MontgomerySisam

Caring for the Elderly: Is Big Bad, Better or Both?

Robert Davies, OAA, RAIC
Edward Applebaum, OAA, RAIC

Design and Health 7th World Congress – Boston
International Academy for Design and Health

July 2011

INTRODUCTION

This paper is intended to:

1) Provide an overview of the design of long-term care buildings in Canada.
2) Provide observations on the impacts of the size of the facilities on quality of life.
3) Speculate on the direction we may be heading by examining from where we have come.

CANADA, AN OVERVIEW

Canada is the world's second largest country by land mass, after Russia. It is bounded by the world's longest unprotected border to the south, the Atlantic Ocean to the east, the Pacific Ocean to the west and the Arctic Ocean to the north. The country is divided politically into 10 provinces and three territories. 80% of its 34 million people live in urban environments distributed as follows between the provinces:

British Columbia	4,531,000
Alberta	3,720,900
Saskatchewan	1,045,600
Manitoba	1,235,400
Ontario	13,210,700
Quebec	7,907,400
New Brunswick	751,800
Nova Scotia	942,400
Prince Edward Island	142,300
Newfoundland and Labrador	509,700
Population of Canada	**34 million**
% of population over the age of 65 in 2011	14 %
% of population over the age of 65 in 2031	23 %
Average life expectancy for women	83
Average life expectancy for men	78
Average annual household income	$63,900
Canada's national debt	$563 billion
per person	$16,500
Average cost of healthcare to persons over 80 years	$18,000/ annum
Number of licensed long term care beds	193,858
% of population who use long term care services	0.56%
Average length of stay	3.5 years

In Canada, health care is funded by the Federal Government and governed by Provincial Governments. Within this framework, Long Term Care is provided by three distinct groups: Municipal Homes, Charitable Homes or Private Homes. Each of these Homes is required by law to meet a minimum set of operational standards as established and regulated by the health authorities of the Province in which they operate.

OPERATIONAL STRUCTURE

Municipal Homes are owned and operated by regional municipalities or other government jurisdictions and are typically run as not-for-profit businesses with any operating surpluses put into the provision of enhanced services. These homes are generally designed with a greater emphasis on the provision of community support and programs. Diverse programs such as Adult Day Care, Respite Care and other forms of supportive care are often provided in municipal homes. Staff are generally unionized which creates larger area requirements and increased design standards.

Charitable Homes are owned and operated by various charitable groups & foundations and are also typically run as not-for-profit businesses with operating surpluses put back into the provision of enhanced services. Many of these are comprised of ethnic and/or faith-based communities whose homes reflect their own unique character. Some of these charities are locally based while others are branches of international organizations, such as the Salvation Army. In addition to providing the services of basic long-term care, the charitable homes tend to provide excellent complementary programs and services, not unlike the municipal homes.

Private Homes are owned and operated by a range of private operators, from individuals to corporations, and are run as for-profit businesses. Given the financial imperatives, it is fair to say that private operators must operate at greater efficiencies than the not for profit sector. This also tends to result in tighter area per resident design ratios. However, since private homes must compete for clients, their level of amenity and service needs to be at a similar standard to not for profit homes.

PROVINCIAL STANDARDS

Over the last thirty years, the authors of this paper have been privileged to work in the field of long term care design across Canada. During that time, we have been involved in the development, design and implementation of varying design standards in five provinces. Over that period of time, we have also witnessed a significant evolution in long term care design as the needs of an elderly population have steadily increased.

In addition, we have experienced a broad range of design standards implemented across the country. Some of the most notable design variations are a reflection of the diverse nature of our country and the distinction between different regional cultures & attitudes. Another dimension which must be accounted for is the variation in provincial funding mechanisms, in both capital and operational terms.

The following comparison chart identifies several key measures in long term care design across several regions of the country including Alberta, Ontario and the Atlantic Provinces.

	Ontario	Nova Scotia	PEI	New Brunswick	Alberta
Maximum number of residents per home area	32		14	25	18
Minimum number of residents per home area		12	12	20	12
Minimum private bedroom size	130 sf	190 sf	183 sf	169 sf**	219 sf
All private bedrooms required	No	Yes	Yes	Yes	Yes
Minimum resident washroom requirements		48 sf	50 sf	60 sf	61 sf*
Minimum lounge and activity area per resident	27 sf	36 sf	21 sf	35 sf	43 sf
Minimum dining area per resi-dent	30 sf	36 sf	21 sf	38 sf	43 sf
Minimum multi-purpose area required		19 sf	7.7 sf		16 sf
Maximum overall area required		940 sf			

THE SMALL HOME

Regional Impact

Nova Scotia, one of Canada's four Atlantic provinces, maintains a strong regional character. It's maritime heritage is reflected in the many small communities which string along its extended eastern and western shorelines. The most remote section of Nova Scotia, Cape Breton Island, is almost a province unto itself with its distinctive landscape of rugged shoreline, green meadows & brackish lakes. Socially, its small communities are all very tightly knit, being generally composed of large extended multi generational families.

For the purposes of this section of the paper we have studied Alderwood Rest Home, Cape Breton. It reflects not only the provincial design standards but also the particular regional character of the Island.

Design Features

Opened in July 2010, Alderwood Rest Home represents the new wave of long term care homes being developed in the Atlantic Provinces. It also reflects the current thinking of Nova Scotia's long term care design standards.

At 70 residents, Alderwood is one of the smallest new homes in the system. It is separated into six 11-12 bed home areas. Its compact & integrated design has many benefits & features for residents and staff including;

- less time spent by staff & residents travelling or being portered;
- quicker transitions between private & public spaces;
- quicker transitions between indoor & outdoor spaces;
- staff interaction facilitated & visual contact enhanced between staff & residents;
- fewer hidden or concealed spaces.

The central common areas of the home are well utilized on a daily basis by residents and their families. Staff support and production areas are centrally located promoting efficient transportation of products and services to residents.

Positive Outcomes

The staff and residents at Alderwood have reported many positive outcomes resulting from moving into the new home. Many of these outcomes relate directly to the enhanced design standards & the resulting smaller scaled home areas.

In particular, some of the most notable positive outcomes include:

- more restful & restorative sleep resulting from a quieter, more restful environment ;
- fewer outbreaks resulting from easier implementation of infection control standards;
- a more positive social group dynamic i.e. a smaller overall group size makes it easier to put together a complementary blend of residents;
- better integration of cognitively impaired residents into each resident home area i.e. better chance of success in a smaller grouping with less overall stimulation.

A more homelike family scaled environment has been generally achieved through implementation of the new long term care design standards in Nova Scotia. The many positive outcomes for residents, families and staff are certainly a reflection of this new design approach.

Alderwood Rest Home

LARGE HOMES

For the purposes of this paper we are defining large homes as any home which is larger than 288 beds. Specifically, we are drawing upon our experience as architects for Cardinal Ambrozic Houses of Providence with 288 beds, Davey Home with 384 beds and the Centre for Excellence Integrated Services for Seniors (CEISS) with 544 beds. It is interesting to note that all of these facilities are owned and operated by not-for profit charitable institutions, two of them faith-based. Also of interest is that two of the homes have involved the transfer of licensed beds form municipalities to charitable organizations. This reflects a trend whereby municipalities can no longer afford to manage long-term care homes due to a dwindling tax base.

In each of these large homes there has been a concern that the size of the population may lead to the home feeling more institutional and less residential. In this section of the paper we will investigate the implications of population size by facility as it impacts resident well-being and safety, economy of means and volunteer base.

Cardinal Ambrozic Houses of Providence

Resident Well-Being and Safety

The current trend for long-term care design in Canada places a high degree of emphasis on resident centered design responses. This attention to individual rights and respect for dignity begins with the provision of single bed rooms with a high percentage of private washrooms attached. Even the rooms that are considered semi-private are essentially private bedrooms with a shared washroom. This is the basic building block of all long-term care design.

Just as the bedroom is the smallest building block of any home, it is the gathering together of the bedrooms into Resident Home Areas that is the next essential building block. In all large homes, the operators have opted to provide the maximum number of residents per home area allowable in the Province of Ontario, which is 32. Each home area by regulation must be able to meet the basic needs of all long-term care residents. This means that it is possible for a resident to never need to leave the resident home area. In addition to sleeping therefore one can be fed, bathed, recreated, stimulated, exercised and entertained all within the home area. In the case of residents in certain states of mind, this home area is essential to providing a safe and secure environment for their well-being.

In assessing the impacts of facility size, it is important to recognize that current trends in population acuity indicate that more and more people in long-term care require higher levels of care than was once the case. The Administrators of the Davey Home and Houses of Providence estimate that only one third of the

population possess the ability to leave the home area without assistance due to either mental or physical reasons. Therefore, for a large percentage of residents the quality of life they will experience is heavily reliant on the quality of life to be found in the home area. One of the authors of this paper has a personal family experience that reinforces the notion that once one is living in the home area, it is the home area environment that is critical and it doesn't seem to matter much if the home area is one of one or one of twenty.

If we now consider that there are facility wide spaces that offer facility wide programs, such as an auditorium, town hall gathering places, hair salons, libraries, chapels, cafes or main lobby that require a resident to leave the home area to use then the larger facility will provide more residents to draw from to enliven those programs. One third of a 60 person facility will on average have 20 people who could go to the town square on their own whereas one third of a 540 person facility will have 180 able bodied residents to draw from to enrich the social life of the community.

Centre for Excellence Integrated Services for Seniors

Economy of Means

A distinct advantage of a larger home for staff is that the economy of means related to operating costs allows for more staff than smaller homes could afford. For instance at the Davey Home they have been able to employ a full time occupational therapist, physiotherapist, social worker and chaplain. In addition they have been able to attract two dental hygienists and several physicians to operate a wound program.

Construction costs of larger buildings may not be less on a cost per square foot basis than smaller homes as larger buildings generally have stricter building code regulations requiring more expensive non-combustible construction methods. However, larger programs usually result in space efficiencies that allow the buildings to provide more services for less area. As an example, central functions like kitchens and service spaces can be relatively more efficient in a larger facility. The same applies for entry lobbies, main gathering rooms, therapy rooms and so on.

Volunteer Base

Long-term care homes in Canada rely heavily on a supportive volunteer base to provide services to residents as well as to participate in fundraising activities. Volunteers generally come from family members of residents in the home. The larger the population of the home the broader will be the volunteer base to build from. This larger base provides greater critical mass for events as well as providing a greater pool of people to draw from over the course of any given year, helping to avoid volunteer burn-out.

CONCLUSION

While there are clearly many differences between a 70 bed and a 544 bed home, we do not necessarily favour one approach to providing care over the other. Certainly, each home has certain natural advantages which relate to their relative sizes, as discussed earlier. It is fair to say that size alone does not dictate positive care experiences for residents, families and staff. Both home types share many key architectural design qualities which we believe are as relevant as size in this discussion:

Healing Quality of Natural Light
The world of the senior can become very dark and depressing. Filling the environment we live in with an abundance of natural light promotes a strong sense of well being and vitality, lifting the spirits not only of residents, but of staff and visitors as well.

Inside-Outside Connections
As we age and become less mobile, it becomes more critical to provide the elderly with a sense of the outdoors to combat their sense of isolation from the world around them. Generous windows with low sills that are well located to provide attractively framed views bring the outdoors experience directly to the residents. Easy barrier free access to outdoor therapeutic gardens must be fully integrated into the design.

Community/Privacy
Developing meaningful relationships and finding companionship becomes increasingly more challenging for the elderly in long term care. Designing public spaces of different scales and character draw residents together, which are naturally complemented by more private bedrooms for quiet repose is critical to the overall success of the home.

Colour/Texture
The appropriate use of colour and texture adds delight and enjoyment to the resident's day to day life. The design approach must encompass a full understanding of the aging eye and its relationship to spatial perception as well as cognitive impairment in order to be successful.

A Supportive & Dignified Environment
Creating a domestic environment is at the heart of the resident home area concept. All the activities of daily life including living, dining, bathing, resting etc. take place in the home area. The resident experience becomes more familiar, more comfortable and one of positive associations as opposed to feeling like being in a medical environment. The dignity of the resident is further enhanced through more amenable bathing environments, now characterized as Spas, as well as more privacy and support related to grooming, toileting etc.

Flexibility of Use
The guiding principles of universal design are being applied throughout the design of long term care homes. This has resulted in highly amenable yet flexible spaces which support a multitude of uses and allow easy access for residents with limited mobility or other special needs issues. The trend away from dedicated to flexible spaces has created more dynamic environments in the homes, spaces that can be used for groups of varying sizes and spaces that draw in the community for special events. Higher more concentrated levels of activity brings energy and liveliness to the home, making it a far more positive environment to live in, visit or work in.

Healthy/Sustainable Environments
All buildings in today's world must make a serious commitment to promoting sustainability. Responsible design decisions will be considered and made as part of the integrated design process including improving indoor air quality, selecting recycled materials, choosing the most energy efficient building systems, etc. The contractors work must also be integrated into this process as well to ensure that the building's environmental footprint is minimized.

THE FUTURE

When the authors of this report first started designing environments for long-term care residents over thirty years ago they encountered a building stock that was itself thirty years old. These buildings typically had as many as four people in a room with shared communal washrooms and common locker areas. Congregate dining could be for up to 100 people and there was a significant lack of lounge spaces. Residents were gathered together in wings that were separated by gender.

Of course the thinking has significantly evolved over the intervening thirty years and homes today are designed to very different standards than their recent predecessors.

But do we have it right for the future? The current design standards have been established by well intentioned programmers, architects and administrators who are thirty years away from long term care themselves. Have we swung too far toward individual privacy to suit our own mid-life values? One can't help wonder whether all this privacy may lead to feelings of isolation and loneliness at the end. As we become diminished in mind and body will we not want to be closer to others? One of the authors father had just this kind of experience at the Cardinal Ambrosic Houses of Providence. During one stage of his aging, he was terrified of being alone and would only settle down to sleep when he was transferred to an older part of the facility where he shared a room with two other men.

Another concern relates to our ability to afford services in the future. Our publicly funded health care system is already strained by insufficient resources. Nurses are few and health care aids are strained. As we have seen at the beginning of this paper the percentage increase of seniors is to double by 2031, adding further strain to our ability to pay for our care.

We have recently visited two significant historic buildings that were built to provide long-term care services, Hotel-Dieu in Beaune, France dated 1433 and the Royal Hospital Chelsea designed by Sir Christopher Wren dated 1648. Hotel-Dieu was converted into a museum in the 1970's while the Royal Hospital Chelsea continues to provide care to the Chelsea Pensioners to this day.

Hotel-Dieu

Royal Military Hospital

What is so striking about each is the relationship between public and private life that is evident in the design. Each provides individual sleeping compartments, rather like those of a ship, that give directly onto common spaces. In the case of Hotel-Dieu there is a common hall that would have had dining tables and at the end a chapel allowing all to participate in daily prayer and mass (an essential part of the healing process) without leaving your bed.

At the Royal Hospital Chelsea a resident leaves the privacy of their bed room for a common hall where each resident share a sitting space while commanding their own window. At the head of the overall complex, is a splendid dining hall and chapel which defines a courtyard while joining the wings of the residences.

Both of these examples invert our current sense of individuality and community, efficiently accommodating multivalent uses in a single space. Less area to build and operate means lower capital and operating costs.

As an example, Hotel-Dieu accommodates 29 residents in a hall that is 50 metres long and 14 metres wide (and 16 metres tall). This translates to 80 square metres or 260 square feet per resident. Our current resident home area standards are in the range of 400 to 500 square foot per resident, significantly more.

In conclusion we would like to leave you with the question:

Can we afford our current approach to privacy and even if we can, is it desirable at the end of our life?

In our on-going desire for progress, we may do well to consider whether we can adapt models that have endured so well for centuries past.