Seniors' Campus Continuums: Local Solutions for Broad Spectrum Seniors Care

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Abstract

Background As demand and desire to “age-in-place” grows within an aging population, challenges exist to realizing this wish. Changing demographics and new areas of need have governments nationally and internationally calling for more focused attention on integrative approaches to health and well-being. Seniors’ Campus Continuums seek bridge the “divide” between health and social care for residents and local community. This paper investigates factors that influence Campus evolution, ongoing functioning, and ability to offer wrap around care for older adults wishing remain in their own home and community.

Methods This research uses a comparative case study approach across multiple bounded cases to explore how Seniors’ Campus Continuums operating in various contexts integrate health, housing and social care around older adults living on the campus and in the local community. Six seniors’ campuses from across Ontario offering four physically co-located components – mixed independent housing options, internal community supports to residents, external community supports to the broader community, and a long-term care home – were studied and compared.

Results Eight factors that promote or impede Seniors’ Campus Continuum evolution, design and function, and ability to provide wrap-around care to older adults with progressive needs are identified including: i. historical legacies; ii. windows of opportunity; iii. organizational structure and capacity; iv. intentional physical and social design; v. campus services mix, amenities and partnerships; vi. policy rigidities and enablers; vii. human resources shortages and innovation; viii. funding limitations and opportunities. Together these factors describe opportunities to optimize care on many levels.

Conclusion Seniors’ Campus Continuums offer creative boundary-spanning approaches to address a variety of needs while taking into account local contexts. At an individual level, campuses increase access to a range of care supports and housing options to benefit seniors’ health and wellbeing. At an organizational level, they offer consistency and coordination of care, improved economies of scale, and rich environments for training/research, education and volunteering. At a system level, they offer potential to help people avoid ending up in the “wrong places.” This study fills a gap in evidence-based research around understanding of this integrative model and offers lessons learned for future development.

Background

The Changing Face & Pace of Aging. As they age, most people desire to live as independently as possible and to receive care in their own homes and communities as their health needs, and those of the ones they care for, change and intensify (1,2,3,4,5). In Canada, people aged 65 years and over now represent Canada’s fastest growing age group—a trend that is expected to continue for decades (6). Healthcare and growing demands of oneself or ones’ informal caregivers relating to increasing incidence of chronic and often complex conditions have been identified by Canadian seniors as important and ongoing concerns affecting their quality of life as they age. Other key concerns include access to information, housing, income security, safety and security, *social contacts and networks,* and transportation (7) in addition to

informal caregiving supports and services (8,9). These concerns or needs are demand factors that play an important role in determining an individual's care destination; however, when, where and how a person receives care is also affected by other important "supply" factors including formal system capacity (e.g., state policies, funding priorities, service mix and volume, eligibility criteria, rurality, health human resources) and informal systems (e.g., access to caregivers, care mix and volume, caregiver characteristics and resilience, social capital) (10,1,11,12,13). The dynamism amongst these demand and supply factors with the changing pace of population ageing and preferences to "age-in-place" pose challenges to providing and coordinating appropriate and accessible publicly funded or subsidized care services and supports to remain in communities of choice (14,15,1,16).

In Canada, publicly funded "medically necessary" hospital and physician care falls under national terms and conditions, outlined in the *Canada Health Act:* comprehensiveness, universality, accessibility, portability and public administration (17). Canadian Medicare has positively contributed to the care needs of the frail elderly by providing a large measure of security through universal access to critically important, medically necessary care and equity where provision of care is based on need and not ability to pay. There are however, a variety of ways in which health and wellness needs of seniors can be supported beyond that which are provided in hospital or by physicians including services and supports offered in the community through community support agencies (personal care, supportive housing, meals on wheels, congregate dining, grocery shopping), adult day/overnight programs (respite care and programing provided in group settings), wellness centres (educational, recreational and social programs), and nursing home care. These types of "extended health care services" may receive public funding, but are not under the earlier national terms and conditions of Medicare based on need rather typically than ability to pay. Provinces and territories are able to choose which services (if any) to cover and this contributes to wide variation in investment, availability, eligibility, coordination, access, and costs for long-term homecare services across Canada (supply).

In the province of Ontario, the policy legacy of health care has emphasized medical focused care with less attention and resources focused on more preventative community-based coping care and supports (18,19). The siloed and fragmented nature of health and healthcare can pose great challenges for older persons with increasing health and social care needs and those of informal caregivers to bridge the divides in care. This in turn can increase the likelihood of default to higher cost bed based hospital and institutional care even when more preventative home and community care options may be more appropriate and preferred (20,1,21,22,23,24,25,26,27,28).

In contrast, studies continue to show that seniors are better able to maintain independence and avoid inappropriate or premature use of hospital or long-term care home (LTCH) beds when community-based homecare services and supports are: (a) available and accessible, (b), well integrated across and within the healthcare continuum (including social determinants of health), (c) case managed, and (d) targeted to those at highest risk of nursing home care (1,11,29,22,30,31,32,33,34,35).

The unprecedented economic and demographic pressures of an aging population, a corresponding rise in multiple chronic health and social needs, the decline of traditional social support networks, divergences across urban and rural access to services, and the persistence of costly system challenges means “business as usual” is not sustainable. This has governments across OECD countries looking to leverage existing infrastructure and care networks to develop new sector-spanning policies, roles and pathways to integrate health and social care and supports (36,37,38,1,22).

Sustainable Seniors’ Care. A wide range of integrative programs and approaches have been identified in the literature that can be used to better “wrap” care around seniors wishing to receive care in their own communities including inter-professional care planning, coordination and system navigation, senior-friendly housing options with supports, community-based primary health care, and broader inter-sectoral approaches like age-friendly communities (3,39,15,40,41). A model of care in Ontario that combines many of these approaches in one physical location is the Seniors’ Campus Care Continuum (also known as a Seniors’ Village). In this research Campus Continuums refer to a single organization, or formal collaboration of a number of independent health and social services providers (e.g., community, housing, LTCH), that strive(s) to integrate the provision of a broad spectrum of seniors’ care (e.g., physical/psychosocial/social) within a defined geographic area. Campuses are often further characterized by offering different levels of care and a shared commitment /coordinated responsibility for wrap-around care (e.g., service planning, provision, case management, funding).

The campus continuum approach aligns with the WHO strategic objectives and with recent directions in Western Europe and in Scandinavia, where care for older people has been moving away from developing stand-alone LTCH bed capacity and towards more community-based or home care provision encouraging informal family support, implementing direct payments and integrating housing, health and social care services (42,43,44). Campuses that offer mixed-income housing also align with the Canadian National Housing Strategy priorities around a growing need to offer: affordable housing options with supports for those in greatest need, social housing sustainability, options for northern housing, sustainable housing for diverse communities, and a balanced supply of housing that leverages the blending of housing types to offset costs for social and affordable rental properties (45).

While campuses have existed in various forms over a number of decades in Ontario and elsewhere, there is a gap in the scientific literature regarding their inception and development into a continuum (what and how) and enablers and challenges to maximizing their benefit. This research aims to help fill this gap through an exploration of key factors that influence the evolution and ongoing functioning of seniors’ campus care continuums—in this case municipal and not-for profit campuses (NFP)—and their ability to offer wrap around care for older adults. Findings of this study are described across *three* overarching themes and *eight* sub-themes in understanding the complexity of these models and considerations for their potential scale and spread.

Methods

This study applied a qualitative comparative case study approach across six bounded cases (three municipal and three NFP seniors' campuses in Ontario) to explore influencing factors on the evolution and ongoing functioning of expanded campus continuums in Ontario offering four key components—mixed housing options, LTCH beds, and community supports internal and/or external to the campus—and factors impacting on their ability to wrap care around their clients. Our sample stratification plan sought to maximize variation across several parameters known to influence organizational performance: organizational size (large or small), maturity (years since all four campus components offered), geography (urban, rural, northern), and cultural/ethnic/linguistic populations served. This lens was used to develop an in-depth description and analysis of seniors' campuses through in-person interviews with senior campus staff (N = 30), campus partners (N = 11) and direct observation. The cases were bound by time and place (2–3 days of on-site data collection including on-site interviews, campus tours, and direct observation) at six campus locations (N = 6) across Ontario (46). Comparative cross-case analysis was selected because it allowed for the use of multiple information-rich cases to describe and understand how municipal and NFP campus continuums have evolved to their current configurations, the contexts they operate within, and implications for future advancement of the model.

Literature Review: Prior to site selection and interview question development, the primary investigator conducted areviewof the scientific literature on seniors' campuses using OVID Medline and EMbase as a preliminary assessment of potential size and scope. Available research literature between 1975 to 2017 was reviewed, to understand what evidence was available on the campus continuum model that geographically collocates mixed income housing with community supports (internal and external to the campus) and a long-term care home. This material informed areas for exploration in a semi-structured interview guide. (Please refer to *Appendix A* for overarching questions asked at each interview and additional suggested probes). A follow-up search was conducted in 2018 post data collection. While several articles described various stand-alone components of campus continuums (e.g., benefits of care coordination, multilevel seniors housing, assisted living programs, inter-disciplinary care, none specifically described the development and/or workings of campuses with the four geographically co-located components working together to integrate care for their clients, which was the focus of this research.

Ethics Approval and Advisory Group: Followingresearch ethics approval for the project by the University of Toronto Research Ethics Board protocol # 35557 a Seniors' Campus Advisory Group was created to provide advice and support in the advancement of Seniors' Campus research including assistance with case study site selection, interview probes, reviewing preliminary findings, and knowledge dissemination. The group was comprised of knowledgeable stakeholders including policy directors from AdvantAge Ontario, AdvantAge Ontario members with seniors' campuses, academics, sector experts, and representation from the Ministry of Health and Long-Term Care (MOHLTC), and the Toronto Central Local Health Integration Network (TCLHIN). A case study with a review board also provided an Administrative Review.

Case Study Sampling: Apurposive sample was drawn from 33 potential case sites considered representative of municipal and NFP campuses in Ontario that offer the four geographically co-located

components: a LTC home, mixed housing options, internal community support programs, and supports offered externally to the neighbouring community. Of the 33 campuses invited to express interest as a case study site, 16 confirmed their interest by submitting a template with a brief overview of their background, governance and each of the four components of their campus. This information was used by the advisory group and research team to inform participant site selection. Six representative case studies—three municipal and three NFP—were chosen to in an attempt to maximize variation across several parameters known to influence organizational performance including urban, rural, northern geography, variety in size, maturity, and unique ethnic/cultural/linguistic populations served (please see *Table 1* for Campus Case Study Composition, Informants and Observation Period).

Table 1. Campus Case Study Composition, Participants and Observation Period

Case Study and Contexts at Time of Case Selection* (N=6)	Interviews** (N=34) Participants (N=41)	On-site Interviews and Tours
Au Château Municipal Campus Geography: Northern (town) Campus Size: 162 LTCH beds and 175 mixed housing units Housing: Social, Affordable, Market, Life Lease, LTCH Unique Populations: Francophone and Catholic Heritage Maturity: Four components offered >15 years Visitor Hospitality Suite: No***	5 Interviews (4) Staff (1) Partner	2 days
Georgian Village Municipal Campus Geography: Semi-Rural (town) Campus Size: 143 LTCH beds and 139 mixed housing units Housing: Social, Affordable, Market, Retirement Home, Life Lease, LTCH Unique Population: Large Francophone sub-population Maturity: Four components offered in last 5 years Visitor Hospitality Suite: Yes***	8 Interviews (7) Staff (4) Partners	3 days
Spruce Lodge Municipal Campus Geography: Urban (small city) Campus Size: 128 LTCH beds and 198 housing units Housing: Social, Affordable, Market, Life Lease, LTCH Unique Population: None specified Maturity: Four components offered >15 years Visitor Hospitality Suite: No***	5 Interviews (4) Staff (1) Partner	2 days
Bruyère Continuing Care Not-For-Profit Campus Geography: Urban (large city) Campus Size: 198 LTCH beds and 227 housing units Housing: Social, Affordable, Market, Cluster Care, LTCH Unique Population: Designated French language services provider Maturity: Four components offered between 5 and 10 years Visitor Hospitality Suite: Yes***	6 Interviews (5) Staff (3) Partners	2 days
Radiant Care Pleasant Manor Not-For-Profit Campus	5 Interviews	2 days

Geography: Rural (town) Campus Size: 41 LTCH beds and 189 housing units Housing: Social, Affordable, Market, Life Lease, LTCH Unique Population: German Mennonite Heritage Maturity: Four components offered >15 years Hospitality Suite: Yes***	(5) Staff (2) Partners	
Shalom Village Not-For-Profit Campus Geography: Urban (city) Campus Size: 127 LTCH beds and 81 housing units Housing: Social, Affordable, Market, LTCH Unique Population: Jewish Heritage Maturity: Four components offered >15 years Visitor Hospitality Suite: Yes***	5 Interviews (5) Staff (0) Partner	2 days

* Each campus offered 4 geographically co-located components: Mixed Housing, Internal & External Community Supports/Programs, LTCH beds.
** Some interviews included more than one informant in the interview.
*** The researcher stayed overnight in campus hospitality suites for those that had this amenity or stayed locally to the campus.

Case Studies and Interview Participants: Due to the unique nature and configurations of Seniors' Campuses in Ontario, many are identifiable to knowledgeable observers in the sector. As such, case study sites were *not* de-identified and are named in this research with the permission of the study participants. Senior leadership of each case study helped to identify and recruit key campus staff and partner organizations interested and willing to be interviewed. Participants included a range of positions from each case study including but not limited to current or former chief executive officers, operating officers, finance officers, vice presidents, board members, and directors/managers of programs. Campus partner's similarly brought a broad range of perspectives including, but not limited to municipal housing, community agencies, universities, libraries, primary and allied care, local health integration networks, pharmacy services, and others. Please see *Table 1* for further details on cases and participants.

Participant Anonymity: Participants were provided with a consent form and letter of introduction explaining the research study and given the opportunity to ask questions prior to commencing the interview. Interview participants are not named, and are identified by campus only and were advised that while the authors would not identify them specifically, they could not provide complete anonymity given the names of the case studies are shared. Each participant was provided the opportunity to review their interview transcript prior to analysis. Subject matter was reported in aggregate where possible.

Data Collection Methods, Instruments and Technologies: The primary investigator conducted 34 semi-structured interviews with 37 senior leadership and 11 partner organization informants (some interviews had two or more participants). The majority of the interviews were conducted in person and three informants participated by telephone for ease of participation. All interviews were audio-recorded and transcribed with participants' consent. The principal investigator received a tour of each campus and, where they existed, stayed onsite in campus hospitality suites (available at four of six campuses), or stayed locally to campuses. The primary investigator ate meals with residents at each campus and participated in other resident activities (e.g., sing-alongs, meals, pub nights). As guaranteed by the University of Toronto Research Ethics Approval, the primary investigator ensured that no names of residents, family members, staff, or volunteers that were "observed" were collected.

All participants were given an opportunity to review their transcripts and make any necessary changes, clarifications or redact information. A slide-deck with preliminary findings was circulated to each interviewee for additional member checking to increase trustworthiness and credibility to the data analysis. Senior leadership of the 10 campuses that had expressed interest in participating as a case study site, whose sites not chosen, were invited to participate in a focus groupin person or by teleconference) to review and validate preliminary findings, and provide additional insights (ultimately, 7 of the 10 invited senior leaders).

Data Sources and Analysis: Multiple sources of data provided an in-depth picture of each case study. Sources included case selection summary templates, interviews with senior leadership and key partners at the six case studies, transcripts and interview notes, direct observations, participation in programs and activities with residents and additional documentation provided by case studies (e.g., brochures, activity calendars). During data collection and analysis, the primary investigator had regular meetings with the research team to discuss and debrief high level findings and consider emerging themes and write-up.

Data analysis was guided by a comparative case study approach, further informed by the literature on integrative care. Analysis was an iterative process. First, detailed within-case analysis occurred, followed by a thematic cross-case analysis with interpretations for the six cases combined. Finally, generalizable lessons learned were extracted and summarized (46). *Three* broad cross-case themes and *eight* sub-themes emerged.

Results

Factors that shaped the development and ongoing functioning of municipal and NFP seniors' campus continuums and their ability to offer wrap around care for older adults (as described by campus senior leadership and organizational partners) were carefully considered and organized into *three* overarchingthemes and *eight* sub-themes:

- Campus Evolution:
    - legacies

    - windows of opportunity
    - organizational structure and capacity
- Campus Design and Functions:
    - intentional physical and social design
    - campus service mix, amenities and partnerships
- Ability to Offer Wrap Around Care:
    - policy rigidities and enablers
    - human resources shortages and innovation
    - funding limitations and opportunities

A. Campus Inception and Development

In describing their campus inception—the "why"—participants noted a number of factors relating to their historical legacies of serving unmet need and key windows of opportunity that supported their evolution into full continuums of care. In the case of participants that were partners of a campus, they were asked to describe their own organization's history with the campus including factors that led to their involvement with the campus and their ongoing contributions to campus life. Please refer to *Appendix B* for supporting quotes to each theme.

i. Organizational Legacies—Addressing Unmet and Changing Needs. Campus participants in this study described long organizational histories of caring for seniors and older adults with disabilities in need (e.g., local housing, care). Participants from the newest municipal campus (Georgian Village) and the most mature municipal case study (Spruce Lodge) noted legacies of helping vulnerable populations dating back to the late 1800's starting as municipal "Houses of Refuge" (public and charitable organizations providing for social care, food, shelter and protection to the homeless or destitute) prior to becoming "Homes for the Aged" and evolving into broader spectrum seniors' campuses.

Participants of the three NFP and the mature northern municipal campus described having deep ties to faith communities that recognized gaps in the system for local seniors, particularly those with specific cultural, religious and/or linguistic backgrounds. The mature NFP campuses—Radiant Care Pleasant Manor and Shalom Village—began as community driven enterprises where faith leaders sought to address housing and care needs within the contexts of their respective Mennonite and Jewish religious and cultural heritage. Pleasant Manor began its journey in the 1970's when a collective of Mennonite churches developed independent seniors' housing to address local housing needs for seniors in their community. Shalom Village began as a Home for the Aged in a setting that respected Jewish culture and Kashrut (dietary laws). The northern mature municipal campus, Au Château, and the newest NFP campus, Bruyère Continuing Care, while not faith-based campuses, benefited from strong foundational support and ongoing relationships with the Catholic Church (e.g., advocacy, access to resources) and the Francophone communities in which they operated. Au Château began as a district Home for the Aged to

meet the needs of Francophone seniors in their district and foundational staffing was provided by Catholic Nuns and a priest who resided and presided over their onsite parish. Bruyère Continuing Care, an official designated French Language provider, began its evolution as a hospital run by the Sisters of Charity in the late 1800's that has since evolved to include LTCHs, community-based care and most recently seniors' housing.

Participants from mature campuses described the 1970's to the 1990's as a time when many seniors in residential LTC often had lighter care needs than that which was offered in those settings currently (e.g., many were still driving yet in need of light monitoring, care, or simply safe affordable shelter). Campus participants attributed expansion into full continuums (mixed-income housing options, community-based care supports for seniors and LTCHs) as a means to address the widely varying levels of needs of seniors and adults with disabilitieswishing to age in their communities (local and/or faith-based). Since that time, campus and partner participants alike highlighted that acuity and complexity of care for residents in their LTCHs had increased over time as well as in their supportive housing (SH) and Assisted Living Services (ALS) programs. Many noted that long wait lists for LTCH placement contributed to sometimes having residents on their ALS programs in seniors' housing that have higher needs than what was in their LTCHs.

Participants from the municipal campuses in this study noted that where provincial law sets certain requirements on municipalities to offer LTCH options (separately or jointly) in southern Ontario, the expansion into continuums was not a legal requirement. However, municipal participants noted that co-locating a range of mixed housing and community support options in addition to having a LTCH in one physical location was considered important and a responsibility to their community members (taxpayers) in alignment with municipal "seniors' strategies" which include focused attention on seniors' housing with supports. Campuses were also noted to meet broader goals and commitments to developing Age-Friendly Communities.

Participants from the NFP campuses similarly noted that expansion into seniors housing and additional community services was a natural extension of their mandates to serve their local and/or identified community (heritage/religious/linguistic). The newest NFP campus, as a hospital and provider of LTCH beds, highlighted the direct impact a lack of housing and care options was having on their own hospital bed use and estimated approximately a third or more of patients in one of their hospitals did not belong in hospital, but rather in a LTCH or supported in an ALS program. Each alternative was considered a lesser cost to the system and a senior's wellbeing. (See Appendix B).

Participants from all campuses noted that expansion into continuums required strong visionary leadership (past and current founders, board members, local councils and administration) and attributed successful campus inception and development to a deep dedication to their local community, a willingness to take risks (e.g., financial, organizational), having political acumen (e.g., sitting at the 'right' tables) and being "shovel ready" when funding opportunities appear. (See Appendix B)

ii. Policy Changes Afforded Windows of Opportunity. Campus participants described expansion into a continuum as both purposive and opportunistic often affected by key *windows of opportunity* (funding,

structural, political) to meet varied needs. Participants from the mature campuses highlighted stimulus funding for housing through a combination of federal, provincial and municipal grants and ongoing operating subsidies in the 1980's and early 1990's, greatly supported their expansion of affordable housing for independent seniors with light care needs and the development of "elderly persons" wellness centres, and SH programs. They further noted that expansion efforts became constrained by the mid–1990's with a change in provincial government and focus towards building new LTCH bed capacity. (See Appendix B)

Study participants from newer campuses highlighted that in the last decade new federal and provincial capital funding opportunities and incentives across different levels of government and ministries helped to seed interest and ability to expand affordable housing offerings. (See Appendix B)

Participants from all of the campuses described how they *leveraged existing infrastructure* (e.g., LTCH) as an "anchor" from which to develop other housing options, supports and services and felt a goal of up to four or five lighter or more independent housing types per LTCH bed with ranges of services available would best address growing needs. Expansion into a full continuum of LTCH, mixed housing and community programs was often described by most as incremental and reliant on opportunistic funding incentives by government. In contrast, the newest municipal campus was able to develop all of the components across one period of time by capitalizing on a redevelopment opportunity for their aging LTCH. Participants from each of the newer campuses described benefitting greatly from discussions and site visits with more mature campuses to observe and gauge fit for their own context and roll-out.

Campus participants noted the importance of offering a blend of mixed-income housing options to address a wide array of seniors with varied financial abilities to pay. These included social housing (rent-geared-to-income), affordable housing (generally 80% of market value rent), market housing, and for most case studies, life lease agreements *(See Table 1).* All campus participants described affordable housing options as critical to ensure a lower threshold for low income seniors that do not qualify for social housing on campus but also could not afford to pay market rent.

The newest municipal campus offered an additional retirement home option as a means to address additional care needs along the continuum (e.g., on site nursing, three meals per day) than are available in assisted living programs (government funded ALS program is limited to a relatively small percentage of seniors' housing residents (~20%) in most of the case studies). Campus participants described the retirement option as more expensive for residents and only possible for seniors with financial means, but that this was worth considering for the future to "*fill a hole"* in the expanded continuum while also providing a campus with a wider economic base to support fixed overhead costs, cost recovery for the subsidized units (well below market prices) and enhanced stability of the campus and its programs.

iii. Organizational Structure and Capacity to Expand. Campus participants described having similar corporate structures and governance arrangements with key entities of the campus (e.g., LTCH, housing, foundation) generally having their own respective boards or advisory committees with oversight through an overarching corporate board and cross pollination across the different boards and

committees/councils. Campus corporate services (e.g., administration, human resources, finance) were largely centrally administered and viewed as a means to improve operating efficiency, sharing knowledge and skills across the organization and for standardizing global practices and policies affecting quality of care, service and cost.

Campus study participants each described (re)development and expansion activities as intensive and relayed the considerable upfront commitments of time, finances, partnership development and knowledge requirements. Examples provided included: conducting gap analyses, feasibility studies, business case development, community and government consultations, land procurement/acquisition/ zoning, draft designs/ renderings, arranging mortgages, and fund-raising as necessary to proceed with building a campus or campus addition. Campus study participants identified the value of existing infrastructure and the importance of having adequate cash reserves to put upfront and charge to campus development to be paid back over the life of the project. (See Appendix B)

Study participants from municipal campuses described benefiting from their ability to leverage internal resources for advice and assistance for campus planning and ongoing functioning as needed. Examples provided included seeking expertise from their procurement and property offices to help with capital development plans, human resources departments for advice on collective agreements, or the social services and housing departments for advice on identifying and meeting broader housing affordability issues, criteria to set-up such housing, and capital maintenance. Participants from NFP campuses noted, where possible, they leveraged in-house expertise across their respective components and would contact other organizations to seek advice (e.g., legal, content expertise) or help project manage to process as necessary. For example, the rural NFP had a sister site to share resources/expertise and the new urban NFP campus had two hospitals, two LTCHs, rehabilitation and seniors housing, from which to draw expertise.

B. Campus Design and Functions

In describing campus management and ongoing functioning—the “how”—campus study participants described a number of factors related to campus design, structure, service mix, amenities and creative partnerships. Where participants were partners of a campus, they were asked to describe their own organization’s involvement and contributions to the campuses and campus life.

i. Intentional Physical and Social Design. Campus study participants described the great efforts taken to ensure physical interconnectivity across campus components (e.g., covered above ground linkages, connecting corridors, cleared outdoor walkways). Such connectivity was noted as critical to the health and social well-being of seniors including opportunities for physical exercise through connecting corridors across buildings, greater ease of passage for those with mobility devices, and simply not having to put coats and boots on in –32C weather or above 32C in the summer). Sometimes the physical linkages were not as convenient as others (e.g., going to separate buildings through underground corridors) in which case campus sites worked hard to make these spaces appealing (e.g., local artwork),

senior friendly (e.g., seating between areas) and purposeful (e.g., amenities to utilize space like hair salons, cafés). (See Appendix B)

Physical connectivity was also seen to provide and enhance opportunities across the campus for participation in spontaneous and planned activities, and address the potential for loneliness and social isolation. A mature municipal campus participant described careful consideration given to the redesign of a common room in their LTCH auditorium to make it more inviting to other residents of the broader campus (e.g., sky lights, wide screen television, a small pub, an ice cream parlor, ample seating) and a central area to attend collective programming and social events. Similarly, a participant from another mature municipal campus described recently converting a former greenhouse in their LTCH into a popular lounge area where, given the higher proportion of housing residents than LTCH residents, instituted a policy that housing residents need accompany a LTCH resident to enjoy the area with them. This has provided family and friends of LTCH residents a greatly desirable space to enjoy visiting in.

Study participants (both campus and partners) detailed how residents in campus housing appreciated, even demanded, freedom of movement across campuses to be able to socialize, check on relatives and friends, and volunteer with ease. This freedom was noted to also benefit clients attending on-site day programs, recovering patients in convalescent care in campus LTCH beds, and visiting family and friends of LTCH residents who wished to participate in recreational and social activities or simply seek a change of scenery. Case studies located in smaller towns were largely populated with people from the local community and tended to have multiple residents with shared histories (e.g., attended the same schools, religious institutions or service clubs). It was not unusual for many residents of a (semi)rural or northern campus to be related in some way (e.g., siblings, cousins, in-laws) or for campus staff to have family residing at the campus (currently or in the past). Participants noted benefits in having family and friends in close proximity including an increased ability to maintain kinship and support for one another.

Participants noted that while all campuses aimed to be inclusive, tensions could sometimes develop when offering mixed housing that crosses socio-economic spectrums and different abilities (e.g., physical, cognitive, developmental). They also noted that in marketing for different housing options that the use of different perks or finishes (balconies, appliances) could contribute to potential divides and some campuses either avoided these differences and or actively monitored for this. All campuses that made distinctions observed the issue tended to fade as residents of the campus participated in collective activities and got to know and look out for one another.

ii. Service Mix, Amenities and Partnerships. Study participants noted that *co-location* of the various campus components and *consolidation of resources* allowed for greater *economies of scale* from shared staff training to bulk purchasing of food and cleaning supplies. Campus participants also described such practices benefited the client, organization, and external companies. Case study sites often purchased and sold utilities back to residents at a significant discount to what they would otherwise pay individually. For residents, this removes the need for them to have to organize directly with external companies and avoid strangers in to set up the utilities. For utility companies, this helps to avoid any confusion in

navigating installation across the campus and having one payer. In another example, study participants noted economies of scale in shared offering of the LTCH kitchen which extended within and beyond campus walls to the broader community (See Appendix B).

Campus staff noted contracting out for certain tasks (e.g., pharmacy services, the use of agency staff to cover personal support worker (PSW) or nursing shifts) were common, while others would be less practical (e.g., housekeeping and maintenance). One case study had contracted with a private company to manage the maintenance and housekeeping for the housing component of the campus as well as dietary services for the restaurant and retirement home. While the company offered good service, it was noted the contract was not renewed because, after being in operation for a number of years, the organization came to the realization that these areas could be managed in-house more efficiently and effectively.

Some campus participants also described a practice dubbed “contracting-in” where in-house staff provide additional service at time and a half for short-term projects instead of hiring an outside tradesperson unfamiliar with the residents to do the task (e.g., having internal maintenance staff install lighting during retrofits) with any potential savings rolled back into campus operations.

Campus respondents described the impact of their municipal and NFP contexts on the way they are able to operate and manage money. *Municipal campus* participantsdescribed *levies as an important factor affecting their ability to build reserves into their operations.* Municipal participants noted levies were used to maintain service (e.g., automatic door openers, elevators, damages from wear and tear) when housing contracts were complete and to address any shortfall in revenue in the future and to provide for often higher wages and benefits than other providers (NFP and for-profit). However, when campuses were able to accumulate a surplus “for a rainy day”, municipal campus participants noted that it is not always viewed as managing well, but as having levied too much and requiring continuous negotiation with the municipality. (See Appendix B)

Participants from *NFP campuses* also reported having to exercise caution around the amount and manner in which they would plan and fundraise or carry a surplus in order to *maintain their charitable status* (e.g., not making profit and reinvesting revenue into campus operations and care). (See Appendix B)

Municipal campus participants in smaller communities noted that municipal corporations very much need to work collaboratively with local community and the private sector around their offerings being careful to neither overstep the balance of the private sector in the communitynor be seen as in competition with them (e.g., housing, retirement homes). Participants from *NFP campuses* also reported working closely with private and public sector organizations to encourage the development of local echo-systems for the benefit of residents of their campuses and local community. (See Appendix B)

Campus and partner participants highlighted the need to be knowledgeable across a *vast array of policies and legislation* they operate within, some of which were common across all components, and

others more specific and targeted to care setting. In offering a wide array of health and social care, campuses also worked with different ministries (e.g., Ministry of Health and Long-Term Care, Ministry of Municipal Affairs and Housing, Ministry of Community and Social Services, Ministry of Seniors Affairs and Accessibility). Campus participants of the newest NFP campus noted an additional level of accountability to an overarching hospital board and having to adhere to hospital-based policies. Please see *Table 2* for an overview of Key Legislation and Policies in which Campus Components Operate in Ontario.

Table 2. Key Policies and Legislation Ontario Campus Continuums Operate Within

Campus Feature	Provincial Legislation or Policy
Independent Seniors Housing	· Residential Tenancies Act 2006. · Housing Services Act, 2011
Assisted Living/ Supportive Housing	· Home Care and Community Services Act, 1994 · Assisted Living Services for High Risk Seniors Policy, 2011
Adult Day Programs	· Patients First Act, 2016
Wellness Centres	· Seniors Active Living Centres Act, 2017
Retirement Homes	· Retirement Homes Act, 2010 · Residential Tenancies Act, 2006
Long-term Care Homes	· Ontario Long-term Care Homes Act, 2007
Hospital	· A Public Hospitals Act, 1990
Foundation	· Canada Revenue Agency Guidelines · Not-for-Profit Corporations Act, 2010 · Individual Gift Agreements with Philanthropists
Unions	· Labour Relations Act, 1995 · Collective Agreements
Common to All	· Building Code Act, 1992 · Employment Standards Act, 2000 · Fire Protection and Prevention Act, 1997 · Health Protection and Promotion Act, 1990 · Human Rights Code, 1990 · Municipal Regulations and By-Laws · Personal Health Information Protection Act, 2004 · Quality of Care Information Protection Act, 2016 · Workplace Safety and Insurance Act, 1997
Source: https://www.ontario.ca/laws	

Co-locating and coordinating a mix of community programs, services and supports was viewed by all participants as crucial to maintaining people in the community for as long as possible; however, the

community support sector was quite diverse and described as poorly funded by comparison to other sub-sectors. Participants described offering a similar core set of programs, and services (*see Table 3 for a summary)* assigned by a care coordinator or case manager. Examples provided included lighter coping supports for independent living (active seniors who do not require care support but may get peace of mind from 24 hour security, and the option to purchase light housekeeping, programs and meals), to addressing higher levels of need through case managed services and ALS program supports (personal care, medication and meal monitoring). Some programs were staffed by the campus and others by community partners renting space such as Adult Day Programs (ADPs). The northern municipal campus was unique in their ADP offering for seniors in that they supported an off-site program in another community in need of seniors' services, but none was offered, or potentially needed with the current array of support services.

Many campuses included *basic service packages* as part of their rental agreements (e.g., minimum purchase of congregate dining meals per month, telephone, cable) with an option to purchase additional services. Service packages were described as helpful mechanisms to monitor and address safety, well-being, social isolation and nutritional needs of seniors while also helping to off-set costs in provision of providing these programs onsite.

Table 3. Common Campus Home and Community Care Programs

Campus	Meals on Wheels	Day Program*	Active Living Centres/Wellness Programs**	Falls Prevention Programs/ Physio-therapy***	Congregate Dining	Supportive Housing/ Assisted Living****
Au Château (Municipal)	I & E	Not onsite		I & E	I & E	I
Georgian Village (Municipal)		I & E	I & E	I & E	I & E	I
Spruce Lodge (Municipal)	I & E	I & E	I & E	I & E	I & E	I & E
Bruyère Village (NFP)	I & E	I & E		I & E		I & E
Radiant Care Pleasant Manor (NFP)				I & E	I	I
Shalom Village (NFP)	E		I & E	I & E	I & E	I

***** Programs that provide structured and supervised activities for frail and socially isolated seniors and individuals with cognitive impairment offered during the day, evening or overnight.

****** A centre with programs and services that promote socialization, physical activity, friendships, community involvement and independent living.

******* Group exercises and falls prevention education to help seniors stay healthy and active.

******** Programs for a set number of clients in housing units (differed across campuses) deemed eligible for intensive case management and care coordination of personal care and other supports based on Standardized Resident Assessment Instruments (RAI-CHA).

I = Available Internally to Campus Residents = I; E = Available Externally to Local Community

Campus and partner respondents at each case study described campuses as being "*more than a place to live"* and having "*a real village atmosphere."* Campuses were often described as "*community hubs"* with the ability to serve a broad range of seniors' needs in one place with common areas for residents to gather, socialize, play cards, host meetings, enjoy planned events (e.g., congregate dining, line-dancing, barbeques, live entertainment, religious services), and access important amenities (e.g., gym memberships, libraries, restaurant/pub) without the need for transportation. Commonly described campus offerings are listed in *Table 4.*

Volunteerism by residents, local community, family members, and school placements was noted as playing a pivotal role in the ongoing functioning and vibrancy of all campuses. Volunteer opportunities ranged from direct resident contact (e.g., friendly visiting, delivering meals on wheels on site, helping at

ADPs, portering/accompanying people to and from social activities) to event planning and fundraising committees (e.g., auto shows, barbeques, gardening, organizing golf tournaments, bazars) and/or formal committee membership (family councils in LTCHs). Volunteers were often seniors living in campus housing where proximity increased their ability to help. Campus participants also highlighted the many volunteer hours staff provide in extra-curricular events like dances or barbeques and picking up items for residents unable to get out.

Table 4. Common Shared Recreation, Amenities, Events and Volunteer Opportunities

Recreation Opportunities*	On-Site Amenities*	Events and/or Volunteer Opportunities*
· Bingo · Pub nights · Art classes · Choir · Line dancing · Religious services · Off-site outings · Woodworking · Shuffle board · Wellness centres – gym, therapy pools	· Health related clinics/labs · Hair Salon · General store/Tuck Shop · Community gardens · Library · Restaurant/Bistro/Café · Laundry · Common spaces for planned and spontaneous activities · Hospitality Suites**	· BBQs · Live entertainment · Bazars · Golf Tournaments · Tuck Shop · Friendly Visiting · Family Councils · Board Committees
*Offered at many campuses ** Hospitality suites on campuses are available in many campuses for a modest fee to accommodate visiting family and friends to increase access and affordability and promote visitors. Campuses without hospitality suites noted informal arrangements with their local hotel which provided discounts to guests specifically visiting residents of the campus.		

Campus respondents described many *unique partnerships, relationships and arrangements* they developed to enhance opportunities for maintaining the health and wellness of their residents and for continued community and civic engagement across all components of the campus. Relationships with partners included, but were not limited to, working with representatives from different levels of government, local community organizations, onsite clinics, and academic partners. Please see *Table 5* for examples of key partnerships with providers and local businesses (some with lease arrangements) at many of the campus study sites.

Table 5. Key Partnerships and Supportive Arrangements

Government Partners	Community Partners	Clinical Intervention Partners *	Academic Partners
· Municipal (housing, paramedics) · Regional (Local Health Integration Network homecare) · Provincial (Ministry of Health and Long-term Care, Public Health, Ministry of Housing and Municipal Affairs, Infrastructure Ontario) · Federal (Canadian Mortgage and Housing Corporation)	· Community Care Agencies · Hospitals · Community Health Centres · Primary care · Alzheimer Society · Community Living (serves people with developmental delays) · Mental Health Agencies · Pharmacies · Faith Communities · Local Businesses · Community Programs (choirs) · Shelters	· Audiology · Chiropody · Denture care · Primary care · Phlebotomy lab · Physiotherapy · Pharmacy Services	· Colleges · Universities · School Boards
* Visiting clinics, contracted providers, adjacent health facilities or lease agreements ** Internships (e.g., PSW, RPN, RN, Recreation, Culinary), research opportunities and volunteer opportunities (e.g., high school/co-op)			

C. Ability to Offer Wrap-Around Care:

In addition to many facilitating factors described above, participants at each campus described three common *impeding* factors that impact upon their ability to offer wrap around care across a full continuum: policy rigidities, human resources shortages, inadequate funding. These are shared below with resulting innovations and workarounds.

i. Policy Rigidities and Enablers. Participants described a broad basket of services and supports offered by campus continuums which provide both opportunity and ability to support people's needs as they change or intensify—sometimes temporarily, sometimes permanently. Participants spoke about the ability of community programs like SH and ALS as providing great value to clients as their need for care and coping supports increased; however, they also noted current waitlists and capped budgets limited their

ability to serve as many people as they potentially could, and to the degree of support clients required. (See Appendix B)

Campus respondents explained creative solutions they would undertake for “incidental” short-term use of the ALS program such as an individual returning from cataract surgery in need of only temporary support. Restrictions on admission also applied pressures where clients in great need were unable to be admitted to an ALS program, where others with similar needs already in the program could access supports. Campus respondents also described working with residents and informal caregivers to arrange “top-up” support when client needs exceeded what the program could offer to help bridge gaps in service or fill-in until LTCH placement—ideally on campus—became possible. (See Appendix B)

Participants noted many benefits of a continuum where residents requiring increasing supports could transition across campus programs and settings, facilitated by campus staff familiar with a resident, the quality of the experience for the person receiving care, their informal care giver(s), and staff was much higher than when residents needed to move permanently to another location. (See Appendix B)

However, with waitlist policies for LTCHs in Ontario under the control of the local regional government and applied using an equity lens for all in need of a bed, priority status is not given to residents residing in campus housing to transfer across campus to the onsite LTCH. The policy was described by many campus participants as “incongruent” with the purpose of a care continuum intended to support people across transitions at the most frail and vulnerable point in a resident’s life. (See Appendix B)

Partner respondents providing community-based programs on campuses highlighted similar issues regarding the importance of continuity of care and familiarity of care continuums for their non-campus dwelling clients. (See Appendix B)

While all campus and partner participants explained they understood the need for an equitable process for accessing LTCH beds, many expressed that transitions from seniors housing to an external LTCH setting increased burden for frail partners/family/ friends to attempt to monitor and maintain connection (e.g., transportation costs and energy for traveling distances). Participants further noted that while waitlist provisions are made for spousal reunification in LTCHs, for campus residents, this only applied when one partner was already residing in an onsite LTCH bed and they may have to go to a first available bed elsewhere until the desired bed became available. Campus participants expressed additional concerns that LTCH reunification did not include siblings or adult children with physical, cognitive or developmental disabilities. Participants did note that in cases where campuses provide for designated cultural/religious/ linguistic needs, clients in campus housing with these backgrounds (e.g., Francophone speaking; Jewish heritage) “in principle” had a greater chance of getting into the onsite LTCH, but would often wait long periods of time on the list for an opening.

Partner respondents noted these concerns yet also described experiences of their community-dwelling seniors and caregivers in great need who did not to receive the same level of monitoring and support

available to those waiting for a bed while on campus. They noted having access to a LTCH bed in their community was similarly important to maintain connection and prevent additional stress or burnout.

Campus respondents noted that while they had little control over who would get into their LTCH home, they did have opportunity to manage reunification efforts to help move residents across to other areas of the campus (e.g., life-lease to market housing, affordable housing to rent-geared to income) based on need and not chronology through their *internal wait lists for housing*with some restrictions on rent geared to income. Internal wait lists were also described as helpful when considering entry of a partner or disabled adult child to get into campus housing from the community when their spouse/parent moved to the campus LTCH home from the community. (See Appendix B)

ii. Human Resources Shortages and Innovation. All participants indicated their campuses were affected by human resources shortages of PSWs and nurses. However, in comparison to stand-alone community programs or LTCHs, campus participants indicated their challenges were less acute. Campus participants described relatively low staff turnover in administrative positions (some had 20—30 year histories) but greater fluctuation for front-line LTCH staff. Despite higher pay rates in LTCHs for these positions than in the community, some campus participants described a trend of staff transferring into housing positions citing the attractiveness of lower ratios of patient to staff being lower (e.g., 1–1 vs 1–10). Campus respondents also described a historical trend of staff moving to hospitals where PSWs are paid similar wage rates as the LTCH sector pays registered practical nurses (RPNs), making it tough for campuses to compete. Participants from the northern municipal campus noted that recruitment was particularly difficult in the north and remote communities as compared to their urban counterparts.

All campus participants described being able to provide in-house PSW care was preferred by housing residents to provide greater reliability and staff familiarity. External community support services agencies also experience the impact PSW shortages were noted as being less able to provide care as reliably or with the same consistency of staff as campuses in-house PSWs. Francophone campuses expressed the shortages are further impacted by an inability to find bilingual staff. (See Appendix B)

At the time of data collection, municipal and NFP campuses were both exploring becoming contracted providers for the provision of all government funded PSW services for campus residents. In one case study, the PSW shortage has led to a local community agency partner to sub-contract campus staff to provide lighter onsite PSW care in the housing components of the campus.

Respondents from municipal and NFP campuses described a number of strategies to ensure coverage for required services and programs including: i. the use of external agency staff to cover shifts which was noted could become expensive (e.g., equivalent to paying staff at overtime rates); ii. strategic contracting with another community support agency to provide care on a semi-regular basis as a means to better plan for and cover vacation and sick time for staff in different areas of the campus, avoid paying overtime, and prevent staff burnout; iii. Hiring developmental services workers (DSW) instead of PSWs for their ALS program to provide an additional level of training for the higher acuity community residents and

limit “poaching” PSW staff from other areas of the campus. Many noted the need for other creative solutions like paid apprenticeships for skilling up a robust PSW workforce (See Appendix B).

iii. Funding Limitations and Opportunities. At the time of data collection campus and partner respondents noted that budgets for community support services (CSS) in Ontario had not increased in approximately a decade despite increases in client acuity and volume of seniors in need (since this time there have been some small increases in the 2018 and 2019 budgets). In contrast, participants noted increases in hospital and LTCH funding over the same period. Campus and partner participants described frustration that community support services (CSS) were "*treated as less essential to other healthcare offerings despite their value and ability to offer high level care at the same or lower cost than if they were to be placed in institutional long-term care.” [*CR1]. (See Appendix B)

Discussion

A constellation of facilitating and impeding factors shape opportunities for campuses to emerge and bridge divides in health and social care for seniors with varied levels and types of need (e.g., physical, social, financial, housing). Key factors and their implications in practice are discussed below under the three broad themes: Campus Evolution, Campus Functioning and Campus Ability to Offer Wrap Around Care.

Key Factors Influencing Campus Evolution

i. Historical Legacies. The bedrock for campus inception and development across the six case studies (3 municipal and 3 NFP) was visionary leadership by senior administration and governance of NFP organizations, municipalities, and in many cases strong support from faith communities to address gaps in the “system”. Campus evolution for most of the case study sites was incremental over time with all six currently offering a broad range of health and social care options (mixed income housing, community supports and coping care, LTCH, local amenities) in one geographic location. These components and their respective programs and services address many issues Canadian seniors have identified as important to their quality of life, including access to information, affordable housing, income security, safety and security, *social contacts and networks,* transportation, and caregiver supports that are informative, accessible, and consistent (7,8,9).

ii. Windows of Opportunity. Expansion to broad care continuums required capitalizing on opportunistic policy windows and government incentives (e.g., development and redevelopment funding) and being “shovel ready” when they arose. Key legacy policy directives in housing and LTCH (re)development in the 1980s- early 1990s and again in the past decade, have set the pace and direction for future campus development and expansion to more broad mixes of housing types and ratios (social, affordable, “fair” market, retirement, life lease), inclusive design (physical and social connectivity) and service-mix based on local context (e.g., community needs and support, available options).

iii. Organizational Structure and Capacity. Existing campus infrastructure (e.g., number of licensed LTCH beds) and organizational capacity (e.g., internal expertise) are important factors for leveraging opportunities for development, expansion, and redevelopment. These are highly resource intensive to undertake (e.g., capital, time, finances) from idea to implementation. Municipal campuses and larger NFP organizations are more able to draw upon in-house knowledge, expertise and capital to manage processes themselves and minimize the need to contract out for required skills and project management. Securing funding posed challenges, even for large campuses, as funders could have difficulty understanding the interconnectedness of multiple components within a coherent continuum of care, to projects needing to be "value-engineered" to work within set limits and timelines.

Consolidation of human resources was considered a strength by most participants with the potential to facilitate staff working across different areas of the campus. In practice however, many factors could interfere with this potential consolidation including different legislative requirements by program or rules of collective agreements (e.g., differences in job categories, responsibilities, compensation levels).

Key Factors Influencing Campus Ongoing Functioning

i. Intentional Physical and Social Design. Campuses were often described and experienced as vibrant village atmospheres that promoted social participation and civic engagement across residents, staff and local community. A key facilitating factor to the ongoing functioning of campus life was the intentionality of campus architectural built environment to ensure, to the greatest extent possible, *physical and social interconnectivity* across campus buildings. Such connectivity allows residents and staff the ability travel through campus areas without having to put boots and winter coats on (or sunscreen), and promotes freedom of movement to engage in planned, recreational and spontaneous social activities, visiting family and friends, and/or volunteering. This was also described as promoting greater uptake of onsite respite opportunities (ADPs, LTCH bed) by informal caregivers given ease of proximity to the programs and the consistency and familiarity of staff available to support this service. If onsite placement of a spouse occurred, proximity facilitated greater opportunity for visits and in many cases, ongoing volunteering following the passing of a spouse. The benefits of accessible and available caregiver supports are consistent with a large body of literature on caregiving; such preventative supports were seen to reduce the likelihood of developing illnesses from burn out, and mitigate inappropriate utilization of acute care resources (47,48).

Campus design and service mix were observed by participants to provide many upstream preventative measures which can help to combat the negative impact of social isolation and loneliness on mental and physical health as identified in recent literature (49,50). Campus continuums further align with the World Health Organization's (WHO) expanding *Age Friendly Cities* movement (51) and recently announced *Global Plan and Action Strategy for Aging and Health (*15,52) with strategic objectives and targeted approaches considered essential to integrative seniors care: commitment to action on healthy ageing, developing age friendly communities and environments, developing sustainable and equitable systems

for providing long-term care (home, communities, and LTCHs), strengthening systems for providing integrated long-term care, and aligning health systems to integrate affordable, accessible and quality care that meets the needs, rights and preferences of older populations (15,52).

ii. Service Mix, Amenities and Partnerships. The integration of organizational processes and oversight across campus components (e.g., centralization of core administrative services, consolidation of human resource functions, and cross pollination across campus board entities and management team meetings) were identified as key facilitating factors to campus development providing opportunities for greater efficiencies and maximizing economies of scale (e.g., bulk purchasing for the entire campus; maximizing use of their existing infrastructure to the broader community). Cross-case comparisons highlighted benefits of geographic co-location of a broad range of services and programs to support formal and informal approaches including monitoring wellbeing, maintenance support, case management, and social connectedness. These structural and operational practices align with critical success factors for integrated systems of care outlined in a growing body of literature on the complexity of intra/inter-organizational, inter-professional, inter-governmental, and inter-sectoral collaborations and coordination (3,53,39,15,40,22,30,41).

Mature campuses offer a blend of legacy SH programs with more recent ALS programs where the newer campuses offered only the ALS program (ALS effective since 2011). While a standard assessment tool is used to gauge eligibility criteria for the ALS, program management varied across each campus with contextual nuances, interpretations, and incidental one-off use of the program by the organizations and their funders. Supportive housing, ALS, cluster care and retirement home living were all noted to be highly beneficial for supporting aging in place for their ability to provide improved coordination, ongoing monitoring, medication reminders and support and help with instrumental activities of daily living and support for chronic care needs. These features, in addition to continuity and familiarity with staff and care setting, are consistent with the literature for best practices. Studies have shown that access to such coordination across health sub-sectors (community, primary care, hospital, LTCH) improves the ability of individuals and their informal caregivers to remain independent and avoid inappropriate or premature use of higher intensity care settings (1,11,29,22,54,30,31,32,33,34). There is mounting evidence that for those who develop and are living with dementia (a key predictor of LTCH placement), efforts to ensure continuity through transitions across sub-sectors results in improved outcomes for the individual, their caregivers and providers (55,11,8). Campus continuums offer particular benefit for such continuity of care, setting and onsite inter-organizational support across areas and programs by familiar staff.

Campuses enhanced access to expanded health and social care networks through intra and inter-organizational coordination of services and creative partnerships (vertical and horizontal integration of service delivery). Facilitating factors included the development of positive relationships with key partners (hospital discharge planners, primary care providers, allied staff, informal caregivers and internal care partners). These activities and arrangements also promoted smoother transitions and care planning for residents to return to their homes.

Innovative campus partnerships and arrangements with community organizations, government bodies, local providers and local businesses enhanced campus offerings and helped them to serve as community hubs for which the broader community is encouraged to share in programs, supports, amenities and events. Co-location often mitigated the need for travel affording savings in transportation costs, and built important on-site linkages to clinical and non-clinical services (e.g., primary care and/or audiology offices onsite; banking hours with local bank; libraries; general store; social programing; restaurants). An important practical limitation for campuses was as their scope grew—so too did issues with a lack of parking for clients, staff, visitors, and volunteers. Future campuses should learn from this and plan for this need with development and expansion activities.

Key Factors Influencing Campus Ability to Offer Wrap Around Care

i. Policy Rigidities and Enablers. Campuses in this study noted seamless transitions across a continuum guided the development of their expansion efforts (seniors' housing progressing to onsite LTCH). This intention is supported in the literature given the losses and difficultly one experiences in moving from one's prior home to seniors' housing, let alone having to move from one's own home to campus housing then again to another offsite LTCH (56,57). Consequent moves across a campus setting, while disruptive, would conceivably not be viewed or experienced as stressful or as disruptive as the original move from community or again to another unfamiliar setting altogether (58,57) or in some cases, not even necessary (57).

While all campuses conceptually have the ability to offer a full continuum of care across the broader spectrum when higher levels of care are necessary, and in many cases do, each campus operated under and across multiple policies and legislative and sectoral standards that could pose barriers to acting in this manner—particularly those related to current LTCH bed waitlist policies. While campus respondents noted they understood the value and importance of equity-based policies for LTCH placement, most struggled with the lack of priority status for residents of campus housing to the onsite LTCH. They perceived negative effects to individuals that had had this occur such as losing relationships with familiar staff and social networks (neighbours, friends and in some cases spouses). As described earlier, these loses would be compounded for people living with dementia, where continuity of care and setting are particularly important factors to successful transitions (11).

Where legislative provisions are made for spousal reunification if one person was already in a campus LTCH bed, no provisions are made to allow for onsite priority for other family members living on campus (adult children with physical, cognitive or developmental disabilities) who would benefit from proximity being in close proximity.

Juxtaposed to this, the campus environment also serves many community-dwelling seniors through campus programs (e.g., ADP, Wellness Programs, Congregate Dining, Volunteering) whom were also

considered to benefit greatly from placement in the LTCH of that campus within a familiar setting and greater continuity of care planning and care staff. In each case, but to different degrees, not being able to access the campus LTCH where they had developed relationships with staff and friends, was considered detrimental to their ability to transition successfully and maintain their social relationships.

For individuals arriving to the campus LTCH from hospital or community as “crisis placements” (a term that indicates an inability for people to manage independently at home and/or those with a distressed caregiver), campus respondents noted that, after having been rehabilitated, some of those placements had the potential for lower intensity care elsewhere on campus. Few opportunities were available to shift such residents into these programs with implications that some people can end up receiving care in the “wrong” places when other options may be more appropriate.

It is worth noting that while LTCH waitlists can pose barriers for many in need of such high level care, many campus housing residents are able to actualize aging and dying in place without LTCH placement (e.g., dying of natural causes; palliative care in their home). Limitations to scope of practice for SH/ALS staff, program eligibility criteria, and wait lists were seen to impede optimization of campus resources to allow all campus residents to receive care that might alleviate Alternate Level of Care (ALC) pressures in hospitals (occurrences where people no longer need acute care in hospital but are unable to return home or move to a LTCH). This is an important consideration—particularly as the province of Ontario seeks to address solutions for “Hallway Healthcare” in hospitals and the desire of seniors age-in-place (59).

ii. Human Resources Shortages and Innovation. While conceptually campuses are able to consolidate human resources and have them available to work in different locations in the campus, the wages for PSWs often varied by setting, context and different union collective agreements. Campus participants highlighted the potential benefit of having nursing supports provided to other areas of the campus if a situation arose where a nurse would be best to deal with an emergent situation (e.g., assessing a fall in seniors’ housing); however, current LTCH regulations require that the RN on duty of a LTCH always remain in the walls of the LTCH.

Campuses, by virtue of offering a continuum of services across sub-sectors, are also affected by the legacies of managed competition for home and community care services. In the mid–1990’s government placed downward pressures on wages and working conditions for PSWs in the sector while making hospitals and LTCHs more attractive locations for higher paid work (18). This policy legacy has continued impact on current day PSW and RN shortages and campuses’ ability to meet staffing requirements (60). Despite this legacy, all campuses offered competitive wages for the sector and described struggling less than community support agencies lacking a centralized hub with consolidated services and human resources.

Human resources shortages of nurses and PSWs, and even culinary and allied staff were noted as particularly prominent in the north and rural regions with many campuses utilizing agency staff proactively and reactively to ensure compliance with accountability agreements and the legislation. In some cases campuses themselves were sub-contracted for coverage of clients not on the ALS program

by agencies with the contract but struggling themselves with shortages. All campuses utilized educational placements and internships with students from local colleges and universities (health care, maintenance, culinary) as effective strategies to host, train and potentially hire new staff. Campuses also fostered thriving volunteer programs from local high school placements to tuck shop volunteers, to event planning and board committees. Volunteers were considered crucial to campus life and activities and helping residents and local seniors stay active in their communities.

iii. Funding Limitations and Opportunities. Each campus in this study experienced discrepancies in government funding across different sub-sectors where hospitals and LTCHs would get modest annual increases in funding yet their community programs and support services received little to none. Frustration was felt by all participants that despite community support services (CSS) potential to offer high level care at the same or lower cost to the system and individuals if placed prematurely or inappropriately to institutional long-term care—and conceivably it would be more expensive to build a LTCH bed than have someone be supported in their own homes—preventative and maintenance CSS were not valued and considered as essential to other healthcare offerings.

Social and affordable housing on campuses was expensive to offset, particularly given the large number of seniors requiring subsidized housing (social and affordable housing) at each campus. A key facilitating factor to offsetting costs was the use of market rent and life lease options and in one case study, retirement home living. Fair market NFP retirement home living was also considered a potential option to both subsidize low-income housing, but help extend care continuum offerings (e.g., access to a nurse). Options for short term stays in retirement living (e.g., one to three months) were used at the newest municipal campus for seniors that might need additional help for a short period of time (e.g., winter risk of falls, snow shoveling, trial for permanent consideration). Short-term options were also pursued to meet organizational and system needs, such as ensuring suite capacity and assisting discharge planning with alternatives to placement or convalescing). The desire to provide a good balance of options for varied needs had campuses without retirement home options interested in considering the viability of such where space permitted; noting that careful attention would be paid to reinvest any surplus back into the campus—a key factor to meeting NFP and charitable status.

Campuses looked for other opportunities to try to secure funds for programs and services including fundraising events. Fundraising for those without formal foundations could be disruptive to other administrative activities. Small revenues were also gained through the inclusion of minimum service packages included as part of residents' rent separate and distinct from government funded programs. This low-cost investment not only encourages opportunities for social participation, better nutrition, proactive monitoring, and convenience, but greater returns on client independence and well-being and direct reinvestment of funds in campus programs.

Campuses in this study were proactive with policy and funding windows of opportunity and put money aside to address costs for aging infrastructure across the whole campus and planning for future costs (roof replacement, retrofitting). Current development and redevelopment opportunities for LTCH bed

licenses (N = 30,000) over the next decade may provide incentive for expansion activities for current campuses, but also for standalone LTCHs and Seniors Housing providers to more fulsome campus offerings and amenities (e.g., serve as community hub) where the broader community could be invited in to participate in their recreational and social programing, healthcare and amenities (36,37,1).

The ability for ALS programs to support people well and for longer than those without such a program in the community appears to have implications for future strategies to actualize seniors' desire to age-in-place as long as possible. Such strategies may include enhancements to current program funding (e.g., top-up services, expansion for those on ASL program waitlists), investing in more cluster care options designed specifically to meet the monitoring and vulnerability supports for people living with dementia, and possible fanning out of additional supports to more clients in the neighbouring community to help mitigate or avoid LTCH placement where possible (61).

Conclusions

This research has explored key factors influencing the development of this model the evolution, ongoing functioning and ability to offer wrap care around care for seniors with a range of physical, social and/or financial need. To achieve the promise of seniors' campus continuums as fully integrated, affordable, accessible and quality care settings it is important first to understand how they take root, the opportunities and challenges they face in bridging the health and social care divide, and opportunities to maximize their benefit across varied contexts (urban, rural, municipal, NFP, ethnic, cultural, and/or linguistic campuses). Findings from this research suggest that seniors' campus continuums offer boundary-spanning approaches to health and social care that optimize reach and benefit for a variety and mix of needs at many levels.

At an *individual level* municipal and NFP campus continuums in this study have the ability to address diverse physical, cognitive, social, respite, spiritual, and financial needs of individuals with progressive declines and their informal caregivers through co-location of mixed housing options and supports. Their intentional design provides interconnectivity for greater ease of movement to services, programs and amenities and reduces need to travel distances for services, while enhancing opportunities for social participation and creating a sense of community. Co-location and familiar staff can further contribute to better uptake of respite programs by caregivers—an essential backbone to the healthcare system—to help prevent or delay stress and burnout.

At an *organizational level,* campus continuums serve as valuable employers in the local economy and a community hub for the local community. Campuses create efficiencies in service delivery through centralizing administration and maximizing economies of scale. The intra and inter-organizational workings of a campus can contribute to fewer and smoother transitions and serve as rich environments for educational practicums and volunteer work.

At a *system level,* campuses continuums offer enhanced system coordination and case management of health and social care options for older adults wishing to age-in-place in their own communities and help

to avoid unnecessary or premature utilization of more intensive system resources.

While population aging may occur primarily as the result of demographic trends outside the reach of policy-makers, considerable degrees of freedom exist in deciding how to use scarce resources in response to this growing population and their desire to age-in-place. A new window of opportunity may for scaling and spreading the campus model may open based on external pressures in the form of National and Provincial Seniors' Strategies, Dementia Strategies, and Affordable Housing Strategies as evidenced in Canada and other countries, and growing international agreement that such strategies are crucial.

Limitations of Findings

While this research captures many lessons learned about the history and ongoing management of Seniors' Campuses from multiple perspectives (representation from senior management of programs and services, environmental services and valued partners such as Local Health Integration Networks, municipal housing, primary care), key informants interviews did not seek to interview matching/equivalent roles at each case study—although this did occur in some instances.

An important lens that would be beneficial to include is direct resident perspectives. While the researcher was permitted to observe resident activity during site visits and enjoyed meals with residents which reinforced and confirmed many themes developed in this paper, the voice of people living in campuses and supported by campuses in the community is not captured. A full ethics review to include potentially vulnerable populations would have extended the length of time to commence the study and complete the fellowship in 2018.

Future Research

This research contributes to a broader understanding of seniors' campus continuums as a foundation to exploring other important factors including future investigation of resident lived experience and measures for their health, well-being, quality of life, and level of satisfaction with the model—and impact of having to move off-site for a LTCH bed if that situation arises. Future research may look to compare campus outcomes and/or cost effectiveness of campus models as compared with stand-alone LTCHs and seniors housing and for-profit models. Investigation into the ability of campuses to alleviate Alternate Level of Care (ALC) pressures in hospitals (occurrences where people no longer need acute care in hospital but are unable to return home or move to a LTCH) and possibly branch out to virtual care opportunities would support the goal of enabling seniors to stay in their homes even as their physical needs decline—a key goal in geriatric care. As noted above, future research should include the voice of campus residents and local seniors to include perspectives of those with lived experience.

List Of Abbreviations

ADP Adult Day Program

ALC Alternate Level of Care

ALS Assisted Living Services

CSS Community Support Services

DSW Developmental Services Worker

LTC Long-Term Care

LTCH Long-Term Care Home

MOHLTC Ministry of Health and Long-Term Care

OECD Organisation for Economic Co-operation and Development

NFP Not-For Profit

PSW Personal Support Worker

RGI Rent Geared to Income

RN Registered Nurse

SH Supportive Housing

TCLHIN Toronto Central Local Health Integration Network

WHO World Health Organization

Declarations

Ethics Approval and Consent to Participate

Overall project approval was obtained from the University of Toronto Research Ethics Board (RIS- 35557).

An Administrative Review of the Project was also conducted by Bruyère Continuing Care Research Ethics Board (M16–18–020).

Consent for Publication

Not applicable.

Availability of Data and Materials

While study sites have been identified, we have done our best to keep respondents anonymous and data will not be shared beyond the study team as per our ethics approval.

Competing Interests

The authors declare that they have no competing interests.

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Authors' Contributions

FMC, DB, and WB with assistance from SM conceived and designed the study. FMC, with ongoing support from WB, DB and SM, provided oversight and coordination to all aspects of the direct research, analysis, and manuscript development. FMC, WB and SM were actively engaged in all aspects of interpretation of the findings from preliminary findings to final results. FMC drafted the initial manuscript and WB and SM critically reviewed drafts and revisions to the manuscript and provided valuable ongoing feedback. All authors made valuable contributions to the development and refinement of this manuscript and its intellectual content. All authors read and provided approval of the completed manuscript.

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Appendix A: Interview Protocol

1. **Review Letter of Introduction and Consent Forms and provide any necessary clarification on the study details, requirements and consent process.**
2. **Proceed to Interview Questions**

1. Background: Please describe why and how your campus evolved to its current array of programming, services and supports.

Suggested Probes for exploration (dependent on respondent's role):

- What is the history of your campus? Was it planned/strategic or would you describe it as more serendipitous?
- Did you look at other campus models?
- How did you initially establish /undertake activities for a campus of care?
- When did linkages between/amongst services begin to be recognized as important (and why considered important at the time)?
- Formal or informal partnerships? If yes, how does this occur?

2. Corporate Organization and Overall Governance: Please describe your campuses current corporate organization and overall governance structure. (*Indicate we will focus on the individual components of the campus later in the interview.*)

Suggested Probes for exploration (dependent on respondent's role):

- Corporate structure
- Please describe the campus' relationship with the broader local community
- Does the campus offer any community outreach within and/or beyond your campus borders (e.g., personal support, transportation)?
- How do you monitor the well-being of campus residents across the continuum of your campus? In the community?

3. Programs and Services across the Campus Continuum: Please describe the current array of programming, services and supports offered through your Senior's Campus, either directly or through partnerships, and the nature of required arrangements to offer them (e.g., key development and implementation processes).

Suggested Probes for exploration (dependent on respondent's role):

- Describe the service X (housing, supportive housing and assisted living, LTCH, community services, amenities, etc.) within the campus and, if appropriate, the local community.
- What are the relevant policies and legislation within which programs operate?
- Briefly describe how the programs and services are funded and how they relate to the overall entity (required funding arrangements, sources, and accountability arrangements to offer the continuum of care)?
- How are services managed across the continuum with the campus and local community?
- Could integration of services be improved?

4. Moving Forward (all respondents): How might one better facilitate the ability of campuses to maximize their benefit for their residents/tenants and local community?

Suggested Probes for exploration (dependent on respondent's role):

- Lessons learned from campus development and implementation experience?
- Necessary partnerships, outcomes and potential scale or spread?

5. Thank respondent(s) for participating in this important research.

6. Remind respondent(s) they will receive transcripts for review shortly.

7. Provide contact information for Principal Investigator Dr. Morton-Chang if there are any questions that arise over the course of the research.

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Appendix B: Supporting Quotes For Identified Themes

1. # A. Campus Evolution

i. Organizational Legacies – Addressing Unmet and Changing Needs

"About one to two-thirds of our [clientele] were seniors in our hospital and LTCHs…So we thought 'that's our niche'. There's a dire need [for affordable housing and assisted living] and here's an opportunity that really could continue the legacy of the sisters, which was to address the most vulnerable in the community [and] to build something that we can transfer [people out of hospital]. It's good for seniors' quality of life but it's also good for the system as a whole because if you look at

what it costs per day to sit in a hospital bed versus being in assisted living [in the community]… You're comparing $600 a day to $50 to $70 a day." [CR1]

"The Ministry [conducted a] pilot project … of 102 hostel beds and a 40 unit apartment building… What they cared about was 'how do we best serve the seniors in this community given their health levels?'…So when the Ministry came out with new housing opportunities in 1992… the board was ready. They had the building designed, the land prepared...It was all on paper." [CR2]

ii. Policy Changes afforded Windows of Opportunity

"Funding was from the Ministry of Housing [in] the early '80s – and was really, in today's world, kind of a gift. It financed 50 year mortgages and there were provisions in for rent supplement for people that needed it…So it gave you a nice mix of incomes in terms of modest income through to folks that were pretty well off. And there was pretty quick pick-up. People could understand the notion of 'I don't need a nursing home but living at home doesn't work for me anymore'." [CR3]

"…we received a grant for the affordable housing units as part of the stimulus… This was in the time of the sub-prime crash. The federal government matched provincial dollars but it was administered through the city. The city didn't contribute to that, [but] they… gave us breaks on some of the developmental charges [like]… permit fees." [CR1]

iii. Organizational Structure and Capacity to Expand

"There are a lot of requirements. And I'm talking binders, different levels [of bureaucracy], we had to submit to [the municipality], and resolutions … and my director of Facilities was an engineer and that made things easier…between him and I, we project managed the construction. We didn't have to hire out…and the financing … was a challenge [which] required a tremendous amount of paperwork… [and] borrowing millions of dollars. And we had the infrastructure to do it. We had the staff…a CFO, a corporate controller. And I was just trying to think, you know, if a smaller organization was trying to do this, it would have been difficult." [CR1]

B. Campus Design and Functions

i. Intentional Physical and Social Design

"…deliberate creation of a common gathering space between two formerly separate buildings which encouraged people to sit down, to share in community with each other… structures with a design that can bring people together naturally." [CR5]

ii. Campus Service Mix, Amenities, Partnerships and Arrangements

"Our kitchen makes the meals for the LTCH, for supportive housing, for the Meals on Wheels program, for the [partner organization] adult day program, and then caters meals for various different

events and groups that use our community hall... And having the additional meals helps us to have a more substantial staff group in our kitchen for the purposes of providing the meals for all the other events and activities that we get involved with." [CR6]

"But to get anywhere near close to what the building condition assessment says we need [for future repairs], we need to put more money into our reserves over the next 10, 20, 30 years to be able to replace the whole roof, to be able to replace all the windows, to be able to do all those things we're going to need to do in 25 years. And, being in the municipal sector, we would need to go to council and explain 'we need to up our reserves by say 2% a year' or figure out how we can do that internally in this building." [CR7]

"We're getting into the foray now of designing a new LTCH…and a community hub…[which] might mean, maybe, there's some commercial space in that community hub that generates revenue that supports what's going on here [but] we have to be careful what we do on campus that we don't jeopardize our not-for-profit and charitable status." [CR5]

"So we all work together…I think it's a social responsibility that you have with your private sector…We [as a municipal campus] offer social housing and have to balance as to how many units we should have so not to negatively affect the private sector." [CR2]

C. Ability to Offer Wrap Around Care

i. Policy Rigidities and Enablers

"There is no question that access to a program like [SH/ALS] can prevent or postpone placement into long term care. We see it happen all the time." [CR4]

"… if they are on my assisted living program and suddenly they're on a LTCH wait list… we do our best to hang onto the resident until that [onsite] bed is available or until they end up in crisis and they have to go somewhere else." [CR8]

"If they have to go to the hospital from our apartments, then convalescent care, and go back to their apartment, the campus allows that flexibility for people to move right or left on the continuum, to a point. And that point is the long term care placement." [CR5]

"Yes, you'd be moving, and that's a stress at any point in your life. But at least you're still here [on campus] with people you know." [CR9]

"Some of our day program clients also access the music programs and the respite programs upstairs in the long-term care home…We have quite a few families [living in the community and campus housing] that use long-term care respite [care beds] because then they can get a week or two weeks break at a time. But then the client can still come down to the program during the day…So, it's a

bonus to our clients because they get used to that atmosphere. So if they are moving into the long-term care home, families tell me they find it's a little better transition [for these clients]." [CR10]

"We have an internal wait list such that if people who already live here in the condos and want to live in another place within the village, they can 'jump' the wait list. For example we have people that are on the wait list in the condos to come to a one-bedroom unit in this building. So there is continuity in that as their care needs change, they don't have to really change their address and their community." [CR11]

ii. Human Resources Shortages and Innovation

"[current staff are] tired of working short as well. So we need to balance… that there are not enough PSWs coming out of the programs. The Ministry has to look at the HR issues regarding PSW and do something about it. That's province-wide." [CR2]

"…in a climate where there are PSW shortages, we have further difficulty in finding people that are bilingual who have a car, who can travel distances to work..." [CR2]

"But we're at a point where we've got to start thinking outside the box. And we're hopeful, we've been advocating that the province would look at maybe some type of apprenticeship model that, you know, we could actually pay them while they're in school." [CR8]

iii. Funding Limitations and Opportunities

"[Community support services are] treated as less essential to other healthcare offerings despite their value and ability to offer high level care at the same or lower cost than if they were to be placed in institutional long-term care." [CR1].

"…if seniors have an accident, if they don't take their proper medication or whatever, they end up in the hospital and then they wait for a LTCH bed… if we were to reduce the base CSS offerings…They will either go to the hospital or they'll become high risk. Yet [CSS] is at the cheapest end. It takes very little investment, but may avoid a fall, or a bunch of things and then they don't tax the rest of the health system." [CR12]

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