

# **Lengyel, Cammer, Naidoo & Back, Emergency Food Service Preparedness in Long Term Care Homes across Canada, 2023**

**I. Title of Project:** Emergency Food Service Preparedness in Long Term Care Homes across Canada

**II. Rationale for Importance of Project**

Emergency food service preparedness or disaster planning is critical for long term care (LTC) homes to ensure, provide and maintain foodservice delivery and nutrition support to residents and staff during environmental and pandemic emergencies. Older adults living in LTC homes are vulnerable and susceptible to poor food and fluid intake, increasing morbidity, poor quality of life, and mortality. LTC homes often have limited resources and experience with food service emergency preparedness and response. The Canadian population continues to age and will greatly increase the demands placed on the LTC system (Gibbard, 2017). Additionally, the frail stature and escalating complexity and acuity of residents living in these settings results in a greater intensity of care (Wowchuk, et al., 2006). As such, this population of residents has higher disaster-associated risks than other vulnerable populations (Dosa et al., 2008).

The term disaster encompasses natural events (such as fires, floods, blizzards, tornadoes, hurricanes, and earthquakes, heatwaves, extreme cold weather), man-made events (such as bioterrorism, chemical spills, train or vehicle explosions, water diversion flooding) (Public Health Agency of Canada, 2007; Dosa et al., 2008) and pandemics (such as COVID-19) (Centers for Disease Control and Prevention, 2021). According to Dosa et al., (2008), significant functional limitations may result in the inability of frail older adults to respond appropriately during disasters. These functional limitations may be caused by dementia, significant vision and hearing difficulties, among other conditions. Furthermore, frail older adults may have limited health reserves possibly magnifying the impact of disasters and forced relocation (Dosa et al., 2008).

While a brief review of the searched literature yields evidence that sheltering in place, and gradual evacuation is superior to full evacuation, it is important to note this information is typically within the context of countries other than Canada that have differing external resources, hurricane situations and little to no information describing the role of food service departments in the provision of overall care. Regarding evacuation procedures, it can be extremely difficult transporting and relocating LTC residents with high care needs. Sheltering in place may yield better outcomes yet there are several complexities inherent to sheltering in place that one must consider in the context of LTC. These complexities include the provision of food, water, supplies, and sleeping areas for at least seven days (Dosa et al., 2008), addressing service issues (such as failure of contracted vendors to provide supplies), inadequate power (specifically, the capacity for generators to function beyond the intended use of emergency lighting and life support), staff deployment and related stresses, and loss of communications (Pierce et al., 2016; Dosa et al., 2008). Additionally, the food supply chain must be considered as it may be simultaneously impacted by a disaster, further complicating the mechanisms of support that can be relied upon to respond to the crisis.

Despite these complexities, little information exists within the searched literature on the status of LTC home disaster plans within the Canadian context including preparation for different types of disasters, as well as preparedness of LTC homes for the possibility of sheltering a large number of individuals including frail residents, family members and staff during various disaster events. The lack of information leaves everyone (residents, families, and

# **Lengyel, Cammer, Naidoo & Back, Emergency Food Service Preparedness in Long Term Care Homes across Canada, 2023**

staff) at risk of adverse outcomes as a result of possible inadequate preparation. Therefore, it is imperative that we know more about emergency food service preparedness and develop strong resources to respond effectively and efficiently for the health and safety of residents as preparation assists with mitigating stress and burden on LTC staff and residents.

### **III. Research Project Objectives**

The objectives of this study are:

Phase 1: Assess current LTC food service emergency preparedness procedures and practices during environmental and pandemic disasters.

Phase II: Examine the perspectives of LTC food service supervisors/managers/dietitians about their experiences with emergency food service preparedness during environmental and pandemic disasters.

Phase III: Develop a food service emergency preparedness template manual to support LTC homes in Canada.

### **IV. Description of Methodology for Project**

#### **Study Plan:**

**Phase 1: Survey** - A 35 question online survey using Qualtrics software will be pilot-tested then distributed to foodservice supervisors/managers/dietitians working (n=400) in LTC homes in Canada through a variety of organizations (Canadian Association of Foodservice Professionals, Dietitians of Canada Gerontology Network and Canadian Society for Nutrition Managers). An online consent form will be completed by participants prior to accessing the survey. The following questions will be addressed: emergency environmental disaster plan, emergency pandemic disaster plan, history of implementation and revisions, scope of food services interventions, and information on staff communications. Descriptive analyses will be conducted.

**Phase 2: Individual Interviews** - Thirty LTC food service supervisors/managers/dietitians from Canada will be recruited to participate in a 30-45 minute semi-structured audio-recorded telephone interview. This interview will address 7 topic areas about their experiences with emergency food service preparedness prior to and during recent environmental and pandemic disasters. All audio recordings will be transcribed verbatim and coded for thematic themes.

**Phase 3: Emergency Food Service Preparedness Template Manual for LTC** - A template manual will be developed using data collected from Phase 1 and 2 of this study in addition to the literature review conducted prior to the start of data collection. Once the manual is developed, 10 purposefully selected LTC food service supervisors/managers/dietitians with experience managing food service LTC operations during disasters in Canada will review the manual. Feedback will be used to refine the manual and it will be able to be tailored for each LTC home.

### **V. Significance/relevance of Project Findings to Dietetic Practice**

The research literature on emergency food service preparedness in LTC homes in Canada are limited and there are no current standardized resources for LTC homes to use. The recent experience of the COVID-19 pandemic and several environmental disasters in Canada have brought this issue to light. Many LTC food service operations were unprepared for these emergencies which presented a great burden to operations, staff, and residents. The information collected in Phases I and II will lead to the development of an Emergency Food Service Preparedness Template Manual that can be used and standardized for use by Canadian LTC homes.

**Lengyel, Cammer, Naidoo & Back, Emergency Food Service Preparedness in Long Term  
Care Homes across Canada, 2023**

**VI. Research Study Timetable (Months).**

	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20	21-22	23-24
Literature Review & Ethics Approval/Renewal	√	√				√						
Participant Recruitment		√			√	√	√		√	√		
Survey Development	√	√	√									
Data Collection			√	√				√	√			
Phase I			√	√								
Phase II						√	√	√				
Phase III								√	√	√		
Data Analysis				√	√	√	√		√	√	√	
Manuscript & Presentations						√	√	√	√	√	√	√

**VII. Budget Projections**

Category	Year 1	Year 2	<b>CATEGORY TOTAL</b>
Personnel Salary			\$16,500
- Undergraduate Research Assistant	\$4000	\$6000	
- Transcriptionist	\$2000		
Manitoba Centre for Nursing & Health Research			
- Online Survey Assistance	\$1500		
- Statistical Consultant	\$1500	\$1500	
Equipment			\$1200
- NVivo: Qualitative Analysis Software	\$1200		
Supplies and Services			\$1300
-digital recorders, batteries, memory sticks	\$500		
- Participant Interview Honoraria (30 interviews + 10 expert reviewers X \$20 gift cards each)		\$800	
Fieldwork Travel	0	0	0
Conference Travel and Dissemination (Dietitians of Canada National Conference)		\$1000	\$1000
<b>TOTALS</b>	<b>\$10,700</b>	<b>\$9300</b>	<b>\$20,000</b>

# **Lengyel, Cammer, Naidoo & Back, Emergency Food Service Preparedness in Long Term Care Homes across Canada, 2023**

## **References**

- Centers for Disease Control and Prevention. (2021, June 23). Natural Disasters and COVID-19: Preparedness Information for Specific Groups- Older Adults.  
[https://www.cdc.gov/disasters/covid-19/information\\_for\\_specific\\_groups.html](https://www.cdc.gov/disasters/covid-19/information_for_specific_groups.html)
- Dosa, D.M., Hyer, K., Brown, L. M., Artenstein, A. W., Polivka-West, L., Mor V. (2008). The controversy inherent in managing frail nursing home residents during complex hurricane emergencies. *JAMDA*, October; 599-603.
- Gibbard, R. (2017). Sizing up the challenge: Meeting the demand for long-term Care in Canada. The Conference Board of Canada.
- Pierce, J. R., Morley, S. K., West, T. A., Pentecost, P., Upton, L. A., Banks, L. (2017). Improving long-term care facility disaster preparedness and response: A literature review. *Disaster Medicine and Public Health Preparedness*, 11(1), 140-149.
- Public Health Agency of Canada. (2007). Emergency Food Service Planning for Disasters. Minister of Health, Centre for Emergency Preparedness and Response.
- Wowchuk, S. M., McClement, S., Bond Jr. J. (2006). The challenge of providing palliative care in the nursing home: part I external factors. *International Journal of Palliative Nursing*, 12(6), 260-267.