A CBR Canada Webinar

Long-Term Care homes during the pandemic: Lessons learned and rethinking the future

Chantal Trudel and Soo Wong
Call to Action #21:

We call upon the federal government to provide sustainable funding for existing and new Aboriginal healing centres to address the physical, mental, emotional, and spiritual harms caused by residential schools, and to ensure that the funding of healing centres in Nunavut and the Northwest Territories is a priority.
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Soo Wong, Former MPP and Long-Term Care Advocate
Long-Term Care homes during the pandemic

lessons learned and rethinking the future

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Long-Term Care homes during the pandemic
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Team Research Projects in Long Term-Care

COVID-19 – Design of Long-Term Care Homes (LTC) – Learning for the Future

Co-designing Rapid Design Interventions to Support Infection Prevention and Control in Shared Work Environments in Long-Term Care

SafeTech: Nighttime Monitoring of Older Adults in an Institutional Setting

Student Projects in Long-Term Care

Can We Use Design Approaches to Increase Comfort and Reduce Suffering at End-of-Life? A Focused Literature Review, Margaret Schwellnus, Undergraduate Supervisors: Chantal Trudel & Zsofia Orosz

Long-Term Care Worker Experience during the Pandemic - Explorations in Visual Storytelling: Dawson Clark, Graduate Co-supervisors: Chantal Trudel & Aneurin Bosley

Spirituality and Service Design - Supporting Spiritual Care in Ontario Long-Term Care Homes: Sophia Nakashima, Graduate Co-supervisors: Chantal Trudel & Amy Hsu

Understanding and Improving the Experience of Advanced Care Planning for Older Adults on Long-Term Care Home Waitlists, Madeleine Thomas, Graduate Co-supervisors: Chantal Trudel & Amy Hsu

The Design of Long-Term Care Homes - Dignity and Safety in Continence Care: Sara Abdou, Graduate Co-supervisors: Chantal Trudel & Susan Braedley
Draft Details

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Operation and Infection Prevention and Control of Long-term Care Homes (New Standard)

**Designation:** Z8004  
**Source:** CSA  
**Contact:** cassandra.gullia@csagroup.org

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**Review start date:** Feb 10, 2022  
**Review end date:** Apr 11, 2022

**Categories:** Health Care and Medical Devices

Draft Scope/Description:

For guidance on how to navigate the online public review site, and for more information on the scope, background and content of the CSA Z8004 Standard please see the following instructional videos:

- Registration & site navigation: [https://youtu.be/lvysV_HnNDo](https://youtu.be/lvysV_HnNDo)
- Standard overview: [https://youtu.be/lvKgBWu43xCw](https://youtu.be/lvKgBWu43xCw)

1.1

This Standard provides guidance on safe operating practices, design, and infection prevention and control in long-term care homes, while incorporating a people-centered perspective. The Standard takes into consideration what is
“As of December 9, 2021 in Canada, LTC residents accounted for 3% of all COVID-19 cases and 43% of COVID-19 deaths.”

“Between March 1, 2020, and August 15, 2021, over 56,000 residents and 22,000 staff in Canada’s LTC and retirement homes were infected with COVID-19, resulting in more than 14,000 deaths among staff and residents.”

Research objective and questions

“All too often designers don’t take the needs of disabled and elderly people into account.” - Ronald Mace, Architect

What ‘works well’ and ‘not so well’ in LTC homes within the context of the pandemic from the perspective of staff, residents, and their families?

What were challenges related to design of home?
How did the home need to be adapted?
What innovations did participants bring?
What are unmet needs and opportunities for change?
How can a ‘human factors’ approach contribute to Long-Term Care design?

“Ergonomics is the scientific discipline concerned with the understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimise human well-being and overall system performance.”
- International Ergonomics Association
Involving homes in the study design

COVID-19 Design of Long-Term Care (LTC) Homes: Learning for the Future

Staff Member
Photo Diary & Focus Group Guide

Resident or Family Member
Interview Guide

2.0 Coming and going - entrance and exit experience in the home

What is the design of your entrance like and how does it work?

Some areas and questions to think about...
2.1. How is your entrance used...
- during COVID-19, but with no outbreaks?
- during COVID-19, with an outbreak declared?
2.2. Are there aspects of the entrance design that work well during COVID-19?
2.3. Have you experienced or do you see situations/temporary factors or potential issues that can’t be easily addressed?
2.4. Where and how do you prepare to go home? What do you do with your dirty clothes? Your personal items

7.0 Supplies and medication

Have you had to reconsider supply use during COVID-19 and if so how?

Some areas and questions to think about...
7.1. Impact on the use/circulation of medical supplies (e.g., sterile supplies)?
7.2. Impact on the use/circulation of non-medical supplies (e.g., linens)?
7.3. Impact on the use/circulation of medication?
7.4. How has resident medication been impacted?
7.5. Has there been an impact on staff use of storage or general work supplies?

Notes to photograph and discuss:
Participants, data collection and analysis

9 Long Term Care homes in Ontario:
- 6 homes completed data collection, 3 others still in progress (6 not-for-profit, 3 for-profit)

35 participants to-date (first 6 homes):
- 8 residents, 16 family members, 11 staff (Administrator, Director of Nursing, Director Environmental Services, Electrician, Environmental Service Worker, Facilities Management, Infection Prevention and Control Professional, Program Director, Registerred Nurse, Registered Practical Nurse, Unit Support Worker, Nutritional Manager)

Floorplan analysis of existing home designs (first 6 homes):
- 53 physical distancing and wheelchair planning studies conducted to assess crowding

Qualitative analysis (coding and theming) of self-reports using NVivo (first 6 homes):
- staff photo diaries: 457 images documenting factors related to home design
- interviews/focus groups (residents, staff, family): ~200,000 words or 400 single-spaced pages
Characteristics of the home

Home 1 (H1) Profile

- Number of residents: 159
  - 85% of residents are female
  - 15% of residents are male
  - Average age of residents: 82.7 years old
  - Average length of stay: 461.87 days

Approximately 65%-75% of the residents are in wheelchairs.

- Number of staff: 236
  - 73% of staff are female
  - 27% of staff are male

- Types of Staff:
  - Registered staff (RN, RN, doctors)
  - Personal Support Workers
  - Administrative Staff
  - Allied health staff (physiotherapist, dietician, OT)
  - Management team
  - Facilities staff
  - Housekeeping
  - Food services
  - Volunteers, students and teachers

- 4 levels, 7 units

- Services Offered:
  - 24-hour-a-day nursing care
  - Medical services
  - Dietetics
  - Pharmaceutical services
  - Physiotherapy
  - Social work
  - Pastoral care
  - Banking
  - Recreational and therapeutic programs
  - Housekeeping, maintenance and laundry
  - Specialized services such as dental care, optometry and chiropody, as well as laboratory and radiology services

- Amenities:
  - Chapel
  - Access to public transit
  - Rest and visiting areas
  - Library
  - Hair Salon
  - Cafeteria

Area: Level 2: 324m²

Unit C:
- 6 Personal care attendants
- 1 RN
- 1 Housekeeping staff

Unit AB:
- 7 Personal care attendants
- 1 RN
- 1 Housekeeping staff

*2 behavioural support units
Planning studies – physical distancing, clearance, crowding

2m Physical Distancing Clearance

Building Code Wheelchair Clearance

Wheelchair Clearance for Larger Sized Individuals

Additional Relevant Turning Radii

Power Wheelchair: min 2250 mm
Scooter: min 3150 mm


Physical Distancing & Wheelchair Clearance
Area (m²):
• Bedroom: 16.49
• Bathroom: 4.54
Physical Distancing & Wheelchair Clearance
Area (m²):
• Bedroom: 26.53 (entire room), 13.26 (per resident)
• Bathroom: 4.09
Planning studies - dining room

Physical Distancing & Wheelchair Clearance
Area (m²): 102.17
Planning studies - staff work areas

**Physical Distancing**
Computer Room (e.g., charting)
Area (m²): 18.02

**Nurse/Care Station & Break Room**
Area (m²):
Nursing Station 13.14
Break Room: 7.29
Scenarios
Experiences of residents, staff and family members through the pandemic.

H3 - Adapting to the Pandemic

Excessive Signage
Workload & Fatigue
Laminated 5000 safety procedures signs to place around the home and on every door. Laminating these sheets makes it easier to take them down or post them up.

The open top is to let in sunlight.

Workaround
Shared Rooms
Staff built a wall between the beds in the double/shared rooms.

Pre-pandemic, privacy was provided through curtains.

Not enough storage for all the PPE.

Design
Around
Massive PPE
Storage & Waste
H3 bought enough PPE for daily use and in case of an outbreak.
Every room needed a garbage can for donning and doffing PPE. H3 bought hundreds of garbage cans.

Tape stuck on doors and walls from all the signs that were taken down or replaced.

Now they have too many garbage cans and no where to store them.
Scenarios
Experiences of residents, staff and family members through the pandemic.

H5 - A Day in the Life of a Larger Individual in LTC
Being a person of larger size, resident experiences certain challenges throughout the day.

1. Resident Can't Pick her Own Clothes
Resident wakes up and gets ready. Her wheelchair prevents her from performing routine tasks.

2. Washroom is Too Small for Resident to go Comfortably
Resident needs 2 PSWs to help her go to the washroom. Resident often bumps her legs/feet when going to the washroom.

3. Resident Cannot Open her Own Window
Resident’s wheelchair prevents her from adjusting her window in her own room.

4. Resident Can’t Sit Normally at Table to Eat Meals
Due to the design of the tables in the dining room, resident can’t sit straight. She tends to wait for everyone to get seated before entering the dining room for meals.

5. Resident Can’t Access Certain Spaces
A lot of the entryways and aisles are not accessible for the resident in her wheelchair because the space is too narrow. For example, she can’t access the vending machines to get a snack because she can’t get her wheelchair in.
“It's just if the rooms could be bigger, you know, I mean, it's, I don't see why if you're in long term care, you have to live in this teeny little room. I mean, if the rooms could be bigger, it would be easier to move around.”
Resident

“As far as I'm concerned, for poor sanitation and for social reasons. I think all long-term care homes should have everybody have their own room and their own bathroom.” Resident

“Then eventually, in more recent months, we were allowed to go outside that unit. But really, you had to just be going outside. You couldn’t be traipsing around on the first floor doing your walk, and you had to go outside and for her when she was still with her walker, that was a bit too much for her, was too far, you see. So, then we would stay on her unit. And it's only when she went to the wheelchair that then we could readily bring her outside. So that was because we know mobility is so important in terms of their general function and in terms of stuff like just mental wellbeing. The exercise is extremely important.” Family member
"[The] door to the soiled side of laundry is directly beside the staff room. Staff are continually close together in this area with some going for breaks while others just outside the door emptying and cleaning the carts. The small area for soiled laundry bags and bins is always full and hard to maneuver around. Chemicals for the washing machines are also located in this area as well as one small corner that contains PPE and special laundry cart for a resident on cytotoxic medications that staff must use special precautions for when handling." Staff member

“I think it would be ideal to have a changing room for people who want to change. Or people who feel that their work requires them to change.” Staff member

Soiled room next to staff room.

Small staff locker room, also used for PPE due to lack of space (boxes above).

Home purchased an RV because of space issues for staff breaks, education, meetings, PPE storage and for staff to sleep who weren’t comfortable going home during an outbreak.
“The details are not the details. They make the design.”
Charles Eames, Industrial Designer
### Themes

Deductive coding analysis (pre-defined codes were used to categorize the data) to develop a picture of challenges, adaptations, innovations and opportunities.

#### Categories
- Home Areas
- User Experience Considerations
- IPAC Risks
- National Research Council Construction Master Specification Divisions (MSD)

#### Coded References

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Next steps and early design studies

“I believe well-designed places and objects can actually improve healing, while poor design can inhibit it.”
Michael Graves, Architect
The Role of Leadership in Designing for Health and Wellness in Long Term Care

Soo M. Wong, RN (ret’d), BScN., MSN
Scarborough-Agincourt Provincial Liberal Candidate
Former Executive Director of a Not-For-Profit LTC Home in GTA
Leadership & Management of LTC Home During COVID-19 Pandemic

(starting Feb/Mar 2020)

Knowledge & experience in management of the pandemic
Communications
Minister/Ministry of Long-Term Care or Public Health Directives
Lessons learned during the COVID-19 pandemic

Being proactive

Comprehensive & transparent communications

Ongoing education & training of staff, families & volunteers

Daily audits – completed by staff at all levels

Managing outbreaks

Hosting regular staff recognition events

Design of LTC Home – Ministry only focused on ventilation & PPE

LTC Reform – funding, staffing & design of LTC homes
Ministry’s 2015 Long-Term Care Home Design Manual

Available at:

Ministry’s announcement of new LTC Beds
All health policy is political.
The politics of health care.
Long-Term Care homes during the pandemic

lessons learned and rethinking the future

Get in touch…
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Questions
Upcoming Live Discussion: Designing Long-Term Care Homes: Lessons Learned and rethinking the future.

Facilitators: Chantal Trudel and Soo Wong

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