material handling facilities;
p) multi-purpose treatment room; and
q) other support services as programming requires.

Notes:

1) *Each LTCH differs in the layout of the LTCH community, and in the functions and services that they provide.*
2) *Different LTCHs can include certain services within the LTC community, while others choose to incorporate them within the household or neighbourhood. A group of neighbourhoods can share common areas that provide additional support to all residents.*

8.5 Facility-wide technical requirements

8.5.1 Environmental considerations

Note: *Refer to CSA Z8000 for more on environmental considerations.*

8.5.1.1 Acoustics

The acoustic environment of the building shall be compatible with the general needs and comfort of the building occupants, and with the surrounding residential areas.

Note: *See CSA Z8000 for more on acoustic and vibration design considerations.*

8.5.1.2 Lighting

The lighting within the building shall be compatible with the general needs and comfort of the building occupants, and with the surrounding residential areas.

Exterior windows should provide views to the natural environment and access to outdoor daylight within the main activity areas, as well as in resident bedrooms.

Note: *See CSA Z8000 for more on lighting considerations.*

8.5.1.3 Resident room identification

Means should be provided to distinguish the individual resident rooms from each other (e.g., by using different design features for the doors).

8.5.1.4 Surface contrast

LTCHs shall increase contrast between adjacent surfaces including but not limited to furniture, fittings, walls, and flooring (e.g., the floor and adjacent wall should be different colours or shades).

8.5.1.5 Floor colours

When selecting floor colours, LTCHs should select simple or solid patterns to avoid visual clutter, which can cause confusion in visual processing for cognitively impaired individuals.

8.5.1.6 Windows

Windows should be clear of obstructions for optimal viewing to the outside for residents who are seated or in bed. Considerations shall be made for the placement of windows and the view that the resident prefer.

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8.5.2 Assistive devices

LTCHs shall refer to the local building codes and, in the absence of the National Building Code of Canada, CSA Z8000 and CSA B651 for guidance on the design of

a) handrails;
b) grab bars;
c) corridors;
d) ramps;
e) stairs;
f) information and communication technologies
g) assistive devices (e.g., feeding robots, SMART devices, wearables); and
h) signage.

Personal lifting devices, if any, shall comply with CSA-Z10535.1 and CSA Z8000, and shall be installed and maintained in accordance with CSA Z10535.2.

8.5.3 Signage and wayfinding

8.5.3.1 Signage and wayfinding standards

Signage and wayfinding systems shall be in accordance with requirements in CSA B651 and CSA Z317.14.

8.5.3.2 Floor plans and signage

Information and elements presented on the LTCH floor plans and signs shall be accessible and clear for residents, families, EFCs, and visitors, including people with sensory and/or cognitive disabilities.

8.5.3.3 Visibility and safety

Common areas, corridors, and outdoor spaces (where applicable) shall be designed to maximize the staff's ability to continually observe residents' circulation and activities, particularly around entry and exit points and outdoor areas that can be considered a high risk to resident safety (e.g., traffic areas, inclined sidewalks or roads, uneven ground).

8.5.3.4 Wayfinding methods

Wayfinding methods should be incorporated to assist residents in locating their home areas and individual bedrooms. Some examples that may be considered include

a) personalization of bedroom entrance (e.g., memory boxes, photographs, name displays);
b) different styles, colours, and hardware on bedroom doors; and
c) personalization of the interior bedroom (e.g., belongings visible from the corridor, wall colour).

8.5.4 Materials and finishes

8.5.4.1 Materials and finishes standards

Materials and finishes (e.g., ceiling, floor, wall) shall comply with CSA Z317.12 and CSA Z8000.

8.5.4.2 Fire safety requirements

The flame-spread and smoke-developed ratings of finishes shall comply with applicable requirements.

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8.5.4.3 Resident demographics and activities

Colours, patterns, and finishes shall be appropriate to the anticipated age and type of resident, including features that support cognitive abilities and mobility issues. Colours and textures should be conducive to the activities in those areas.

Note: *Certain colours and complex patterns can be disturbing to some resident populations.*

8.5.4.4 Material and surface characteristics

Materials and surfaces shall contribute to the residential character of the LTCH. They should have the following characteristics, consistent with their functional purpose:

a) easy to maintain, repair, and clean;
b) have no texture or joints that are conducive to dirt, dust, and liquid collection;
c) resistant to microbial spread and growth;
d) smooth and non-porous;

Notes:

1) *Wood is porous, breaks down, and can become a place where microorganisms flourish. It also degrades when it is cleaned frequently.*
2) *High-touch common areas would require materials, surfaces, finishes, and furnishings made of materials that can withstand frequent cleaning and disinfection.*

e) durable;
f) able to be installed, demolished, and replaced with acceptable downtime;
g) if installed on a substrate or structural assembly, constructed to be simple, durable, and stable;
h) seamless;
i) resilient and impact-resistant;
j) offering options for colour, pattern, texture;
k) non-toxic;
l) non-allergenic;
m) not glossy or presenting minimal glare or reflection;
n) constructed in such a way that they are impermeable and do not soak up or harbour moisture;
o) low permeability; and
p) provide sufficient traction for the activities taking place in the space while still allowing ease of movement for mobility aids.

8.5.5 Furniture, fittings, and equipment

8.5.5.1 Furnishings, fittings, and equipment standards

LTCHs should have policies and procedures that specify the criteria to be used when selecting furnishings, fittings, and equipment for the LTCH that comply with CSA Z317.12 and Z8000.

8.5.5.2 Clearances

Resident rooms and common areas shall provide appropriate clearances to

a) accommodate the size and location of furniture, fittings, and equipment;
b) allow safe movement of people around these items to support
   i) daily living activities;
   ii) appropriate care; and
   iii) team tasks;
c) reduce awkward static and dynamic postures; and
d) reduce crowding and potential risks of contact transmission.

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8.5.5.3 Damaged furnishings or fixtures

Cracked or torn furnishings or fixtures shall be removed and repaired immediately so that they can be effectively cleaned or replaced.

8.5.5.4 Procurement

Procurement staff shall consult with any relevant parties, including IPAC, prior to making purchases, including personal items for residents.

8.5.5.5 Cleaning and disinfection

The TDAT shall procure, install, or use surfaces, finishes, furnishings, flooring, instruments, and equipment that can be effectively cleaned and disinfected.

9 LTCH building systems

9.1 Operations and maintenance plan

9.1.1 Operations and maintenance plan standards

LTCHs should follow CSA Z8002. At a minimum, this includes developing a comprehensive operations and maintenance plan for the following systems:

a) HVAC;
b) fire safety systems, including fire suppression, fire alarm, and smoke control systems;
c) plumbing;
d) medical gas;
e) electrical, including emergency/essential power systems; and
f) electronic systems, including security.

9.1.2 LTCH systems

The LTCH design shall incorporate HVAC systems for airborne isolation, medical gas systems, electrical systems, IT systems, communication systems, and plumbing.

9.1.3 Auditing

An audit of the physical facilities conditions shall be conducted. Auditing shall form a part of the ongoing operations and maintenance program, and be developed and implemented to facilitate optimum operation of the facility systems.

9.1.4 Documented maintenance plan

The LTCH shall have a documented maintenance plan for air filter maintenance, including appropriate filtration, inspection, replacement, and storage.

Note: *See CSA Z317.2.*

9.1.5 Resident room layout flexibility

Building systems should accommodate flexibility in resident room layouts (e.g., location of the resident bed, location of medical gas, resident call system, HVAC supply and return locations, electrical outlet locations).

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9.2 Plumbing

9.2.1 Plumbing standards

Plumbing systems shall be designed, installed, and maintained in compliance with CSA Z317.1 and CSA Z8000.

9.2.2 Emerging technologies

LTCHs should consider emerging technologies for IPAC, such as UV irradiation, and their appropriate application.

9.2.3 Hand hygiene sinks

Hand hygiene sinks shall conform with provisions in CSA Z8000 and CSA Z317.1.

9.2.4 Water quality management plan

A water quality management plan shall be adopted to ensure water quality is appropriate for LTCH use.

9.2.5 Stagnant water

The LTCH shall have a water quality management plan that considers the different parts of the home in which water can be stagnant for long periods of time and the impact that has on water quality (e.g., the plan should consider how often resident washrooms that have a designated shower/tub are used).

Note: *Refer to CSA Z317.1 for more information on water quality management.*

9.3 Heating, ventilation, and air conditioning

9.3.1 General

9.3.1.1 HVAC system standards

HVAC systems shall be designed, installed, and maintained in compliance with CSA Z317.2 and CSA Z8000.

Notes:

1) *CSA Z317.2 outlines ventilation rates, temperature ranges, and humidity ranges acceptable for LTCHs.*
2) *HVAC systems in LTCHs contribute to a safe and comfortable environment for residents, staff, and visitors. This includes individual temperature and humidity control, maintenance of indoor air quality, and contaminant control by filtration, dilution, and exhaust.*

9.3.1.2 Zone design and controls

HVAC systems should be designed in such a manner that zones with individual supply and return airflow rate controls align with households and support spaces. Each of these zones should have controls to allow the area air volume to be adjusted. Consideration should be given to using airflow to achieve pressure differentials that can assist in airborne separation between households.

Any manual adjustments of airflow rates (supply, return, or exhaust) or introduction of additional exhaust systems varying from the original design and commissioned status shall only be performed under the review of an engineer and by qualified technicians along with airflow and pressure measurements.

Notes:

1) *See CSA Z317.2 for more guidance.*

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2) *This Clause is not to infer that each zone is serviced by an independent air handling unit. This separation of supply and return is intended to allow for independent airflow and pressure balancing, and does not require independent air handling units for each zone. Return air from one zone to another will intermix at the air handler, recognizing that before that air is recirculated it is filtered and conditioned by the air handling unit.*

9.3.1.3 Automated airflow adjustment control systems

Any automated airflow adjustment control system should include automatic pressure-compensating adjustment so that the overall pressure balances and airflow rates within the LTCH continue to be managed.

9.3.1.4 Ventilation

All rooms and areas within the LTCH shall be ventilated to provide occupant comfort and air exchange, and to control contaminant levels, temperature, and humidity while minimizing stratification and drafts.

9.3.1.5 HVAC documentation

LTCHs shall have documentation that provides system design and operating capacity, relative pressurization settings, and the current condition of their systems in order for staff to understand and address implications to IPAC (see Clause 9.7).

9.3.1.6 AGMP considerations

The LTCH shall conduct a risk management review by the TDAT to determine safe operating practices and the physical environment for residents undergoing AGMPs.

Note: *LTCHs should consider the guidelines recommended by authorities having jurisdiction.*

9.3.1.7 Air flow and pressurization

Air flow and pressure relationships should be checked and verified between areas within the minimum operation zone and single-occupancy resident rooms as needed for odour control and space cleanliness.

Note: *it is not practical to maintain airflow and pressure relationships when windows are opened.*

9.3.2 Indoor air quality

9.3.2.1 Indoor air quality standards

LTCHs shall refer to provincial/territorial guidelines and associated OHS departments for recommendations or requirements on indoor air quality.

Note: *Federal and provincial/territorial government and agencies might have reference publications, standards, and sources regarding air and airborne contaminants that need to be controlled. These often reference air quality control through either elimination from the built environment, remediation of external or underground sources, or through proper placement of ventilation intakes to avoid contamination. See also Health Canada's resources on air quality and health, and its document* Indoor air quality resources for professionals*.*

9.3.2.2 Risk assessment and evaluation

As per Clause 11, the LTCH shall have policies and procedures for the evaluation of risks to residents, and to care and treatment, when HVAC systems are operating outside of the values specified in CSA Z317.2. Such policies and procedures shall include a clinical risk evaluation should the LTCH continue to provide services when indoor conditions are outside of the design ranges specified in CSA Z317.2.

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Conditions outside of those specified in CSA Z317.2 do not necessarily indicate that a space is unsafe for use; however, there shall be contingency plans to deal with problems that can occur when temperatures or humidity exceed specified ranges (e.g., condensation and the associated risk of microbial growth).

9.3.2.3 Air handling system accessibility

All parts of the air handling unit, supply air and exhaust air registers, air ducts, filter housings, and humidifier/dehumidifier, if present, should be easily accessible for inspection and reachable for cleaning and disinfection purposes.

Note: *CSA Z317.2 includes installation, operation, and maintenance information.*

9.3.2.4 Materials

All HVAC system materials in contact with the distributed air should be non-corrosive and able to be cleaned.

Note: *See CSA Z317.2.*

9.4 Medical gas systems

9.4.1 Safe handling, storage, and use

The LTCH shall develop and maintain policies and procedures for the safe handling, storage, and use of oxygen in compliance with CSA Z305.12.

Note: *Where portable cryogenic oxygen is used, it is advised that LTCH personnel wear cryogenic gloves and face shield when filling canisters.*

9.4.2 Medical gas system design

Medical gases may be provided either through centrally piped systems or by portable equipment.

9.4.3 Centrally piped system design

Centrally piped systems shall be designed, installed, and maintained in compliance with CSA Z7396.1.

9.4.4 Portable equipment

To manage costs, portable gas cylinders, portable liquid oxygen, portable oxygen concentrators, and/or portable suction may be considered.

Portable equipment, including compressed gas cylinders, portable liquid oxygen systems, portable oxygen concentrators, and portable vacuum equipment shall be handled in compliance with CSA Z7396.1.

Note: *Piped systems generally are not considered a "small system", which as per CSA Z7396.1-17 limits the system to 10 or fewer terminal units.*

9.4.5 Needs assessment and review

The TDAT shall undertake a thorough review of the medical gas needs for the LTCH. This includes the type of system needed, as well as whether it is a centrally piped system or portable equipment, including compressed gas cylinders, portable liquid oxygen, portable oxygen concentrators, and/or portable vacuum.

9.4.6 Oxygen therapy

LTCHs shall consider the requirements for oxygen therapy for their residents.

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Oxygen therapy for residents may be delivered via
a) low-flow oxygen generated in the room via oxygen concentrators;
b) low-pressure liquid oxygen systems;
c) high-pressure oxygen cylinders with a pressure regulator to manage pressure and volume; or
d) a centrally piped oxygen system with oxygen flowmeter to manage pressure and volume.

Note: *While piped gas systems provide reliable service, the capital and operational costs can be high. The use of portable oxygen concentrators for point-of-use supply is dependent on local power sources, introduces noise, introduces risks associated with incorporating an appliance into the resident care space, and has IPAC considerations.*

9.4.7 Room layout customization

LTCHs should provide flexibility for room layout customization per resident. Consideration in room furnishing selection should be given to safely locate equipment or cylinders so as to minimize hazards.

Note: *The use of portable oxygen cylinders for routine therapy can present physical hazards to residents.*

9.4.8 Medical gas systems

LTCHs shall have a comprehensive operation and maintenance plan for their medical gas equipment and systems (e.g., concentrators, portable or piped).

9.4.9 Residential looking covers

Where centrally piped medical gas is installed, terminal units shall be concealed behind residential-looking covers.

9.4.10 Expiration dates

LTCHs shall ensure the gas cylinder (including oxygen cylinder) is within any product expiry date or date stamps on the cylinder (e.g., hydrostatic retest date).

9.4.11 Piped vs. portable suction systems

The provision of piped medical vacuum should be reviewed to determine the frequency of use versus the option of portable suction systems.

9.4.12 Oxygen-enriched atmospheres

When handling, storing, or using oxygen, care shall be taken to avoid forming oxygen-enriched atmospheres in the presence of combustible materials so that
a) the environment is safe for all residents and staff on the unit prior to commencement of oxygen treatment;
b) required safety precautions for handling, storage, and use of oxygen are in place;
c) all staff, residents, and visitors in the immediate vicinity are aware of safety precautions; and
d) the amount of oxygen stored in various areas of the home is limited.

Notes:
1) *Oxygen, when used correctly, offers minimal safety risk. There can be a significant fire hazard, especially in close proximity to an open flame or other source of combustion, when precautions are not followed.*
2) *Oxygen concentrators provide a safe source of oxygen-enriched air. By selective removal of nitrogen from room air, these devices increase the concentration of oxygen in the delivered gas product. An oxygen concentrator is an electrically powered and electrically controlled device that does not store oxygen when not in operation.*
3) *A clear and odourless gas, oxygen supports and can accelerate combustion. Oxygen will not burn; however, it does vigorously accelerate burning of any material.*

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9.5 Electrical and electronic building systems

9.5.1 General

9.5.1.1 Electrical system standards

Electrical systems shall comply with

a) CSA Z32, which addresses electrical safety associated with the provision of health care, building electrical installations for HCFs, and essential electrical systems for HCFs; and
b) CSA C282, which applies to the design, installation, operation, maintenance, and testing of emergency generators and associated equipment for providing an emergency electrical power supply to electrical loads.

Note: *Local codes or regulations, or in the absence of same, the* Canadian Electrical Code, Part I*, might apply.*

9.5.1.2 Electronic and data building systems

Electronic and data-building systems shall be installed, maintained, and operated in alignment with codes and standards towards meeting the operational requirements of the LTCH.

9.5.1.3 Electrical wired devices

Cleaning policies and procedures shall evaluate the products used, cleaning procedures, and the frequency of cleaning to reduce entry of cleaning solutions into electrical wired devices, which can lead to short circuits.

9.5.1.4 Operation and maintenance

Operation and maintenance of electrical systems shall only be performed by qualified persons as deemed by provincial/territorial legislation (e.g., licensed electricians, certain classes of power/ stationary engineers), or in the case of the essential electrical systems, a competent person as defined in CSA C282.

9.5.1.5 Emergency generators

Emergency generators for LTCHs shall be sized and have fuel capacity as identified by the TDAT but in no case less than those stipulated in CSA C282.

9.5.1.6 Building heating system considerations

Where the building heating system's prime heat source is not electrical, the system design shall ensure all required electrically powered appurtenances and ancillary equipment are on the building's essential power system.

Note: *See also CSA Z32 and CSA Z317.2.*

9.5.1.7 System design and performance tests

Systems design and performance tests shall be conducted so that the essential power system comes online and the heating systems automatically restart without human intervention.

9.5.1.8 Resident life support systems

Where standalone resident life support systems (e.g., ventilator assisted breathing, portable oxygen concentrators) are used, essential power system shall be available in resident rooms.

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9.5.1.9 Resident safety and security systems

Resident safety and security systems (e.g., nurse and staff call system, security system, resident exploring protection systems) shall be connected to the essential power system, as per CSA Z32.

9.5.1.10 Uninterruptible power supply

Where the interruption of power would be critical in the support of resident life, the use of an uninterruptible power supply should be considered.

Note: *See CSA Z32 for further information on the use of uninterruptible power systems.*

9.5.2 Electronic building systems

9.5.2.1 Resident safety and security

Electronic building systems shall be provided for resident safety and security.

9.5.2.2 Nurse and staff call systems

LTCHs shall refer to provincial/territorial guidelines for recommendations or requirements on nurse and staff call systems.

9.5.2.3 Signalling devices

Residents should have access to signalling systems at any location (e.g., wireless) within the LTCH including from their bed, and in all washrooms.

9.5.2.4 Remote monitoring systems

Where LTCHs provide enhanced life support services (e.g., long-term ventilators, portable oxygen concentrators, feeding tube systems), LTCHs should incorporate remote monitoring systems.

9.5.2.5 Staff notification

The method of notifying staff of a call shall be considered in the LTCH design.

Note: *Options to notify staff can include non-audible signals such as the use of vibrating pagers or wireless telephony and alphanumeric displays.*

9.6 Security systems

9.6.1 General

9.6.1.1 Physical elements

The LTCH design shall include the physical elements necessary to support the LTCH's overall security program.

Note: *Some security systems that may be considered in a LTCH include*

a) *access control;*
b) *video surveillance;*
c) *intrusion detection;*
d) *staff emergency assistance asset protection;*
e) *guard tour;*
f) *incident reporting;*
g) *lighting;*
h) *motion sensors; and*
i) *social distancing, crowd counting, and other artificial intelligence systems.*

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9.6.1.2 System integration

Security systems should be integrated across the LTCH and might be required to operate over the LTCH network. Alarm systems should integrate with other security systems for alarm recording and incident reporting purposes.

9.6.1.3 Security system compatibility

Security systems shall be compatible throughout the entire LTCH to coordinate performance, administration, and maintenance of the systems.

9.6.1.4 Alarm system acoustics

Alarm systems that are not resident care-focused should have dampened acoustics in resident rooms. Remote paging, as opposed to overhead paging, should be implemented to avoid alarm fatigue.

Note: *Fire alarm systems are standalone and must be heard in all areas of the LTCH. They take priority and cannot be suppressed.*

9.6.1.5 Alarm system incident locating

Alarm systems shall be able to identify where the incident is occurring to allow authorized personnel to respond.

9.6.2 Access and egress control systems

9.6.2.1 Egress control standards

Egress control shall be provided in accordance with applicable codes and standards. Where required, permits from the AHJ and signage shall be provided.

9.6.2.2 Resident and staff safety

Security of residents and staff shall be considered in the provision of access control, egress control, anti-exploring control, video monitoring and recording, and personal safety alarms.

Note: *Resident exploring is also referred to as "resident purposeful wandering" or "resident egress" by some LTCHs.*

9.6.2.3 Access control device placement

A comprehensive threat, risk, and vulnerability assessment shall be completed to determine access control device placement. The following areas and site elements shall be evaluated to determine the need for access control or alarm and monitoring:

a) secure resident care areas;
b) building perimeter;
c) reception areas;
d) central drug storage areas;
e) areas handling or holding money;
f) staff facilities;
g) loading dock;
h) staff entrances and exits;
i) parking;
j) areas for psychiatry treatment;
k) palliative care;
l) electrical equipment rooms;
m) generator rooms;
n) mechanical equipment rooms;

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o) roof access;
p) IT equipment rooms; and
q) service entrance rooms.

Note: *Additional guidance and requirements on security are addressed in CSA Z8000.*

9.6.2.4 Resident demographics

LTCHs shall provide access control based on the demographics of their residents to manage access of visitors and external personnel.

9.6.2.5 Access control personnel

LTCHs shall have an access control system that allows authorized personnel access into controlled departments and prevents access to unauthorized personnel.

Note: *Controlling traffic towards specific doors, such as the main entrance, allows the LTCH to better guide residents and public to their desired location.*

9.6.2.6 Access type and tracking

Use of an electronic card, wearables, facial recognition, or other technology access system with individually issued and tracked cards should be considered, as it provides the ability to track who has accessed an area as well as the ability to remove access easily if needed.

Notes:

1) *The use of physical keys does not offer tracking ability or the ability to easily remove access.*
2) *The use of "punch code" locks represents the lowest level of security control as the codes can be easily shared and there is no ability to track or account for who knows the code (whereas without holding the physical key you do not have access).*

9.6.2.7 Access control system integration

The access control system shall be integrated with other security systems to provide alarm annunciation and control.

9.6.2.8 Fire alarm system integration

Egress control shall be integrated into the LTCH fire alarm system. The testing and operation of all integration (e.g., release of door locks on a fire alarm signal) shall be incorporated in the annual fire alarm system test.

9.6.2.9 Video monitoring

Video monitoring shall be required when screening of visitors to a locked access point is done remotely (e.g., intercom with a remote door release system).

9.6.3 Video surveillance

9.6.3.1 VSS

The LTCH should incorporate a VSS.

Notes:

1) *The VSS comprises cameras, recording systems, and display workstations.*
2) *These systems provide authorized personnel with monitoring to control secure areas and can be an investigative tool to follow up on security incidents.*

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3) *The threat, risk, and vulnerability assessment identifies where cameras are needed, but the following public locations should be considered as potential camera placements:*
   a) *resident hallways and common areas;*
   b) *parking areas;*
   c) *exterior of the building and grounds;*
   d) *loading dock; and*
   e) *shipping and receiving.*

9.6.3.2 Video imaging

The VSS shall produce a video image of high enough quality to be acceptable as evidence in forensic investigations.

9.6.3.3 Building network connection

The VSS may be connected through the building network.

9.6.3.4 Video monitoring and recording systems

Video monitoring and recording systems shall be incorporated to support security and safety.

9.6.3.5 Video monitoring placement

Video monitoring shall be strategically placed following a formal security and safety overview process (e.g., Crime Prevention Through Environmental Design or IAHSS resources).

Camera placement for monitoring shall not be present where the expectation of resident privacy exists (e.g., resident bedroom, resident washroom), nor shall any EFC or family be permitted to place cameras in such places. The use of video and audio resident surveillance shall be discussed with residents, EFCs, and families.

9.6.3.6 VSS integration

The VSS may be integrated with other security systems for automatic camera call-up and recording to capture the security incident.

Note: *Refer to privacy regulations from the AHJ to confirm video monitoring and recording follows privacy laws.*

9.6.3.7 Video recording retention

The LTCH shall have a video recording retention policy and procedure.

Note: *The shortest possible video retention standard is recommended to be used to alleviate liability with longer video hold. Seven to 21 days is considered normal range.*

9.6.3.8 Video recording review

LTCHs shall have a video recording review policy and procedure which outlines who can view recorded videos, for what purposes, and under what conditions the video will be provided to others.

9.6.4 Staff emergency assistance alarm systems

9.6.4.1 System integration

Staff emergency assistance alarm systems should be incorporated. They may be either standalone devices (sounders) or integrated into a central reporting or monitored alarm system.

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9.6.4.2 Location

The location of the staff emergency assistance alarm system shall be identified in the threat, risk, and vulnerability assessment. A staff emergency assistance alarm system shall be provided in all areas where there is a danger to staff from the residents or the public.

9.6.4.3 Staff considerations

A staff emergency assistance alarm system should be considered for staff working in situations such as

a) where aggressive residents may present a risk;
b) working in isolation within the LTCH with no other staff present; and
c) particular time of day.

9.6.4.4 Wired systems

For wired staff emergency assistance alarm systems, LTCHs shall identify risk factors within the home where an alarm system shall be present.

9.6.5 Resident exploring and safety requirements

Note: *See Clause 10.2.5 for RTLS guidance.*

9.6.5.1 Resident considerations

Resident exploring systems and safety requirements shall be provided in all home units where residents could be at risk of injury if they leave the department unescorted. Movement and range of opportunities of the resident shall be optimized.

Note: *It is important to consider all exiting points when designing for these systems, such as doors, elevators, balconies, and windows if they are operable. Overrides on these exits are needed to allow staff to escort the resident out of the area of protection as needed.*

9.6.5.2 Perimeter protection

Perimeter protection for resident exploring management will provide an audio-visual alarm at the door, elevator door access at the location, and the nearest nurse call system.

Notes:

1) *The local alarm allows staff to respond quickly to an unauthorized egress attempt.*
2) *LTCHs can incorporate new and emerging monitoring systems with input from the TDAT. These systems allow monitoring in different ways and formats.*

9.6.5.3 Egress control

Egress control shall be provided to prevent residents from accidentally accessing the outside of the LTCH, isolated areas (e.g., stairwells, unmonitored areas), or stairwells that can present falling hazards.

9.6.5.4 Resident anti-exploring systems

Resident anti-exploring systems shall be provided for residents with cognitive impairment in such a manner that they can move freely and safely without risk of harm. Resident anti-exploring systems shall integrate with the building fire alarm system and comply with the codes and standards.

Note: *Resident exploring is also referred to as "resident purposeful wandering" or "resident egress" by some LTCHs.*

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9.7 Building system assessment

9.7.1 Building system review

LTCHs shall conduct an annual review of building systems, noting system design, redundancy and capacity, and the condition of the systems, including the ability of the existing systems to meet original design.

9.7.2 Risk assessment

The TDAT shall review and assess the results of the annual review and perform a risk assessment.

9.7.3 Risk assessment report

Other systems, such as electronic incident reporting, public duress alarms, RFID asset tracking, order inventory control, guard tour, and parking control systems should be addressed in the risk assessment report and installed if recommended (see CSA Z8000).

9.7.4 Auditing

The outcome of the risk assessment shall be part of the auditing process (see Annex E) and addressed in the site operational plans until the system status changes.

9.7.5 Risk assessment outcomes

The outcome of the risk assessment shall be used to inform management and process improvement, and to prepare the site for capital infrastructure renewal and any site redevelopment plans.

10 IT

10.1 General

10.1.1 Personnel connectivity

LTCH design should incorporate IT to help enable connectivity between residents and their family, EFCs, and care providers.

10.1.2 Infrastructure

LTCHs should have the infrastructure to support current and future AgeTech systems and other emerging information technologies to provide PCC.

10.1.3 IT systems

LTCHs shall implement IT systems that support and improve care delivery where appropriate.

Note: *IT systems can support care delivery using electronic health records and care plans. Use of these systems can result in improved care delivery and outcomes. IT can also enable integrated care delivery, which requires that systems across care settings are compatible.*

10.1.4 AgeTech systems

LTCHs shall implement AgeTech systems to meet the needs of residents, their EFCs, and families.

Note: *Examples of what some AgeTech systems can include are voice-activated telephone and video VOIP, voice- or motion-activated lights (to reduce falls at night), and wearable technologies to monitor vital signs and enable*

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social interaction (i.e., technologies that can detect how long someone has gone without speaking or being spoken to).

10.1.5 User considerations

Implementation of IT systems and AgeTech shall be planned and operationalized at the organization level, as well as for all categories of users (e.g., staff, families, and EFCs) for the purpose of PCC and collaboration.

10.1.6 System implementation

Implementation of IT systems and AgeTech shall include

a) an analysis and consideration of the needs of the organization and of all categories of users;
b) an analysis and consideration of the usability of the systems to be acquired;
c) a training program for all categories of users;
d) continuous user support; and
e) continuous monitoring and improvement of the systems.

10.1.7 Internet and computer access

LTCHs shall implement internet access for

a) residents;
b) visitors, EFCs, and families; and
c) staff.

Infrastructure for electronic communications (e.g., internet) shall be accessible from within in each resident room or in an alternate location when resident rooms are shared to enable private conversations. Internet and Wi-Fi access should be stable and private so that residents can carry out virtual communications.

When designing or renovating LTCHs, resident bedrooms should have the means to accept computer technology (e.g., infrastructure, wiring).

10.1.8 Quality improvement and monitoring

LTCHs shall use IT systems to support quality improvement, surveillance, and reporting.

10.1.9 Electronic resident record system

LTCHs shall have an electronic resident record system.

10.1.10 IT selection

Considerations for selecting information technologies shall include

a) integrated applications and data;
b) data and reports:
    i) real-time access and electronic automated reports;
    ii) customizable reports and ease of extracting data;
    iii) data mining; and
    iv) capabilities for internal and external reporting;
c) standardized charting;
d) syndromic surveillance:
    i) data collection; and
    ii) analysis of data;

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e) AROs and other transmissible pathogens:
   i) screening;
   ii) testing; and
   iii) surveillance;
f) antibiotic stewardship;
g) outbreak, epidemic, and pandemic measures:
   i) documentation;
   ii) analysis; and
   iii) reporting;
h) resident health programs (i.e., immunization);
i) quality indicators:
   i) documentation;
   ii) analysis; and
   iii) reporting;
j) adverse healthcare events:
   i) documentation;
   ii) monitoring; and
   iii) reporting;
k) HR/occupational health:
   i) syndromic surveillance;
   ii) return to work;
   iii) staff immunization;
   iv) TB status and screening; and
   v) health and safety education;
l) audits;

   Note: *See Clause 6.*
m) electronic policy and procedures;
n) real-time communications with staff, residents, EFCs, and family including
   i) email; and
   ii) virtual conferencing; and
o) security and privacy.

10.1.11 Spam filters and phishing alerts

LTCHs shall investigate and implement spam filters and phishing alerts to protect resident data.

10.2 Design and implementation

10.2.1 General

10.2.1.1 System design standards

The latest IEEE, EIA/TIA, and CSA standards shall be used when designing IT systems. Systems design should include a high level of physical and logical redundancy that promotes continuity of service even if individual components fail.

10.2.1.2 IT infrastructure

The IT infrastructure shall be designed to accommodate the specific needs of the LTCH.

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The LTCH's IT planning policies and procedures shall specify the number and type of wireless systems that will be used. Systems shall have the necessary compatibility (e.g., allow communication between systems as required by the functional program) and shall not interfere with each other.

10.2.1.3 IT infrastructure elements

Planning for the IT infrastructure shall include the following elements, as appropriate, to the functional program of the LTCH:

a) general communications systems, including
   i) telephone (e.g., digital, voice over internet protocol, analogue);
   ii) cellular networks;
   iii) television;
   iv) audio conferencing;
   v) wireless networks for voice/data/video; and
   vi) education systems for staff, residents, and their families or EFCs;
b) clinical systems, including those for
   i) resident monitoring;
   ii) imaging (picture archiving and communication system, or PACS);
   iii) clinical equipment and networks;
   iv) pharmacy dispensing;
   v) nurse call;
   vi) video conferencing and associated telehealth, telepathology, and e-medicine systems for social connectedness;
   vii) resident bedside portal; and
   viii) telemetry/resident monitoring;
c) administrative systems, including
   i) resident registration; and
   ii) financial and administration networks;
d) security systems, including
   i) access control and video surveillance;
   ii) resident exploring and staff locating;
   iii) staff emergency assistance alarm; and
   iv) asset tracking;

   Note: *The systems in Items ii), iii), and iv) can allow for either real-time locating in areas and/or secured perimeters to provide protection against theft, misplacement, or unauthorized exploring. These systems can be combined into a centralized real-time locating system that provides all or part of these functions.*
e) building systems, including
   i) building automation systems;
   ii) computerized maintenance management systems; and
   iii) energy monitoring systems; and
f) logistics.

Notes:

1) *An IT professional should design the network that supports the different systems that will reside on the network. The physical cabling should be designed by an RCDD.*
2) *Surveillance is subject to privacy regulations of the AHJ.*

10.2.1.4 Communication and information transfer and storage needs

The LTCH shall determine its communications and information transfer and storage needs during the design stage. The design shall be reviewed on a regular basis to evaluate ongoing needs.

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10.2.1.5 Data requirements

System design should consider data traffic requirements and data security, and shall maintain proper operational parameters.

10.2.1.6 Latest proven technology

The latest proven technology should be considered for transferring, securing, and storing information.

10.2.1.7 Media types

All media types that are appropriate for use by residents and staff shall be accommodated in the LTCH, including data, waveforms (sounds), images, video, voice, and text.

10.2.1.8 Information dissemination

IT systems shall be provided to assist staff, residents, and the public with the dissemination of all forms of information.

10.2.1.9 Information management

IT systems shall be designed to manage information in a timely and accurate fashion.

Note: *Information transfer is an essential part of providing care.*

10.2.1.10 Confidentiality, privacy, and security

IT systems shall be designed to preserve confidentiality, privacy, and security of information with the goal of maintaining trust between the public and the healthcare provider.

Note: *In Canada, provincial/territorial laws apply to the storage and dissemination of personal information (e.g., Ontario's Freedom of Information and Protection of Privacy Act).*

10.2.1.11 System compatibility

Information and communications systems shall be compatible and able to share information appropriate to the functioning of each system.

Note: *The convergence of technology has resulted in many systems being able to share information on a single network or between networks. Integrated systems can increase efficiency and function, resulting in better resident care.*

10.2.1.12 Electronic health record systems

IT systems and infrastructure shall be designed to accommodate electronic health records systems.

Note: *Technology that can enable residents to maintain self-care and dignity is a cornerstone of modern healthcare IT systems.*

10.2.1.13 Network failures

If VoIP is used, landlines shall be maintained in critical areas where communication needs to be maintained in the event of network or internet failure.

10.2.2 Structured cabling

All hardwired devices should be connected with a cabling system that is in compliance with CSA Z8000.

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10.2.3 Wireless

10.2.3.1 Wi-Fi systems

All LTCH should provide secure Wi-Fi systems for the use of the residents, visitors, and staff throughout the home. The LTCH may choose a single or multiple segregated Wi-Fi systems depending on local security requirements. When larger or more complicated systems are to be constructed inside of the LTCH, the system should be constructed in compliance with CSA Z8000.

10.2.3.2 Personal communication accessibility technology

All plans for IT infrastructure should consider compatibility with personal communication accessibility technology (e.g., hearing aids to connect to Bluetooth-enabled devices such as TV, phones, computers, and tablets).

10.2.3.3 Institutional communication accessibility technology

All plans for IT infrastructure should consider compatibility with institutional communication accessibility technology for group interactions in common areas (e.g., room systems using remote microphones, loops, FM).

10.2.4 Network equipment

10.2.4.1 Network equipment standards

Network equipment should comply with the IEEE 802.1 Series of standards and IEEE 802.3.

Network equipment shall be consistent with established equipment standards and allow all industry protocols, software, and media types to reside on it.

10.2.4.2 Personnel expertise

The network shall be designed by a person with experience and qualifications in network design.

10.2.4.3 Network switches

The network may be configured to be fault-tolerant, having two core switches. There may be two pathways to the edge distribution switches.

10.2.4.4 Power supply

Network equipment should be powered by uninterruptible power supplies fed from the emergency power distribution system.

10.2.4.5 Network equipment location

Network equipment should be located in the data centre and telecommunication rooms.

10.2.4.6 Data security measures

Data security measures (e.g., firewalls, encryption, cybersecurity measures, authentication services) should be considered to protect unauthorized access to network data.

10.2.4.7 Network system compatibility

The network system should be compatible throughout the entire LTCH to facilitate performance, administration, and maintenance of the system.

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10.2.5 Real-time locating system (RTLS)

10.2.5.1 Asset and personnel tracking

The RTLS may be considered for tracking of assets and people throughout the LTCH.

10.2.5.2 RTLS integration

Where possible, staff emergency assistance alarms, resident exploring devices and systems, and fall detection devices and systems should be integrated into the RTLS to allow for determining the location of the respective alarm or device.

The RTLS system should be integrated with the security system and LTCH information system where possible.

Notes:

1) *See ISO/IEC 27000 for more guidance on information security management systems.*
2) *Some systems can be standalone and use radio frequency.*

10.2.6 Data centre

10.2.6.1 Data storage

All files and data shall be securely stored.

10.2.6.2 Physical security

Consideration should be given to file back-ups and physical security of the file/data storage locations.

10.2.6.3 Central data site

When a central data site is constructed inside of the LTCH, it should be constructed in compliance with CSA Z8000.

10.3 Data systems

10.3.1 Data system standards

Data systems shall be designed following the most up-to-date standards for data networks, including but not limited to federal, provincial/territorial, and local healthcare organization standards, and IEEE standards.

10.3.2 Redundancy and contingency planning

Data system redundancy shall be designed to match the need of the clinical systems used. Regardless of redundancy, contingency plans for manual and paper systems for clinical systems shall be prepared.

10.3.3 Wireless internet service

Access to wireless internet service for resident, EFC, and family use shall be provided to enable visitation and support during outbreaks, epidemics, and pandemics.

10.4 Data management

10.4.1 Data storage standards

Data storage shall be in accordance with jurisdictional protection of privacy laws, with privacy being the top priority. All data holdings shall adhere to applicable laws.

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10.4.2 Resident data platforms

Where appropriate, resident data platforms should have the ability to interface with data platforms from other service providers if it is determined to demonstrate a benefit to the resident or reduce duplication and errors.

10.4.3 Privacy protection

Each LTCH shall have a policy and procedures in place to protect and respect residents' rights to privacy and their personal data.

10.5 New and emerging technologies

10.5.1 Design and implementation

LTCH design shall consider the probable impact of new technology (e.g., the use of modular design and standard interfaces). Implementation planning will be informed by evidence-informed strategies. Implementation strategies may include opportunities for staff and residents to physically see and touch technology in action and understand its impact on daily activities and spaces.

10.5.2 Care and safety

LTCH design shall consider the needs of future technologies that may be useful in the care and safety of residents, staff, family, EFCs, and visitors. This includes having the ability to upgrade or add as needed new infrastructure that addresses data management, security, and other IT systems.

10.5.3 Collaboration

LTCH design should collaborate and consider relationships with outside stakeholders (e.g., universities, research and development partners, service providers) to develop, install, and use new IT for both medical and non-medical activities such as social connectedness, online physical activities, and cognitive activities that are web-based or locally installed that will benefit residents, staff, EFCs, family, and visitors.

11 Catastrophic event management

Notes:

1) *See CSA Z8000 for principles on catastrophic event management.*
2) *See Clause 5.8 for more on contingency planning.*
3) *See Clause 12.4 for details on training for catastrophic event management.*
4) *See Annex I for a sample catastrophic event management plan.*

11.1 General

11.1.1 Catastrophic event planning

The LTCH shall develop catastrophic event plans related to the interruption or loss of external utilities, or loss of internal building systems, as they relate to the ongoing safe operation of the LTCH.

11.1.2 Clinical supports

The LTCH shall have a documented catastrophic plan in place to ensure residents receive appropriate physician and clinical supports during outbreaks, epidemics, and pandemics that incorporate infection control practices.

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11.1.3 EVS and housekeeping activities

During outbreaks, epidemics, and pandemics, EVS and housekeeping activities shall be enhanced and continual auditing of outbreak, epidemic, or pandemic protocol compliance (e.g., hand hygiene and PPE) shall be initiated.

Note: *Enhanced cleaning is more extensive and higher frequency of cleaning. See CSA Z317.12.*

11.1.4 Communication

LTCHs shall provide regular and ongoing communication to all relevant stakeholders (i.e., leadership, staff, families, EFCs, residents) during outbreaks, epidemics, and pandemics. Emergency procedures and plans should be publicly posted and available at all times for the residents, families, EFCs, and care partners. Information should be in a visible location for all residents to access and updated whenever changes are made to plans and procedures.

11.1.5 Onsite residential care

LTCHs shall develop catastrophic event management plans that promote continued onsite resident care and minimize the need to transfer residents to other facilities or hospitals.

11.2 Risk assessment

11.2.1 Timing

Catastrophic event risk assessments for new LTCHs shall be conducted during the early stages of design. The owners' requirements shall be included early in the design stage so that the design will meet the owners' requirements. Through the design, construction, commissioning, and operationalizing of the LTCH, the TDAT shall continue to assess the LTCH so that catastrophic event plans match the final product.

Note: *See CSA Z8001-13 for more guidance on commissioning of HCFs.*

11.2.2 Frequency

Catastrophic risk assessment should be conducted annually and following major renovations, repurposing of spaces, or changes in care delivery.

11.2.3 Documentation

The TDAT shall undertake and document a formal risk management process to identify and score potential catastrophic event risks for the LTCH.

11.2.4 Utility system identification

The TDAT shall identify all building utility systems for the LTCH that can be interrupted during a catastrophic event. These systems can include

a) natural gas;
b) fuel oil;
c) electrical power;
d) domestic water;
e) sanitary service (e.g., sewer or onsite sewage handling and/or treatment);
f) storm water service;
g) back-up power generators;
h) telephone (both cellular and hardwired); and
i) internet.

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11.2.5 External support service identification

The TDAT shall identify all critical external support services for the operation of the LTCH, which can be interrupted during a catastrophic event. These can include

a) food services;
b) home care;
c) medical supplies, including medical gas such as bulk or bottled oxygen;
d) textiles;
e) PPE;
f) waste management;
g) funeral home access and services; and
h) third-party building maintenance.

11.2.6 Process

To minimize disruption to operations during a catastrophic event, the TDAT shall

a) determine the duration of time the LTCH can operate without each of the support services listed in Clause 11.2.5 before the health of the residents and other building occupants is adversely affected;
b) create a contingency plan for the temporary provision of support services from external sources, alternative vendors, and community partners;
c) develop and maintain a list of alternate third-party suppliers for temporary provision of support services, critical utility systems, supplies, and connections at the building edge/envelope, including documented discussions with said suppliers regarding delivery logistics. The LTCH shall update this list semi-annually; and
d) consider the effect of an external catastrophic event on the delivery logistics for these alternative support services.

Notes:

1) *These external services can be interrupted for reasons beyond the control of the LTCH, such as a widespread catastrophic event that affects the third-party vendor supply chain, weather, labour disputes, etc.*
2) *See CSA Z317.1, CSA Z317.2, CSA Z32.2, and CSA C282.*

11.2.7 Impact and contingency planning

LTCHs should assess the impacts of catastrophic events including the potential disruption or loss of support services to LTCHs and necessary contingency actions to address varying lengths of disruption or loss of support services based on the duration and severity of the catastrophic event.

11.2.8 Collaborative planning

Where LTC settings are partnered with a hospital, planning for catastrophic events shall be held in collaboration with the hospital. Where an obvious partnership is not apparent, the LTCH should actively seek out a relationship with a hospital in the local area to collaborate with.

11.2.9 Resident transfers

Documented plans for transferring residents to offsite locations shall include

a) the availability of other community sites;
b) the nearest transfer site;
c) the method of transport to the site;
d) the priority of resident transfer;
e) triggers that initiate transferring;
f) the person responsible for initiate transferring;
g) the incident command structure to be followed;
h) communication strategy; and

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i) considerations of residents who may need to be assigned advocates to assist them.

11.3 Planning process

Note: *See CARF's* Aging Services Standards Manual *for guidance on person-centred long-term care communities, including business practices, care processes, and program-specific quality standards.*

11.3.1 Internal events

11.3.1.1 General

LTCHs shall assess the impact of internal catastrophic events to operations and care functions and develop contingency plans to mitigate the impact.

11.3.1.2 Internal fire

11.3.1.2.1 Fire safety plan

A fire safety plan shall be developed and maintained in cooperation with local fire and emergency response teams to address the method of transferring some or all residents to safe care. Management of interior smoke and contaminants after a fire incident shall be described in the fire safety plan procedures and carried out by competent and trained staff.

11.3.1.2.2 Fire disaster plan

Fire disaster plans shall include an outline of the disaster assessment approach, re-occupancy plans, remediation steps, and how a partial transfer could be accommodated.

11.3.1.3 Vertical transportation

11.3.1.3.1 Elevator system assessment

Event contingency plans shall include an assessment of the elevator systems in accordance with Clauses 11.2.1 and 11.2.8 to identify design limitations that impede elevator use for evacuation and the delivery of support services after event-specific occurrences.

11.3.1.3.2 Power supply

Contingency plans that require the use of elevators shall take into consideration whether they are connected to the building's emergency power supply should there be a coincident primary power supply failure.

11.3.1.3.3 Resident transport service coordination

Where resident transport in and out of the LTCH is dependent on elevator service, contingency plans shall include coordination with a resident transport service capable of moving residents via stairwells for clinical care.

11.3.1.4 Flooding

11.3.1.4.1 Contingency planning

LTC shall have a catastrophic contingency plan to address internal and external floods, with plans organized by water category (clean, grey, and black) and extent of time the area has been affected.

Note: *See CSA Z317.13 and ANSI/IICRC S500.*

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11.3.1.4.2 Impact assessment

Depending on the type of liquid, different contingency plans shall be developed to address the impact of flooding, which should be coordinated with IPAC for construction.

Note: *Internal flooding can occur with rainwater, snow melt, domestic water supply, process liquids (including steam or chilled water), or sewage.*

11.3.1.4.3 Drying threshold period

For most floods, a threshold period for drying carbon-based building materials shall be established to mitigate mould concerns.

Note: *See CSA Z317.13 and ANSI/IICRC S500 to determine acceptable drying times or when damaged materials must be replaced.*

11.3.1.4.4 Infection control considerations

Where liquids present a direct infection control risk (e.g., sewage, some roof leaks), procedures to transfer residents and control, clean, and disinfect the area after contamination shall be in place. Building contamination should require investigating enclosed cavities (i.e., walls, ceilings) and addressing multiple floor-to-floor penetrations.

11.3.1.4.5 Moisture and mould

The impact of flooding, including high moisture levels and potential mould growth affecting any components of the building ventilation system, shall be addressed. Use of the building ventilation system during any period of drying or building remediation should follow acceptable standards.

Note: *See CSA Z317.13 and ANSI/IICRC S500 to determine acceptable drying times or when damaged materials must be replaced.*

11.3.1.5 Loss of normal power

11.3.1.5.1 Impact

LTCHs shall understand the operational impact of emergency power system disruption due to a catastrophic event and develop contingency plans.

11.3.1.5.2 Emergency power supply system standards

An emergency power supply system shall be provided in conformance with the requirements of CSA C282 standard for emergency electrical power support. Essential power for the LTCH loads shall be provided as required by CSA Z32 Clause 6 and as specified in CSA Z32 Table 6.

11.3.1.5.3 Service provision

Plans for how to manage provision of services during an extended normal power outage shall be established.

Note: *Extended loss of the normal utility power (e.g., usually beyond 2 h) can affect facility operations, particularly with food services, but also with loss of laundry and some recreation therapy and entertainment services.*

11.3.1.5.4 Refuelling

Plans for eventual emergency power loss shall take into the consideration the possibility of refuelling being hampered by catastrophic events (e.g., road inaccessibility) that can affect delivery of fuel and supplies.

Note: *CSA C282 specifies fuel supply and storage requirements for LTCHs; however, plans for fuel resupply beyond that timeline should be considered.*

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11.3.1.6 Loss of the emergency power system

While emergency power systems are expected to operate, and are critical to life and resident safety, the following shall be assessed and planned by the LTCH:

a) the length of time without power that can be accommodated;
b) how a transfer of residents shall be handled in the event of a prolonged power outage; and
c) preservation of the building (which is critical during winter conditions in which freezing temperatures can risk the LTCH).

11.3.1.7 Loss of prime heating systems

11.3.1.7.1 Resident transfer

Loss of the prime and (where in place) alternate fuel source or method for heating will have an impact on a facility quickly. In event of loss of heat, plans for safely transferring residents shall be in place. Plans shall include local and remote transport locations (depending on the widespread impact of the loss of the fuel source) and suitable methods of transport (which may be weather-dependent).

11.3.1.7.2 Ventilation systems

Plans to maintain in place for as long as possible should include stopping all ventilation systems to preserve heat.

11.3.1.8 Loss of prime cooling systems

Threshold levels for relocation, repair services, and temporary cooling sources should be established to determine an appropriate action plan.

Notes:

1) *Loss of the prime cooling systems will affect resident comfort first and, depending on weather extremes, can affect resident health.*
2) *Most often, cooling systems are electrically driven and thus affected by short-term and long-term loss of power.*
3) *Depending on resident health, some residents may be able to accommodate heat stress conditions longer.*

11.3.2 External events

11.3.2.1 General

LTCHs shall assess the impact to operations and care of external catastrophic events and develop contingency plans to mitigate their impact.

11.3.2.2 External airborne contaminants

An external airborne contaminant can include

a) irritants (e.g., road paving, roofing tar, construction equipment exhaust);
b) external organic contaminant (e.g., excessive airborne dust, forest fire, structure fire); and
c) chemical, biological, or radiation release.

Special operating protocols for HVAC systems shall be incorporated during a release of an external airborne contaminant. The HVAC system’s design and operation shall comply with CSA Z317.2 Clause 6.16.

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11.3.2.3 Irritants

LTCHs shall assess the hazard presented by the external release and, if confirmed to be an irritant only, should consider

a) operating ventilation systems in 100% recirculation mode;
b) ensuring that external doors and operable windows throughout are closed; and
c) mitigating the movement of residents, staff, and visitors through external doors.

11.3.2.4 External organic contaminants

LTCHs shall establish action levels for their external organic plan as per the US-EPA 2016 Air Quality Index (AQI).

Based on the action levels in the external organic plan, the LTCH shall assess the hazard presented by the external organic contaminant and, if confirmed to be of concern to the LTCH, shall

a) operate ventilation systems in 100% recirculation mode;
b) close external doors and operable windows;
c) minimize the movement of residents, staff, and visitors through external doors;
d) consider reducing the volume of exhaust systems to minimize the infiltration of contaminated outdoor air;
e) monitor ventilation systems filtration and replace filters frequently; and
f) consider installing temporary carbon filtration in ventilation systems.

Note: *External organic contaminants can include excessive airborne dust, forest fire smoke, and structure fire smoke.*

11.3.2.5 Chemical, biological, or radiation release

LTCHs shall assess the hazard presented by external chemical, biological, or radiation release and, if confirmed, shall

a) immediately inform the provincial/territorial health emergency management agency of the situation;
b) operate ventilation systems in 100% recirculation mode;
c) close external doors and operable windows throughout;
d) prevent the unnecessary movement of residents, staff, and visitors through external doors;
e) where possible, stop exhaust fans to minimize the infiltration of contaminated outdoor air (e.g., stopping critical exhaust fans, such as isolation room exhaust fans or kitchen exhaust fans while cooking is underway, may not be safely performed); and
f) monitor ventilation systems filtration and replace filters frequently.

11.3.2.6 Extreme temperature conditions

In the event of extreme temperature conditions, the LTCH should modify the operation of its HVAC systems as follows:

a) manually or centrally adjust the room temperature set points to that allowed by CSA Z317.2 (maximum for hot external temperatures, minimum for cold external temperatures);
b) temporarily reduce the volume of outdoor air admitted to the ventilation system in accordance with CSA Z317.2 Clause 16.2;
c) close all operable windows and external doors;
d) encourage the closing of all external window coverings;
e) for extreme high temperatures, minimize the operation of heat-producing equipment (e.g., stoves, hair dryers, unnecessary lighting) within the building;
f) minimize the movement of residents, staff, and visitors through external doors;
g) consider moving internal laundry services to off hours or delay services as possible; and

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h) consider reducing the heat generated by hot meal services.

11.3.2.7 Extreme weather events

Note: *Extreme weather events such as overland flooding from torrential rain, high wind events such as snowstorms and tornadoes, and hailstorms can damage the building envelope, allowing weather elements to enter and affect the LTCH, or can affect normal drainage and damage the building envelope.*

11.3.2.7.1 Overland flooding

Plans for mitigating water damage from overland flooding shall take into consideration the grading of the land and surfaces adjacent to their LTCH for the ability to redirect flood water away from the LTCH.

11.3.2.7.2 Overland flooding and tsunamis

Emergency plans to protect occupants of a LTCH from tsunamis and overland flooding shall be developed in cooperation with the applicable provincial/territorial or local emergency management agency.

11.3.2.7.3 Earthquakes

The LTCH shall review the localized risk for earthquakes and the risk to structural or building envelope damage.

11.3.2.7.4 High wind events including snowstorms and tornadoes

The LTCH shall review the localized risk for high wind events including snowstorms and tornadoes and the risk of structural or building envelope damage or wind-driven snow or rain brining moisture into the building or building ventilation systems.

11.3.2.7.5 Hail

The LTCH shall review the risk to the building envelope from hail and develop contingency plans for addressing the envelope damage and mitigating internal impacts.

11.3.3 Outbreak, epidemic, and pandemic management

11.3.3.1 Planning

Plans for outbreak, epidemic, and pandemic management in a household, neighbourhood, or throughout the LTCH shall include

a) protocols and procedures for detection, identification, investigation, response, and control,
b) maintaining appropriate staffing levels;
c) managing supplies;
d) managing access and isolation for staff, contracted caregivers, EFCs, and family; and
e) stakeholder communication including external reporting.

Note: *Refer to PHAC's* Infection prevention and control for COVID-19: Interim guidance for long-term care homes *for more information on monitoring, preventing, and controlling HAIs.*

11.3.3.2 Supplies

LTCHs shall have adequate and accessible supplies available during outbreaks, epidemics, or pandemics.

Note: *LTCHs can refer to the CDC's PPE usage calculator for more direction: https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/burn-calculator.html.*

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11.3.3.3 Procurement

LTCHs shall have access to or prepare for procurements of additional PPE supplies in the event of an outbreak, epidemic, pandemic, or catastrophic event.

Note: *Storage of PPE supplies can be offsite as long as they are readily available when needed.*

11.3.3.4 Storage

Common areas may be appropriated for storing large quantities of PPE during catastrophic events.

Note: *Common areas are spaces that are shared by staff and residents.*

11.3.3.5 PPE use

Proper use of PPE during an outbreak, epidemic, or pandemic shall include

a) point-of-care risk assessment to determine need for PPE;
b) using the correct technique for donning and doffing PPE; and
c) using the correct technique while wearing PPE (e.g., not to self-contaminate).

See the following PHAC RPAP and RPAP Education Tool documents for more guidance:

Notes:

1) *PHAC RPAP: https://www.canada.ca/content/dam/phac-aspc/documents/services/publications/diseases-conditions/routine-practices-precautions-healthcare-associated-infections/routine-practices-precautions-healthcare-associated-infections-2016-FINAL-eng.pdf*
2) *RPAP Assessment and Education Tools (has PCRA information): https://publications.gc.ca/collections/collection_2013/aspc-phac/HP40-65-2012-eng.pdf*

12 Training and simulation

Note: *Frequency of training is set by the AHJ and directed by local public health.*

12.1 General

12.1.1 Training development

Training shall be developed and evaluated by the TDAT.

12.1.2 Staff feedback

There shall be policies and procedures in place to obtain regular feedback from staff on training effectiveness, including relevance of training and solicitation of new ideas.

12.1.3 Learning tactics

Learning tactics should include

a) peer audits, learning and mentorship;
b) self-study, with provided onsite computer access;
c) face-to-face (one-on-one, small group, or large group);
d) space (e.g., study carrels) and paid learning time;
e) practice suites to enable simulation-based training;
f) a resource library and electronic library access to enable learning; and
g) reliable remote video connection to offsite mentors and educators.

Note: *Training delivery methods could include resident-led training sessions.*

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12.1.4 Delivery methods

Delivery methods for training should include but not be limited to

a) interaction;
b) simulation;
c) scenarios and context-based approaches;
d) short bedside teaching approaches;
e) video vignettes demonstrating a skill or approach;
f) posters and visual aids;
g) didactic sessions; and
h) skills return demonstrations.

12.2 Organizational commitments

12.2.1 Staff training and education

LTCHs shall establish training and education opportunities for staff on PCC, EDI, relationship building, and sexual expression to create an inclusive environment.

Notes:

1) *See Clause 4.1 for more on EDI and PCC.*
2) *See CARF's* Aging Services Standards Manual *for guidance on person-centred long-term care communities, including business practices, care processes, and program-specific quality standards.*

12.2.2 Sexual expression and intimacy

LTCHs shall have training protocols and policies for understanding sexual expression and intimacy.

Training shall incorporate a method for staff, residents, EFCs, and families to "whistle blow" and call out any violation to policies that infringe on a person's right to sexual expression and intimacy. Training shall be inclusive of complexities between supporting sexual expression and intimacy.

12.2.3 Inclusive language

LTCHs shall establish training and education policies and procedures for staff regarding the use of inclusive language.

12.3 Waste management training and operations

12.3.1 Staff training

Staff shall be trained in the handling, transport, storage, and disposal of waste material.

12.3.2 Waste separation and disposal

Internal policies and procedures, including training systems, shall properly separate waste at the point of disposal to prevent spoiling or fouling of a waste stream, including cross-contamination and infection risk.

12.3.3 Proper handling

Signage, clearly identified waste handling containers, and training aligned to both shall be present for proper handling. When changes in the system occur (including container changes with contract changes), signage and training shall be updated.

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12.3.4 Training frequency

LTCHs shall provide waste management training for all LTC staff with documented validation annually.

12.3.5 Licensing

All providers of waste handling services (e.g., solid, wastewater, recycling, and all hazardous waste streams) shall be licensed and maintain that licensing.

12.3.6 Outbreak, epidemic, or pandemic waste management

LTCHs shall prepare training material for isolation or outbreak, epidemic, or pandemic waste management practices. LTCHs shall include a training delivery plan.

12.4 Catastrophic event management

12.4.1 Stakeholders

Training programs shall be developed and conducted for all staff, residents, families, EFCs, and any third-party agencies. This training shall be reinforced during an event.

Notes:

1) *See Clause 11.*
2) *LTC is part of the community setting. In the event of a catastrophic event, there is a need for proper training to support those who are affected by the disaster, including families and EFCs.*

12.4.2 Training program elements

Training programs shall

a) provide a context for leadership and provincial/territorial coordination in planning for, responding to, and recovering from an emergency/disaster;
b) outline the guiding principles and key structural elements for catastrophic event management;
c) promote awareness and shared understanding between staff, residence, families, EFCs, and external partners; and
d) guide services/programs in the development of their respective catastrophic event management plans.

12.4.3 Resident and EFC involvement

Residents, families, and EFCs shall be involved in catastrophic event training.

12.4.4 Catastrophic events

Staff shall be trained to manage internal and external catastrophic events including

a) extreme weather (e.g., tornado, earthquake, ice storm, heat wave);
b) hostage-taking;
c) bomb threat;
d) active shooter;
e) hazardous material release; and
f) epidemic and pandemic outbreak in accordance with Clause 11.3.3.

Note: *Staff might need to evacuate the LTCH in the event of flooding, fire, water restrictions, and long-term power loss, and should be trained to do so.*

12.4.5 Site specific training

Catastrophic event response training shall be site-specific and might require input from local authorities.

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12.4.6 Training methods

Training should consist of a combination of theory and hands-on training, such as

a) exercises (e.g., fire drill);
b) simulations (e.g., scenarios and describe the behaviour); or
c) tabletop exercises (e.g., manual, incident command).

12.4.7 Validation and continuous improvement

Staff at LTCHs shall be provided with training validation documentation and continuous improvement monitoring.

12.4.8 Operational components

LTCHs shall have operations and training in place regarding

a) how to manage staff isolation;
b) entry of family, EFCs, or contracted caregivers into the LTCH; and
c) IPAC to minimize the spread of infection.

12.5 IPAC

12.5.1 Core competencies education timing

LTCH shall provide, at minimum, IPAC core competencies education during employment orientation, as needed when special circumstances (e.g., outbreaks, epidemics, pandemics, new products or information) arise, and at least annually for all managers, staff, and volunteers.

12.5.2 Core competencies education content and principles

IPAC core competencies shall include education and training sessions for routine practices and additional precautions, with content that shall include but is not limited to the following principles:

a) point-of-care risk assessment;
b) transmission of microorganisms (chain of infection);
c) prevention of exposure to microorganisms (including source control);
d) importance of immunization;
e) knowledge of immune status to vaccine preventable diseases (e.g., varicella);
f) indications for hand hygiene (i.e., ABHR at point of care as preferred method unless exceptions apply, such as when hands are visibly soiled with organic material, or if exposure to norovirus and potential spore-forming pathogens such as *C. difficile* is strongly suspected);
g) indications for and appropriate application of aseptic technique;
h) routine practices and additional precautions for the transmission of infection in healthcare settings;
i) safe use and disposal of sharps;
j) cleaning and disinfection of non-critical resident care equipment between residents;
k) resident/visitor education;
l) indications for and appropriate use of PPE (including donning and doffing routinely and during catastrophic events);
m) implementation of additional precautions; and
n) modification of practices during outbreaks.

12.5.3 Adult education

Education needs to consider teaching and learning principles for adult education.

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12.5.4 Trainee personnel

Volunteers, students, agency, or contracted personnel shall be provided with the appropriate IPAC education related to their roles and as required by the relevant AHJ (e.g., OHS legislation).

12.5.5 Responsible parties

LTCHs shall identify responsible parties for the training, education, and ongoing audits of all staff. Training and education shall occur at onboarding, ongoing proficiency trainings and assessments, and ad hoc as new issues arise and continuing education is needed.

12.6 IPAC — EVS personnel

12.6.1 Training topics

Upon hire, on-the-job training shall at a minimum cover the following:

a) EVS-specific policies and procedures;
b) fundamentals of EVS, including cleaning and disinfection of resident areas;
c) cleaning and disinfection of administrative/public areas;
d) IPAC policies and procedures such as
    i) routine practices;
    ii) additional precautions; and
    iii) hand hygiene;
e) OHS;
f) WHMIS;
g) EVS equipment;
h) quality auditing program; and
i) hands-on training.

Notes:

1) *See CSA Z317.12 for more details.*
2) *On-the-job training is in addition to organizational orientation training that is provided to all new hires.*
3) *EVS training is needed for all staff performing EVS duties or activities, not only those identified as EVS staff.*

12.6.2 Training standards

LTCHs shall follow the requirements for EVS personnel including qualifications, competency, continuing education, and training in CSA Z317.12.

12.6.3 Program components

LTCHs shall have an education program in place for EVS personnel that includes education, training, and monitoring. Personnel involved in environmental cleaning and disinfection shall be prepared for the function they perform through appropriate education and training on

a) cleaning principles and methods;
b) EVS policy and procedures on cleaning routine and frequency of cleaning of resident rooms, communal spaces, and washrooms;
c) IPAC routine practices and additional precautions; and
d) mixing, using, and storing chemicals and disinfectants.

12.6.4 Education timing and frequency

Education shall be provided to EVS staff upon onboarding and annually thereafter.

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12.7 IT

12.7.1 System training

Training programs for IT systems and AgeTech usage shall be developed and delivered for all staff, families, and EFCs according to needs of all categories of users.

12.7.2 Continuous user support

Continuous user support for IT systems and AgeTech usage shall be provided to all staff, families, and EFCs.

12.7.3 Staff training

Staff members shall be trained to assist in electronic communication for residents.

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Annex A (informative)
Environmental scan of Canadian Resident Bill of Rights

Notes:

1) *This Annex is not a mandatory part of this Standard.*
2) *The following bills of rights, acts, and regulations across the country informed the development of Annex A. See references below for more details on each provincial and/or territorial bill of rights:*
   a) *British Columbia Bill of Rights;*
   b) *Alberta Hospital Act;*
   c) *Saskatchewan: The Personal Care Homes Regulations, 1996;*
   d) *Manitoba:*
      i) *Health Services Insurance Act (C.C.S.M. c. H35);*
      ii) *Personal Care Homes Standards Regulation;*
      iii) *The Protection for Persons in Care Act; and*
      iv) *Long-Term Care Homes Act (LTCHA), 2007;*
   e) *Ontario: Long-Term Care Homes Act, 2007, Ontario Regulation 79/10;*
   f) *Nova Scotia: Homes for Special Care Regulations made under Section 19 of the Homes for Special Care Act, R.S.N.S. 1989, c. 203 Long Term Care Program Requirements: Nursing Homes & Residential Care Facilities (2019);*
   g) *New Brunswick: New Brunswick's Nursing Homes Act and its Regulation do not outline residents' rights (with the exception of health information privacy);*
   h) *Newfoundland and Labrador: Newfoundland and Labrador Operational Standards;*
   i) *Prince Edward Island: Community care facilities and nursing homes act regulations addresses social rights;*
   j) *Nunavut: No clear "Bill of Rights" embedded in legislation;*
   k) *Yukon: Health Act, 2002;*
   l) *Northwest Territories: 'Client rights' are addressed at section 5.11 of the Northwest Territories Continuing Care Standards, 2015.*

A.1 Humanitarian rights

Every resident should have the right to

a) be free from discrimination;
b) be treated with courtesy and respect and in a way that fully recognizes the resident's individuality, and maintains and respects the resident's dignity;
c) be protected from neglect, abuse, and exploitation;
d) be protected by the licensee or staff;
e) be properly sheltered, fed, clothed, groomed, and cared for in a manner consistent with his or her needs;
f) live in a safe and clean environment;
g) be treated in a manner and live in an environment that promotes their health, safety, and dignity;
h) to have their personal privacy respected, including records, bedroom, belongings, and storage spaces;
i) be encouraged to exercise their rights as a citizen (e.g., voting, mail delivery); and
j) pursue social, cultural, religious, spiritual, and other interests to develop their potential, and to be given reasonable assistance by the licensee to do so.

A.2 Administrative and communication rights

Every resident should have the right to

a) be informed about how to make a complaint to an authority outside the LTCH;
b) have their family and EFCs exercise the rights under this Clause on their behalf;

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c) be informed in advance of all charges, fees, and other amounts that they pay for accommodation and services received through the LTCH;
d) if any part of the cost of accommodation or services is prepaid, receive at the time of prepayment a written statement setting out the terms and conditions under which a refund may be made;
e) have their family or EFCs informed of the matters described in this Clause;
f) communicate in confidence, receive visitors of their choice, and consult in private with any person without interference;
g) designate a person to receive information concerning any transfer or any hospitalization of the resident, and to have that person receive that information immediately;
h) raise concerns or recommend changes in policies and services on behalf of themselves or others without interference and without fear of coercion, discrimination, or reprisal, whether directed at the resident or anyone else;
i) form friendships and relationships, and to participate in the life of the LTCH;
j) participate in the residents' council where applicable;
k) be informed in writing of any law, rule, or policy affecting services provided to the resident and of the procedures for initiating complaints;
l) manage their own financial affairs unless the resident lacks the legal capacity to do so;
m) have any friend, family member, EFCs, or other person of importance to the resident attend any meeting with the licensee or the staff of the home;
n) information and access to the internet; and
o) communication access and supports as needed to facilitate understanding.

A.3 Care rights

Every resident should have the right to

a) be told who is responsible for and who is providing their direct care;
b) be afforded privacy in treatment and in caring for their personal needs;
c) a care plan that is developed specifically for them, and based on their unique abilities, physical, sensory, social, and emotional needs, their communication capacity, and their cultural and spiritual preferences;
d) a program that addresses behavioural changes and complies with local, provincial/territorial, and national laws regarding restraint minimization;
e) receive care and assistance towards independence based on a restorative care philosophy to maximize independence to the greatest extent possible;
f) participate in decision-making;
g) participate fully in the development, implementation, review, and revision of their individualized plan of care;
h) when mentally competent to do so, give or refuse consent to any treatment, care, or services for which their consent is required by law and to be informed of the consequences of giving or refusing consent;
i) participate fully in making any decision concerning any aspect of their care, including any decision about admission, discharge, or transfer to or from a LTCH or a secure unit;
j) have their personal health information kept confidential;
k) have access to their records of personal health information, including their plan of care;
l) have any family or EFC attend any meeting with the licensee or the staff of the LTCH;
m) have family or EFC present 24 h per day when they are dying or very ill;
n) family and EFC visitation for purposes beyond assisting with palliative care (see Clause 5.3 for more details on the visitation policy);
o) not to be restrained, except within limited circumstances;
p) have their lifestyle and choices respected;

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q) keep and display personal possessions, pictures, and furnishings in their room, subject to safety requirements and the rights of other residents;
r) meet privately with family, EFC, or another person in a room that assures privacy;
s) share a room with another resident according to their mutual wishes if appropriate accommodation is available;
t) be given access to protected outdoor areas to enjoy outdoor activity unless the physical setting makes this impossible; and
u) have their family or EFC informed of the matters described in this Clause.

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Annex B (informative)
Residential care sample survey

Note: *This Annex is not a mandatory part of this Standard.*

LTCHs should regularly seek feedback from residents, family, and EFCs regarding their experiences of PCC, EDI, design, operations, and IPAC considerations. Surveys can be conducted as part of annual reviews, exit interviews, and ongoing to gauge satisfaction and inform quality improvement initiatives.

Thank you for participating in this anonymous survey from XXX. The purpose of the survey is to incorporate the perspectives of our residents, EFCs, and family into the LTCH.

Participation in this survey is completely voluntary. Only anonymous testimonials and summary data will be used by the operational team. If you have any questions about the survey, please contact XXX. We estimate the survey will take you 3–5 min to complete.

Survey Questions

1) Are you a ___? If you fit more than one category, please feel free to complete the survey multiple times.
   a) person living in a LTCH
   b) family/EFC of a person living in a LTCH
   c) family/EFC who is completing the survey in consultation with/on behalf of a person living in a LTCH

   (Please answer the following questions from your perspective as identified above)
2) How much do you agree with the statement: “My/my family member’s well-being is well-supported in the LTCH…”?
   a) strongly agree
   b) agree
   c) neither agree nor disagree
   d) disagree
   e) strongly disagree
3) What do you feel is essential to supporting well-being in your LTCH? Choose all that apply.
   a) ability to visit with family/EFC/friends
   b) safe IPAC operations
   c) high-quality physical care
   d) compassionate staff who know me well
   e) adequate staffing levels
   f) sexual expression and intimacy
   g) equity, diversity, and inclusion in all operations
   h) excellent communication and relationships with staff/management
   i) meaningful activities
   j) formal therapeutic recreation programs
   k) informal opportunities to socialize
   l) home-like environment and design
   m) ability to customize my bedroom with personal belongings
   n) comfortable, climate-controlled environment
   o) nutritious, tasty food
   p) access to outdoor spaces
   q) peer relationships with other residents (friendships)
   r) other (please specify)

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4) In your opinion, which of these areas are done well by your LTCH? Choose all that apply.
   a) ability to visit with family/EFC/friends
   b) safe IPAC operations
   c) high-quality physical care
   d) compassionate staff who know me well
   e) adequate staffing levels
   f) sexual expression and intimacy
   g) equity, diversity, and inclusion in all operations
   h) excellent communication and relationships with staff/management
   i) meaningful activities
   j) formal therapeutic recreation programs
   k) informal opportunities to socialize
   l) home-like environment and design
   m) ability to customize my bedroom with personal belongings
   n) comfortable, climate-controlled environment
   o) nutritious, tasty food
   p) access to outdoor spaces
   q) peer relationships with other residents (friendships)
   r) other (please specify)
5) In your opinion, what more could be done to support your/family member's well-being in the LTCH?
6) How have visitation restrictions in your LTCH affected you/your family member?
7) How would you like to see family/EFC/friend visiting handled in the case of future outbreaks, epidemics, pandemics (COVID-19 or other viruses)? Choose all that apply.
   a) clear visiting protocols
   b) safe designated visiting areas inside
   c) safe designated visiting areas outside
   d) staff support for in-person visits
   e) staff support for virtual visits
   f) technology support available for virtual visits
   g) protocols for short-term leave from LTCH
   h) designation of approved visitors for each resident
   i) daily updates on current protocols
   j) other (please specify)
8) Is there anything else you would like to say about supports for your/family member's well-being in your LTCH?
   a) No
   b) If yes, please specify

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Annex C (informative)
Jurisdictional waste management

Note: *This Annex is not a mandatory part of this Standard.*

In Canada, all three levels of government contribute to environmental protection and have a role to play in managing hazardous waste and hazardous recyclable material:

a) Local governments establish collection, recycling, composting, and disposal programs within their jurisdictions. Local by-laws and regulations provide the requirements for facilities generating solid waste, recycling and wastewater which are then inputted to the local systems. Where they exist in the locality, regulations regarding composting would apply.

b) Provincial and territorial governments establish measures and criteria for licensing hazardous waste generators, carriers, and treatment facilities, in addition to controlling movements of waste within their jurisdictions. Provincial/territorial acts and regulations include licensing of solid waste and wastewater management systems and oversight of federal transportation acts including the following requirements:
   i) facilities which operate their own water and/or wastewater treatment systems should adhere to provincial/territorial acts including registered systems and licensed operators; and
   ii) facilities which operate their own solid waste management systems including incinerators should adhere to provincial/territorial acts regarding these systems.

c) The federal government regulates trans-boundary movements of hazardous waste and hazardous recyclable material, in addition to negotiating international agreements related to chemicals and waste. Federal acts and regulations include Canadian Environmental Protect Act and related regulations for
   i) movement of waste;
   ii) handling of Polychlorinated Biphenyls (particularly found in older electrical and electronic components of equipment and buildings); and
   iii) export and import of hazardous waste and hazardous recyclable materials in and out of Canada.

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Annex D (informative)
Waste management plan

Notes:
1) *This Annex is not a mandatory part of this Standard.*
2) *This Annex provides guidance for non-hazardous and general waste.*

D.1 Container selection

Container selection should
a) be based on the resident population in the LTCH (e.g., dementia);
b) be able to be cleaned (e.g., recommendation not to use metal containers in resident areas, better to use plastic ones which are also fire retardant);
c) include waste containers outside resident rooms that would be larger and would service an area;
d) include area waste containers that should be covered, and the opening of the cover should be touchless and/or foot pedal operated;
e) include big containers at the loading dock that should have a drain hole to support cleaning and disinfection practices and be pest-proof;
f) hold wet garbage in leak-proof, non-absorptive, easily cleaned, and approved containers with tight-fitting covers in a separate enclosed area or container until removal for disposal. Soiled waste or recycling containers should not be brought into the food preparation or storage areas; and
g) include external containers where the size is appropriate such that the bag can safely be removed when the container is full (i.e., bag will not be too tall and/or heavy to lift and causes safety issues).

D.2 Container cleaning

LTCHs should clean and sanitize waste and recycling containers carrying waste regularly, inside and out, either manually with a hand scrub brush, detergent, and water, followed by a sanitation rinse, or mechanically with a steam pressure hose or can washing equipment. This operation should be carried out in an area separate from food preparation, storage, and service.

D.3 Container location

Container locations should
a) be in resident rooms, with a container beside each bedside in shared resident rooms;
b) be external to the resident rooms with an appropriate number of containers placed in centralized locations efficient for EVS and housekeeping personnel; and
c) consider odour and pest management (e.g., organic waste container located on loading dock).

D.4 Container emptying

Waste containers should be emptied daily and should be sized accordingly. Depending on the location, containers might need to be emptied more frequently (e.g., kitchen spaces) and this should be determined. Contents should be removed on a scheduled basis to eliminate safety concerns associated with weight, odour, and hygienic issues.

D.5 Pest control

Plans should be in place for controlling pests that can include but not be limited to
a) insects (bedbugs, silverfish, cockroaches, flies);
b) rodents and vermin (mice, rats, raccoons); and

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c) birds (terns, seagulls, crows, ravens, geese).

Note: *Use of a third-party contractor can be considered.*

D.6 Waste segregation

Waste segregation should be based on CSA Z317.10 and local AHJ regulations for the different waste types including

a) recycling, garbage, organics, food and incontinence, and medical waste (including disposal of medications and insulin);
b) disposal of electronic phones, old electronics, batteries, and light bulbs; and
c) fine paper, corrugated cardboard, plastic bottles, metal cans, glass, and newspaper.

D.7 Internal pick-up

Internal pick-up should

a) be on a regular scheduled basis; and
b) not be done in morning and at dinner as these are the busiest operational times. The most appropriate timing for pick-up is based on services offered and dynamics of the LTCH.

D.8 External pick-up

External pick-up should

a) occur in the loading dock area;
b) have a clear separation between pick up areas with containers that hold clean and dirty contents to avoid cross-contamination (e.g., waste vs. food). Some LTCHs may only have one loading dock area, so efforts should be made at areas where cross-contamination may occur (e.g., use different equipment to transport food vs. waste); and
c) use designated building entrances and exits to remove garbage.

D.9 Internal waste transportation

Internal transportation of waste should

a) include proper collection carts;
b) have a designated route within the LTCH (e.g., use of freight elevator);
c) include the use of chutes and/or designated elevators to keep food and soiled/waste management deliveries separate; and
d) transport waste using the following guidelines:
    i) clearly defined transport routes;
    ii) avoid crossing through clean zones, public areas, or resident/resident care units;
    iii) avoid transporting waste on the same elevator as resident (i.e., if a dedicated elevator is not available, waste should not be transported at the same time as residents are transported); and
    iv) transport waste in leak-proof and covered carts that are cleaned on a regular basis.

D.10 Waste storage

LTCHs should consider the following waste storage recommendations:

a) have a secure interim storage location for waste such as biomedical waste or pharmaceutical waste, as well as general garbage and recycling from the LTCH population;
b) clean interim storage rooms and containers on a scheduled basis;
c) store waste in or close to a loading dock area;
d) if LTCHs have a soiled room, secure it and prevent access to unauthorized personnel; and
e) secure confidential waste in locked containers for interim storage.

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D.11 Waste disposal

LTCHs should consider the following waste disposal recommendations:

a) maintain container disposal frequencies to reduce odour nuisance or pest control; and
b) have a contingency plan in place for interruptions to waste pick-up (e.g., vendor goes out of business). LTCHs can reach out to local HCFs in this instance. External contractors should provide contingency plan in event of waste disposal disruption.

D.12 Audits

LTCHs should develop a waste reduction work plan and conduct a waste audit that will show

a) sources of waste within the LTCH;
b) opportunities for waste reduction (such as separating paper, plastic, and metal recycling compared to biomedical, organics, and landfill); and
c) the degree to which each waste stream might be cross-contaminated.

Note: *Having the audit results by waste commodity can help the LTCH further understand how it purchases and uses products and materials, including the rationale for their choices.*

D.13 Outbreak, epidemic, and pandemic management

LTCHs should develop and follow IPAC requirements and protocols that include waste management policies and procedures during outbreaks, epidemics, and pandemics.

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Annex E (normative)
Audit tool

Note: *This Annex is a mandatory part of this Standard.*

E.1 General

E.1.1 Policies and procedures

LTCHs shall establish policies and procedures using the audit tool to demonstrate compliance with this Standard.

E.1.2 Auditing

The LTCH shall complete an audit of the home in accordance with the audit tool.

E.2 Frequency

The audit shall be performed at least once a year.

E.3 Auditors

The audit shall be performed by individuals independent of the LTCH ownership or operating organization who are qualified and experienced in LTCH operations and IPAC to perform the audit. As appropriate, sections of the audit shall be performed by and where appropriate certified by

a) registered design professionals licensed to practice in the jurisdiction where the LTCH is located;
b) appropriately registered and experienced healthcare professionals licensed to practice in the jurisdiction where the LTCH is located; and
c) accreditation bodies.

E.4 Publishing audit results

E.4.1 Audit results reporting

The LTCH audit results shall be

a) submitted to the AHJ; and
b) published publicly.

E.4.2 Audit results publishing

The publicly published audit results should be

a) displayed at the front entrance of the LTCH (within 3 m of the entrance); and
b) broadcasted, or a link to the audit results document provided, on the LTCH website.

Note: *The LTCH should adopt a culture that promotes an atmosphere where people can share audit results without fear of blame to promote learning and advancement.*

E.5 Contents

The audit contents shall include

a) a title page with the name of the LTCH, which shall include
    i) the LTCH address; and
    ii) the name of the most senior person responsible for the LTCH operations at that location;

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b) a brief letter summarizing the audit contents (signed by the most senior person responsible for LTCH operations at that location);
c) completed audit forms for each clause in this Standard that document
    i) the findings of the audit;
    ii) areas of compliance; and
    iii) areas of non-compliance;
d) benchmarking for the next audit;
e) an action plan that includes
    i) steps to maintain safety for areas of non-compliance;
    ii) steps to gain full compliance with this Standard;
    iii) steps to monitor progress of attaining full compliance;
    iv) anticipated costs for steps to attain full compliance;
    v) anticipated schedule to attain full compliance; and
    vi) considerations for changing practices and demographics; and
f) auditor signature page.

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Annex F (informative)
IPAC risk reduction strategies

Note: *This Annex is not a mandatory part of this Standard.*

The following risk reduction strategies should be adopted by LTCHs.

F.1 Resident accommodation

The care team should evaluate the resident's accommodation needs based on the ICRA and determine if private room accommodation is appropriate for them.

F.2 PPE

F.2.1 Gloves

Clean gloves should be used when there is a risk of hand contact with resident's body fluids, excretion, secretion, non-intact skin, or mucous membranes. Gloves are not required for direct care when contact is limited to resident's intact skin (e.g., taking blood pressure, bathing and dressing the resident).

Gloves should be removed immediately after completion of care, after touching a contaminated site, and before touching a clean site. Single-use disposable gloves should not be reused or washed;

Gloves should not be used for the care of more than one resident.

A single layer of gloves should be used except when handling cytotoxic or hazardous chemicals.

Hand hygiene should be performed before putting on gloves and after removing gloves, as gloves are not a substitute for hand hygiene.

F.2.2 Gowns

Gowns should be used when it is anticipated that a procedure and resident care activities are likely to generate splashes or sprays of blood, body fluids, secretions, or excretions. Long-sleeved gowns should be used if contamination of clothing or skin is anticipated.

Gowns should be put on immediately before the task and worn properly (e.g., tied at the top and around the waist). Used gowns should be discarded immediately after removal into appropriate receptacles.

Gowns should not be re-used, worn between residents within the same room, or worn between residents from room to room.

F.2.3 Masks

Masks (e.g., medical grade, surgical) should be used when indicated to protect mucous membranes of the nose and mouth during procedures and resident care activities that are likely to generate splashes or sprays of blood, body fluids, secretions, or excretions (e.g., wound irrigation procedures). They should be discarded immediately after removal into the appropriate receptacle and the user's hands washed.

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CA-N95 or equivalent respirators used to prevent inhalation of bioaerosols that may contain infectious agents transmitted via the airborne route. They should also be

a) annually fit-tested for staff. Records of fit testing should be maintained, including staff member's name, date, time, size of respirator, make/model of respirator, and date of next fit testing requirement;
b) worn by staff and visitors continuously while inside the LTCH during outbreaks or high-community cases of airborne diseases;
c) provided to residents and encouraged to be worn based on the point-of-care resident risk assessment;
d) worn by staff and visitors when in close contact with residents with illness transmitted via the airborne route; and
e) discarded immediately after removal into appropriate receptacle and the user's hands washed.

Note: *See CSA Z94.4.1.*

F.2.4 Eye protection

Eye protection should be

a) used to protect the mucous membranes of the eyes during procedures and care activities likely to generate splashes or sprays of blood, body fluids, secretions, or excretions;
b) worn when in close contact with residents with respiratory symptoms; and
c) worn for wound irrigation procedures if there is any risk of sprays or splashes.

F.3 Safe handling of sharps

Refer to CSA Z316.6 for guidance on sharps injury protection and sharp container functionality.

F.4 Clean resident personal care equipment

Resident personal care supplies (e.g., lotions, creams, soaps, razors, toothpaste, toothbrush, hairbrushes, combs) should not be shared between residents. Supplies should be labelled with resident's name and supplies should not be stored on the washroom counter.

F.5 Clean environment

Refer to CSA Z317.12 for guidance on housekeeping routines and guidelines for cleaning and disinfection.

F.6 Laundry

The same laundry policies and procedures in normal circumstances should be followed during catastrophic events.

F.7 Waste

Waste should be handled carefully to prevent personal contamination and transfer to other residents.

Transport carts should be utilized. Carts should be brought to waste. Waste should not be carried in the hallway to the cart.

Waste handlers should wear protective apparel appropriate to their risk (e.g., gloves, protective footwear).

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Annex G (informative)
LTCH layout and design

Note: *This Annex is not a mandatory part of this Standard.*

Figure G.1 shows a bird's-eye view of an example of a long-term care home, with labels indicating the functional areas of the building. Figure G.2 shows a detailed view of an example of a long-term care home, and indicates various zones and spaces of the building.

Figure G.1
Example of LTCH layout and design — Bird's-eye view
(See Clause 8.)

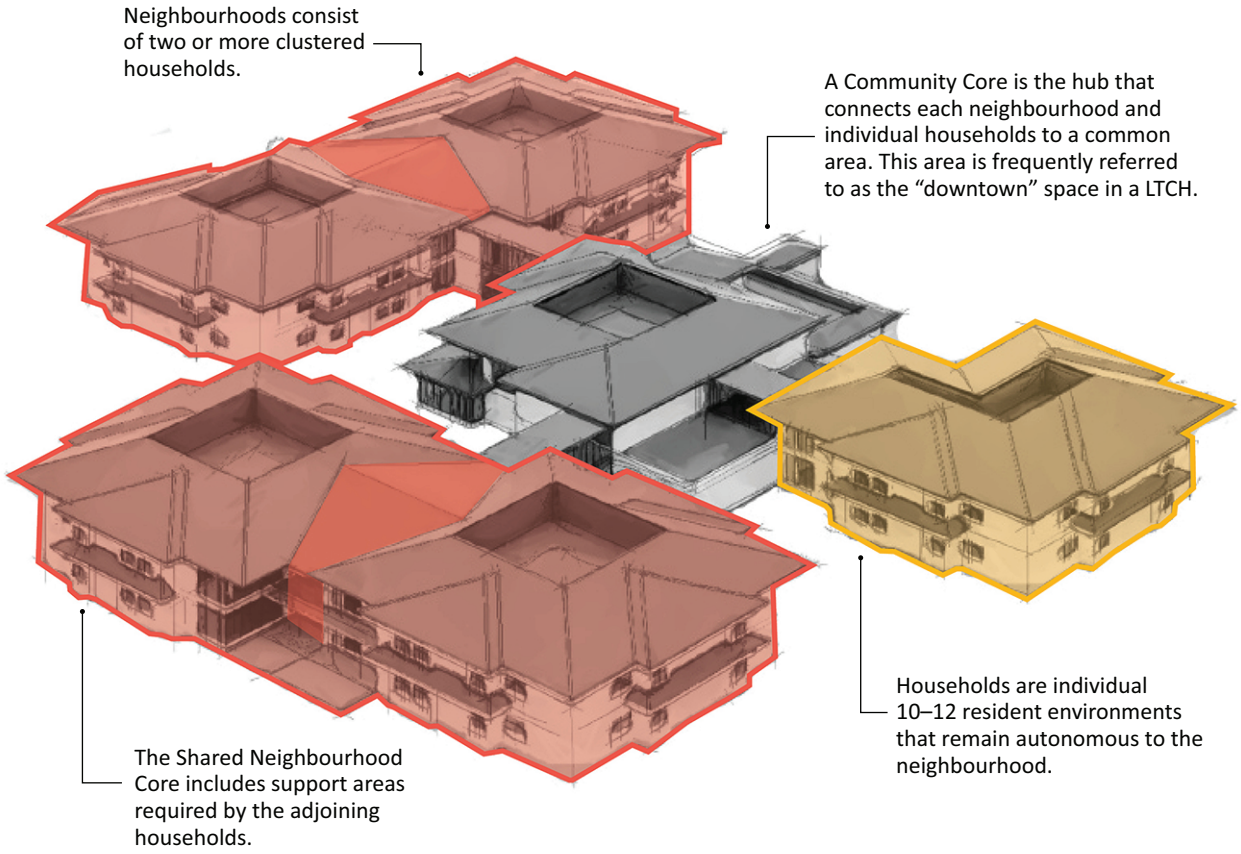

Figure G.1 shows a bird's-eye view of an example of a long-term care home, with labels indicating the functional areas of the building.

Source: *MMP Architects Inc.*

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Figure G.2
Example of LTCH layout and design — Detailed view

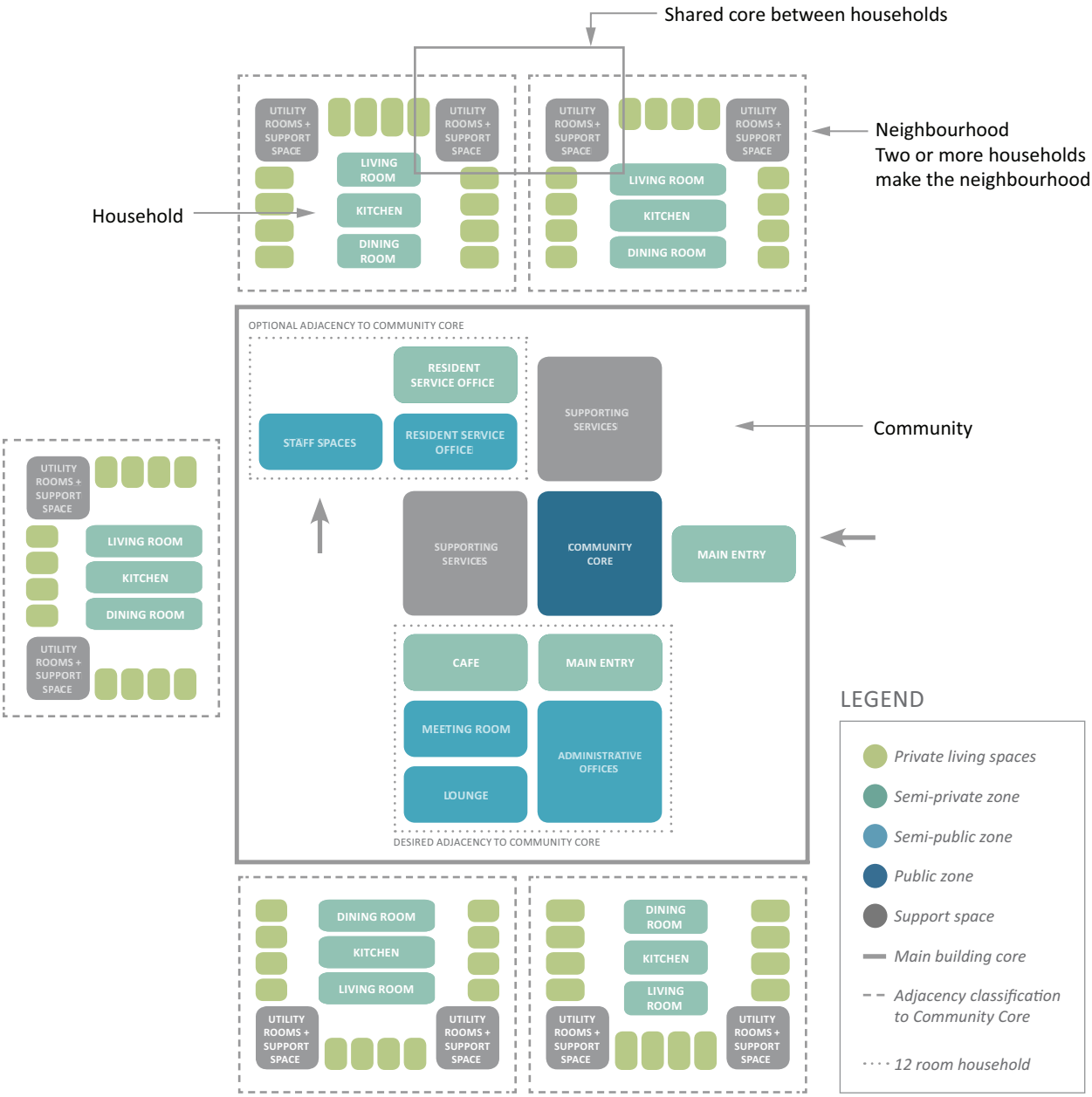

Figure G.2 shows an example of how a long-term care home looks on the inside when its component parts are placed in a relational diagram. In the centre of the home, next to the main entry, is the community core, surrounded by supporting services, staff spaces and offices, and a meeting room, lounge, and café. Surrounding the community section on three sides are five households, each one consisting of 12 resident bedrooms, a shared living room, kitchen, and dining room, and utility rooms and support space. Two or more adjacent households may share support spaces and form a neighbourhood.

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Annex H (informative)
Garden design considerations

Note: *This Annex is not a mandatory part of this Standard.*

The figures depicted below provide examples of garden designs that LTCHs can consider incorporating in their outdoor space.

Figure H.1
Example of pathway garden
(See Clause 8.1.4.)

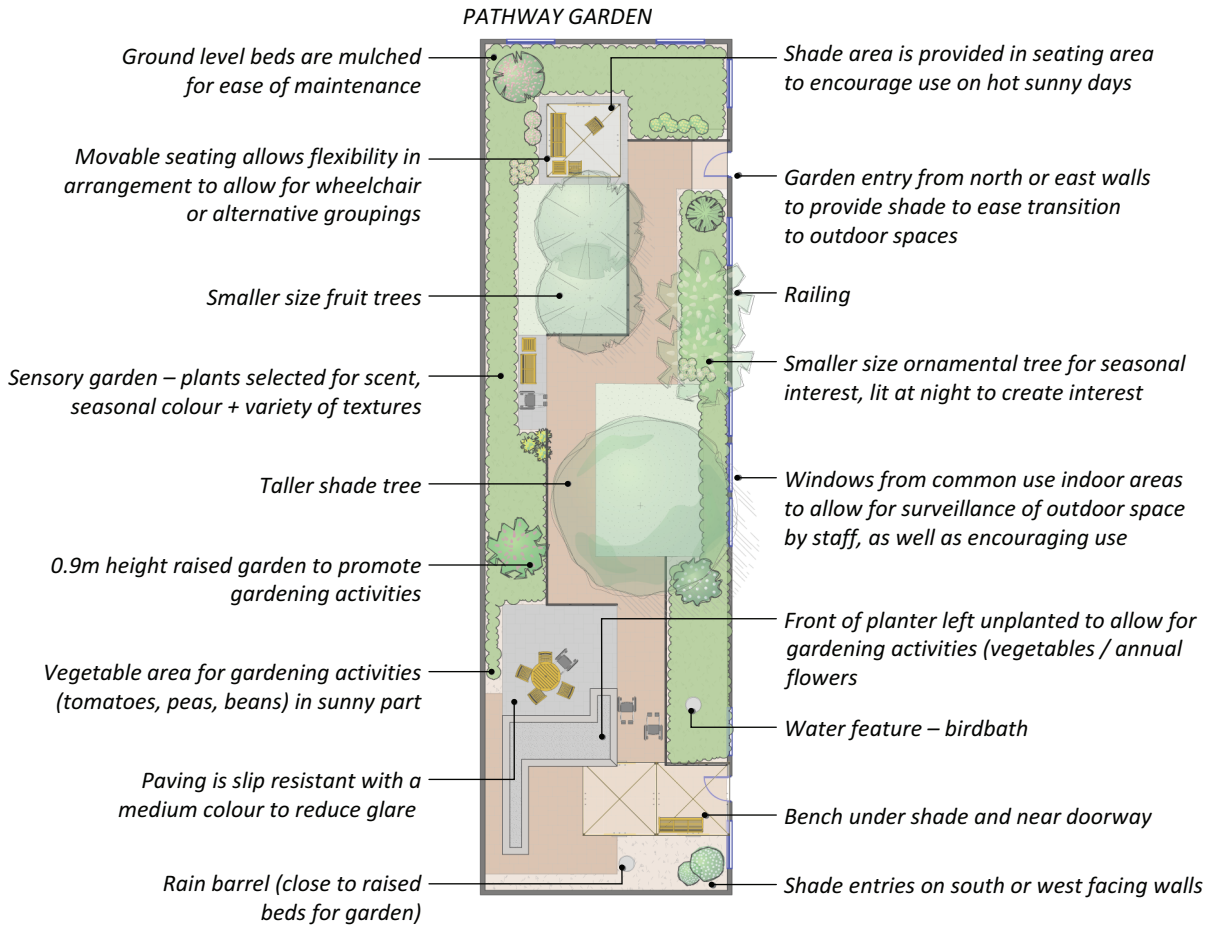

Figure H.1 shows an example of a pathway garden, with each element of the garden labelled. Prominent features include ground-level beds, movable seating, fruit trees, sensory garden, taller shade trees, height-raised garden, vegetable area, non-slip paving, rain barrel, shaded area, railing, smaller ornamental trees, windows from the common use indoor areas, water feature, bench, and shaded entries.

Source: *Robert Wrublowsky - MMP Architects and Dean Spearman*

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Figure H.2
Example of courtyard garden
(See Clause 8.1.4.)

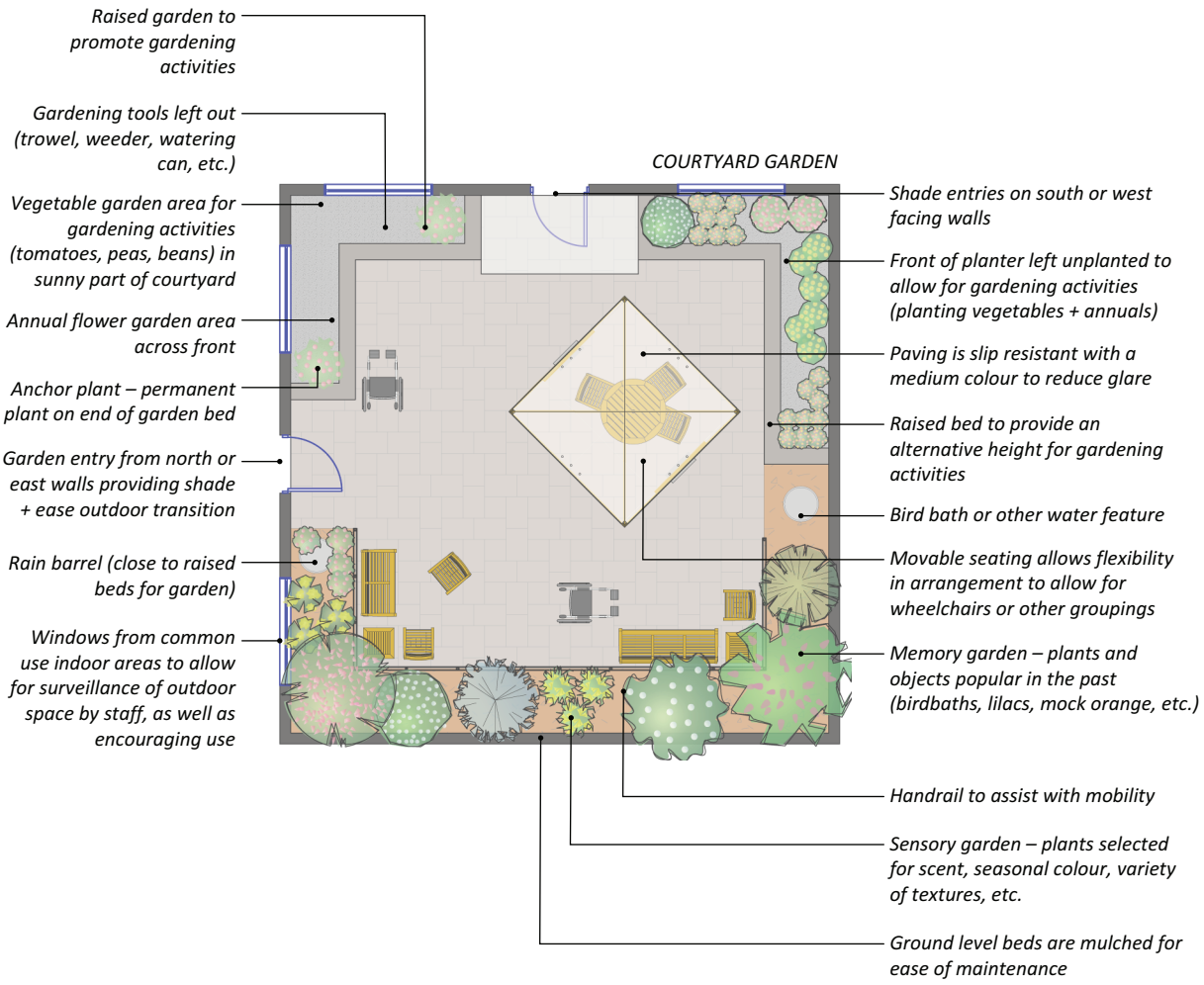

Figure H.2 shows an example of a courtyard garden, with each element of the garden labelled. Prominent features include various raised gardens, gardening tools, vegetable and flower gardens, rain barrel, windows from common use indoor areas, shaded entries, non-slip paving, water feature, movable seating, memory garden, handrail, sensory garden, and ground-level beds.

Source: *Robert Wrublowsky - MMP Architects and Dean Spearman*

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Figure H.3
Example of large garden
(See Clause 8.1.4.)

Figure H.3 shows an example of a large garden, with each element of the garden labelled. Prominent features include rain barrel, railings and gates, covered areas, vegetable garden area, slip-resistant pavement and pathways, windows from common use indoor areas, ground-level beds, shaded garden entries, fruit and shade trees, seating areas and benches, height-raised gardens, playhouse, sensory garden, and movable seating.

Source: *Robert Wrublowsky - MMP Architects and Dean Spearman*

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Annex I (informative)
Catastrophic event management plan

Note: *This Annex is not a mandatory part of this Standard.*

The four inter-dependent pillars of emergency management include

a) **Hazard identification and mitigation:** to identify and manage the risks of disasters to protect lives, property, and the environment, and to reduce economic disruption. Three components of hazard identification and mitigation are risk analysis, risk management, and risk insurance;
b) **Planning/preparedness:** to be ready to respond to a disaster and manage its consequences through measures taken prior to an event (e.g., emergency response plans, mutual assistance agreements, resource inventories, training, equipment, and exercises);
c) **Response:** to act during or immediately before or after a disaster to manage its consequences (e.g., emergency medical assistance and evacuation to minimize suffering and losses associated with disasters);
d) **Recovery:** To repair or restore conditions to an acceptable level through measures taken after a disaster (e.g., return of health services, trauma counselling, and reconstruction).

Note: *See Public Safety Canada's Emergency Management Planning, https://www.publicsafety.gc.ca/cnt/mrgnc-mngmnt/mrgnc-prprdnss/mrgnc-mngmnt-plnnng-en.aspx.*

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Annex J (informative)
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Notes:
1) *This Annex is not a mandatory part of this Standard.*
2) *Additional reference material is provided in Clause 2.*

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