Location, Location: Characteristics and Services of Long-Stay Home Care Recipients in Retirement Homes Compared to Others in Private Homes and Long-Term Care Homes

Tout est une question d'emplacement : caractéristiques et services pour les bénéficiaires de soins à domicile de longue durée dans les maisons de retraite en comparaison aux autres résidences privées et aux foyers de soins de longue durée



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Abstract

We examine recipients of publicly funded ongoing care in a single Ontario jurisdiction who reside in three different settings: long-stay home care patients in private homes and apartments, other patients in retirement homes and residents of long-term care homes, using interRAI assessment instruments. Among home care patients, those in retirement homes have higher proportions of dementia and moderate cognitive impairment, less supportive informal care systems as well as more personal care and nursing services above those provided by the public home care system, more frequent but shorter home support visits and lower than expected public home care expenditures. These lower expenditures may be because of efficiency of care delivery or by retirement homes providing some services otherwise provided by the public home care system. Although persons in each setting are mostly older adults with high degrees of frailty and medical complexity, long-term care home residents show distinctly higher needs. We estimate that 40% of retirement home residents are long-stay home care patients, and they comprise about one in six of this Community Care Access Centre's long-stay patients.

Résumé

Nous avons examinés, dans une seule circonscription en Ontario et au moyen des instruments d'évaluation d'interRAI, le cas des bénéficiaires de soins continus financés par les deniers publics qui résident dans trois types d'établissements: les bénéficiaires de soins à domicile de longue durée en appartements et résidences privées, les patients en maisons de retraite et les résidents en foyers de soins de longue durée. Parmi les patients qui reçoivent des soins à domicile, on observe chez les résidents en maisons de retraite une proportion plus élevée de démence et de troubles cognitifs modérés, moins de soutien sous forme de soins informels, moins de soins personnels et des services infirmiers supérieurs à ceux fournis par le système public de soins à domicile, des visites à domicile plus fréquentes mais plus courtes ainsi que des dépenses publiques pour les soins à domicile moins élevées que prévu. Ces dépenses moins élevées peuvent être dues à l'efficience de la prestation des soins ou au fait que les maisons de retraite fournissent certains services qui sont habituellement fournis par le système public de soins à domicile. Bien que les personnes dans chacun de ces établissements soient principalement des aînés qui présentent un haut degré de fragilité et de complexité médicale, les résidents dans les foyers de soins de longue durée présentent un bien plus grand besoin de soins. Nous estimons qu'environ 40 % des résidents en maisons

de retraite sont des patients en hébergement de longue durée et représentent environ un sixième des patients de longue durée liés à ce Centre d'accès aux soins communautaires.

Introduction

In Ontario, Canada, Retirement Homes (RH) have been regulated since 2010, and are defined in legislation as a "residential complex or the part of a residential complex," "occupied primarily by persons who are 65 years of age or older," whose residents are "not related to the operator of the home," and have "at least two care services available, directly or indirectly" (Government of Ontario 2010). In 2014, there were more than 700 licensed RHs in Ontario, mostly privately funded and for-profit (RHRA 2015a), and while capacity has grown in recent years, demand has outpaced growth (CMHC 2015).

RHs may provide a range of services to their residents among the minimum of two required for licensure, including meals; assistance with bathing, personal hygiene, dressing or walking; administering medications; continence care; or making a doctor, nurse or pharmacist available (ORCA 2015). They range in size from a minimum of six to 250 units or larger, with semiprivate or ward accommodations up to multi-bedroom suites that vary widely in rent (CMHC 2015). RHs represent an option for older persons looking to relocate from a private house or apartment to a setting where services are available to meet present or anticipated needs or preferences, and to live near others with similar interests. Needs of potential residents are assessed before a tenancy agreement to ensure suitable care is available (ORCA 2015).

As a place of residence, RHs may be placed somewhere between private homes or apartments (PH) and nursing homes, called long-term care homes (LTCH) in Ontario. The need for personal care or other health-related services is not a requirement to move into RH, and some persons choosing to move there are entirely independent and self-reliant. For more information on RHs in Ontario, including a searchable database of facilities, see http://www.rhra.ca/en/register/.

Home care is part of publicly funded health services in Ontario, with delivery organized into and administered from 14 geographic areas called Community Care Access Centres (CCAC). They provide home health services for various populations including child and school, short-term acute and rehabilitation, palliative and persons requiring support to remain in their own homes (Government of Ontario 2015). Eligibility is based on need, and co-payment is not required for services. Persons in RH are considered equally for eligibility along with those in other community settings.

More than 55,000 persons reside in RHs in Ontario (RHRA 2015a), but it is unknown how many of them receive ongoing home care services through their local CCAC. Ontario has about 77,600 LTCH spaces (OANHSS 2015) and 359,000 seniors receive supportive services annually through their CCAC in community settings, including RH (OACCAC 2016).

Operationally, the Hamilton Niagara Haldimand Brant (HNHB) CCAC is the largest CCAC in Ontario, and has among the most persons over the age of 65. It serves a diverse urban and rural area of 7,000 km² with a population of 1.4 million people.

This study seeks to understand the subset of RH residents served by the HNHB CCAC, and how they compare with others served in PH settings. This comparison also includes LTCH residents in the HNHB catchment area to profile the continuum of housing options for older persons receiving care.

Detailed clinical measures are drawn from the RAI family of assessments that are developed by interRAI, an international collaborative of researchers.

The RAI-Home Care (RAI-HC) is a standardized comprehensive clinical assessment system designed for home care, with demonstrated reliability and validity (Carpenter et al. 2004; Landi et al. 2000; Morris et al. 1997). It has been mandated in Ontario since 2002 for use among all adult, non-palliative home care patients expected to be on service 60 days or longer. It is normally done at program entry, and then every 6 to 12 months, or sooner in the case of a significant change in health status. Assessors are care coordinators with healthcare backgrounds employed by the CCAC, trained in the administration of the RAI-HC and the use of its information.

The RAI-Minimum Data Set 2.0 (RAI-MDS 2.0) assessment is a standardized comprehensive clinical assessment designed for LTCH facility care, with demonstrated reliability and validity (Hawes et al. 1997; Mor 2004; Poss et al. 2008a, 2008b). Its use in LTCH in Ontario began in 2005 and was adopted by all LTCHs by 2010. It is administered within the first 14 days of a resident's stay, and then every three months thereafter, or sooner in the case of a significant change.

Both the RAI-HC and the RAI-MDS 2.0 produce scales and other measures reported here, including the Cognitive Performance Scale (Morris et al. 1994), Activities of Daily Living Hierarchy Scale (Morris et al. 1999), Changes in Health, End-Stage Disease and Signs and Symptoms (CHESS) Scale (Hirdes et al. 2003), Depression Rating Scale (Burrows et al. 2000) and Resource Utilization Groups Version III for Home Care (RUG-III/HC) case mix grouping algorithm (Poss et al. 2008a, 2008b).

Methods

Long-stay home care population (private homes and retirement homes) Four administrative databases maintained by HNHB CCAC were used. These four databases are provided in de-identified, linkable form to the University of Waterloo as part of a contractual agreement that imbeds researchers and graduate students within HNHB CCAC.

- All RAI-HC assessment records done in the home care patient's residence were considered for calendar year 2014 (n = 29,659).
- Assessments were linked to a patient's address table. Home address records classified as "private dwelling" or "retirement home" and active on the day of assessment were identified. During CCAC data entry, the patient's address field is validated against known retirement home addresses at the time of patient intake (n = 27,723).
- 3. A referrals database of patients on active home care service informing referral start and end dates was then linked. Cases discharged within 30 days of the RAI-HC assessment were excluded, as there was insufficient time to observe a stable pattern of services (n = 24,242).

- 4. Billed services were used in the final linkage. Services were aggregated for the 30-day period starting on the day of the RAI-HC assessment. Cases receiving no service within 30 days of the RAI-HC assessment were excluded. The 30-day period represents sufficient time to understand patterns of service in relation to the patient's characteristics measured by the RAI-HC assessment. Cases (n = 109) averaging more than 8 hours of personal support per day were excluded, as they represent short-term intensive support not typical of long-term service (n = 22,377).
 - If a patient had more than one assessment, the most recent one was selected (n = 17,945).

There were 1,453 persons with assessments in either PH or RH that were excluded from the final sample because they were on service for fewer than 30 days. These cases differed slightly, in that they represented both more low-risk cases whose care might have been referred to agencies outside the CCAC and more high-risk cases who were more likely to be discharged because of death, hospitalization or LTCH placement.

Expected costs for the 30-day period were case mix adjusted using the 23 classifications of the RUG-III/HC grouping algorithm with the addition of co-residing with an informal caregiver as a final split for each group, doubling the number of classifications. This change was helpful, given there are no adjustments in RUG-III/HC for informal care availability that is known to drive home care intensity (Van Houtven and Norton 2004), and it differs greatly between PH and RH.

Long-term care home population

LTCHs submit RAI-MDS 2.0 assessment data directly to the Canadian Institute for Health Information (CIHI). As part of a data-sharing agreement with interRAI, a research extract is provided by CIHI to interRAI Canada at the University of Waterloo. Assessments in this analysis were done in the quarterly period between January 1 and March 31, 2014. If a resident had more than one assessment, the most recent assessment was used. This cross-sectional data set is representative of persons living in LTCHs in HNHB's catchment area at the time the community population was observed.

The goal was to achieve a representational view of the populations in these three settings. The RAI-HC is conducted every 6 to 12 months, so the full year of assessments was included. RAI-MDS 2.0 assessments are done every three months, and this dictated the sampling frame. Placing LTCH at the beginning of the calendar year minimized the likelihood of an individual being included in both, as patients are much more likely to transition from community to LTCH than the reverse.

Statistical testing of differences between cohorts used chi-square for nominal/ordinal and *t*-test for continuous measures. SAS 9.4 was used.

Ethics clearance was received from the University of Waterloo's Office of Research Ethics (ORE# 20862).

Results

Table 1 presents selected characteristics from the RAI-HC and RAI-MDS 2.0 assessments, for home care patients in PH and RH, as well as for residents of LTCHs. It is necessary to keep in mind that the results represent all LTCH residents, while values for PH and RH are for the subset residing in those settings who have sought and are receiving help from CCAC home care services. In other words,

the community samples reflect groups of mostly older persons with sufficiently high needs requiring ongoing and regular personal care, nursing or therapy services. As a result, these findings cannot be directly compared with studies that describe entire populations of older persons in PH or RH.

Compared to PH, individuals in RH are almost nine years older on average, and are more likely to be female and widowed. This is consistent with the understanding that women are more likely to be widowed and living on their own in later life (Statistics Canada 2011), and that RH is a preferred location for persons living on their own and seeking on-site services such as meals or housekeeping. Age is also influenced by the absence of younger persons in RH, compared to PH. LTCH residents are more similar in age to RH residents, if somewhat younger. About 17% of persons in the RH cohort are married, but half record a person other than their spouse as the primary informal caregiver. In these cases, it may be that the spouse does not live with them, possibly because they are in a LTCH, or they are too frail to be an active caregiver.

For many characteristics associated with care needs, we see a pattern of lowest proportions in PH, somewhat higher in RH, and very markedly higher in LTCH. These characteristics include dementia diagnosis, cognitive and physical impairment, wheelchair use, bladder incontinence, wandering and aggressive behaviour. This pattern is consistent with long-stay home care serving individuals who can be supported with scheduled visits, whereas LTCH residents require the availability of 24-hour care.

Stroke and heart failure are more similar among settings, but psychiatric diagnoses, particularly depression and anxiety, are much more common among LTCH residents.

Over 45% of RH residents have a Cognitive Performance Scale value of 2 that is approximately equivalent to 19 on the Mini-Mental State Exam and is consistent with mild to moderate dementia, suggesting much greater cognitive impairment than seen in the PH cohort. Higher levels of cognitive impairment are much rarer among both PH and RH cohorts.

The Changes in Health, End-Stage disease and Signs and Symptoms (CHESS) scale is associated with health instability and mortality. Similar proportions of persons living in PH and RH have notable health instability, whereas LTCH residents have lower levels of health instability. Another study (Hirdes et al. 2014) reported similar lower levels of health instability in LTCH compared with persons receiving home care in seven Canadian provinces and territories.

The pattern of daily pain seems to be inversely associated with significant cognitive impairment, perhaps where pain becomes more difficult to ascertain with increasing cognitive impairment. However, it is remarkable that the reported prevalence between community and LTCH-residing persons is approximately five times greater in PH and RH.

RH residents have significantly lower rates of depressive symptoms than persons in PH. This finding is surprising, especially because depressive symptoms are known to be associated with dementia (Snowden et al. 2014), something that explains the much higher rate in LTCH, but not in RH. An alternative explanation is offered by the significantly greater age in RH, where older age has been found to be protective of depressive symptoms (Szczerbińska et al. 2012). Age-stratified versions of Tables 1 and 2 are presented in Appendix 1 (available at: http://www.longwoods.com/content/25025). This hypothesis is supported by the disappearance of significant differences in depressive symptoms between PH and RH, and lower rates observed among individuals over the age of 80 in either setting.

TABLE 1. Selected characteristics of home care patients in private homes and retirement homes, and residents of long-term care homes

	PH	RH	LTCH	p-value PH vs. RH	p-value RH vs. LTCH
N	15,115	2,830	10,939	_	-
Median days on service (at time of assessment)	280	366	549	_	_
Mean age, years	76.6	85.4	83.6	<0.0001	<0.0001
Age under 65 years, %	18.8%	4.5%	5.9%	<0.0001	0.0025
Age 85 years and older, %	33.4%	63.0%	56.1%	<0.0001	<0.0001
Female, %	62.9%	69.7%	70.9%	<0.0001	0.1745
Married, %	41.5%	17.4%	24.5%	<0.0001	<0.0001
Widowed, %	38.0%	67.4%	56.7%	<0.0001	<0.0001
Diagnoses, %	'				
Dementia	17.0%	30.4%	63.6%	<0.0001	<0.0001
Stroke	17.4%	20.6%	21.6%	<0.0001	0.3065
Heart failure	12.5%	15.0%	11.4%	0.0002	<0.0001
Any psychiatric diagnosis	20.3%	23.7%	39.0%	<0.0001	<0.0001
Cognitive performance scale, %	<u>'</u>		'		
0 (intact)	43.2%	21.8%	10.7%	<0.0001	<0.0001
I	16.2%	17.6%	9.9%		
2	28.3%	45.4%	16.2%		
3–6	12.4%	15.1%	63.2%		
Activities of daily living hierarchy, %					
0 (independent)	52.7%	40.6%	3.0%	< 0.0001	<0.0001
I-2	28.7%	40.3%	16.1%		
3–6	18.6%	19.1%	80.9%		
Wheelchair primary means of locomotion indoors, %	12.0%	15.1%	57.6%	<0.0001	<0.0001
Fall in last 90 days, %*	39.7%	44.2%	36.8%	< 0.0001	<0.0001
CHESS§ 2+, %	44.2%	42.9%	20.2%	0.1975	<0.0001
Daily pain, %	63.8%	53.9%	12.6%	<0.0001	<0.0001
Bladder incontinence daily, %	25.7%	37.8%	66.5%	<0.0001	<0.0001
Depression rating scale 3+, %	16.0%	13.0%	38.2%	<0.0001	<0.0001
Wandering, easily altered, %	1.3%	3.0%	10.7%	<0.0001	<0.0001
Wandering, not easily altered, %	0.5%	0.6%	8.4%	1	

	PH	RH	LTCH	p-value PH vs. RH	p-value RH vs. LTCH
Any aggressive behaviour, easily altered, %	4.5%	6.7%	20.4%	<0.0001	<0.0001
Any aggressive behaviour, not easily altered, %	2.6%	3.4%	30.0%		
9 or more meds in last 7 days, %	55.0%	66.3%	64.8%	<0.0001	0.1466
Antipsychotics, %	9.1%	14.8%	32.0%	<0.0001	< 0.0001
Anxiolytics, %	17.4%	19.8%	14.8%	0.0027	<0.0001
Antidepressants, %	28.6%	33.7%	52.2%	<0.0001	<0.0001
Any of these 3 medications, %	40.6%	48.5%	67.4%	<0.0001	<0.0001

CHESS = changes in health, end-stage, signs and symptoms; LTCH = long-term care home; PH = private home; RH = retirement home. *In long-term care: fall in last 180 days. §Scores of 2 or more represent notable health instability.

Medications show distinctive patterns by setting. Antipsychotic prevalence follows patterns of both psychiatric diagnoses and dementia. Anxiolytic use is highest among RH residents. Antidepressants show increasing prevalence from PH to RH to LTCH.

Table 2 summarizes additional characteristics found only in the RAI-HC assessment. Patterns of caregiver relationship and co-residing with a caregiver differ greatly between PH and RH, which can be explained by differences in marital status and life stage that influence a move to RH. Nearly 60% of the PH cohort has a caregiver living with them, compared to 13% in RH. This difference, along with availability of bundled or other services by RH operators, explains the large differences in informal care time. In turn, informal care time is positively associated with caregiver distress (unable to continue, or feelings of distress, anger or depression).

The belief that the person would be better off in a living environment other than where they currently reside shows markedly higher proportions among the RH cohort, driven by cases in which the informal caregiver holds this belief but the care recipient does not, or both believe it. The type of other living environment is not known, but the difference may be partially explained by a greater proportion of the RH cohort waiting for a bed in LTCH, along with a possible sense of loss of having left their former place of residence behind. Analyses not shown indicate that persons waiting for a bed in LTCH, regardless of setting, have higher needs.

RH settings rarely note any issues with home environment concerns, compared with PHs, which is expected given institutional standards and provincial licensing and inspection. Remote alerting may be a standard component of some RH facilities, making this security feature more than twice as prevalent compared to PHs.

The proportion of persons rating their health as poor is lower in the RH cohort, on its face surprising, given the higher levels of cognitive and physical impairment. Rates of feeling lonely are fairly similar, although fewer RH residents go outside of their building regularly, something that could be related to the availability of services on-site (e.g., hair salon, chapel).

TABLE 2. Additional characteristics and services for long-stay home care patients in private homes and retirement homes

Informal caregiver co-resides, is spouse, %	35.8%	8.5%	
		0.3%	<0.0001
Informal caregiver co-resides, other than spouse, $\%$	24.0%	4.7%	
Informal caregiver, but does not co-reside, %	38.1%	84.4%	
No informal caregiver, %	2.1%	2.4%	
Mean informal care hours/week	21.3	8.3	<0.0001
Caregiver distress, %*	26.8%	12.1%	<0.0001
Better off in another living environment, %			
Client or caregiver believes	18.7%	31.1%	<0.0001
Client alone believes	2.2%	2.6%	
Caregiver alone believes	9.4%	15.2%	
Both believe	7.1%	13.3%	
Waiting for long-term care home placement, %	3.0%	8.0%	<0.0001
No environmental issues (accessibility, safety, etc.), %	72.3%	94.9%	<0.0001
Medic alert/electronic security alert, %	14.3%	34.4%	<0.0001
Poor self-rated health, %	22.6%	12.8%	<0.0001
Indicates that he/she feels lonely, %	11.0%	12.4%	0.048
No days out of house/building in a typical week, %	17.0%	25.4%	<0.0001
Exercise therapy in last 7 days, %	15.5%	20.9%	<0.0001
Received help by others (paid or informal) in last 7 days, %		1	
Meal preparation	84.7%	99.3%	<0.0001
Ordinary housework	93.3%	99.2%	<0.0001
Medication management	51.9%	84.6%	<0.0001
Received by a paid service/program in last 7 days, %			
Homemaking (any source)	20.1%	62.1%	<0.0001
Personal support (any source)	57.8%	79.6%	<0.0001
Personal support (home care through CCAC)	55.3%	70.7%	<0.0001
Nurse (any source)	25.2%	32.1%	<0.0001
Nurse (home care through CCAC)	24.4%	13.9%	<0.0001
Daily nurse monitoring	5.2%	22.2%	<0.0001

	PH	RH	p-value PH vs. RH		
Help by CCAC in 30 days after assessment					
Any PS, %	70.5%	85.7%	<0.0001		
Mean hours per week of PS (among those receiving)	5.6	4.9	<0.0001		
Mean number of visits of PS (among those receiving)	21.3	37.7	<0.0001		
Mean length of time per PS visit (among those receiving), minutes	72.1	36.4	<0.0001		
Any nursing, %	33.7%	20.3%	<0.0001		
Any physical therapy, %	26.0%	28.7%	0.0022		
Any occupational therapy, %	34.7%	26.8%	<0.0001		

CCAC = Community Care Access Centres; LTCH = long-term care home; PH = private home; PS = personal support; RH = retirement home. *Caregiver unable to continue, or expresses feelings of distress, anger or depression.

Many of the PH cohort and virtually the entire RH cohort receive regular help with meals and ordinary housework, from paid or unpaid sources. However, a more marked difference is seen for medication management where daily medication administration, normally by a registered practical nurse, may be common practice in RHs.

Formal services in the past seven-day period can be understood from CCAC service/billing records representing CCAC services only and from the RAI-HC assessment that reflects services from all sources. CCAC services do not include homemaking in either setting, and where received, it would be fee-for-service or bundled in the case of RH accommodation. Homemaking is much more commonly received among those in the RH cohort, in part because of its availability and options for bundling, but also related to those in RH not having access and support from a co-residing informal caregiver. Across all sources (CCAC and other), the proportion of persons receiving personal support or nursing is higher in RH than in PH. Of greater interest is the comparison of service patterns received from CCAC alone versus all sources. Among the PH cohort, these proportions are very close for personal support and nursing (55% from CCAC compared to 58% from any source and 24% from CCAC compared to 25% from any source, respectively). This closeness suggests that individuals living in PH rarely receive additional nursing or personal support by a source other than the CCAC. In contrast, there is a larger difference observed in these numbers for RH: personal support 71% to 80%, and nursing 14% to 32%. These differences suggest that more persons in RH, particularly for nursing, are receiving paid services not provided through the CCAC.

Among persons receiving services through the CCAC, RH residents are more likely to receive personal support. Patterns of personal support delivery show RH receiving more visits that are of shorter duration. This finding is consistent with the ability of a single personal support provider to organize care for multiple clients into more frequent but shorter visits in RH, while travel times between PHs makes this less viable. CCAC-provided nursing is less

common in the RH cohort, as is occupational therapy, the latter possibly related to fewer environmental issues. Receipt of physical therapy is slightly more common in RH.

Table 3 shows the observed and expected costs. RH shows significantly lower costs (9%) than expected, driven by significantly lower costs than expected for personal support and nursing.

TABLE 3. Thirty-day service costs

Costs in 30-day period after RAI-Home Care assessment	Private home	Retirement home
All service costs, observed	\$808.59	\$780.72
All service costs, expected§	\$794.01	\$858.53
Observed exceeds expected	\$14.58*	(\$77.81)*
Personal support cost, observed	\$488.45	\$526.28
Personal support cost, expected§	\$479.87	\$572.10
Observed exceeds expected	\$8.58 n.s.	(\$45.82)**
Nursing cost, observed	\$171.60	\$102.55
Nursing cost, expected§	\$165.42	\$135.55
Observed exceeds expected	\$6.18 n.s.	(\$33.00)**

Expected from RUG-III/home care classification, with additional co-resides with an informal caregiver split for each classification. Paired t-tests: n.s. = not significant: * significant < 0.05; ** significant < 0.000 I

Discussion

A retirement home in Ontario may have a different label elsewhere, such as an assisted living facility in the US, which creates challenges for researchers, policy makers and consumers. Even in Canada there is no standard level of governance or regulation of similar facilities. For example, while the *Retirement Homes Act* (2010) and the *Community Care and Assisted Living Act* (2004) set the health, safety and staffing requirements for licensure in Ontario and British Columbia, respectively, similar facilities in Manitoba are neither licensed nor regulated by the government. Although locally adapted models of care and housing will undoubtedly result in distinctive settings and populations, more consistent use of terminology will benefit ease of comparison across research studies and public reports.

This study shows that long-stay home care patients living in RH are a distinct population. Compared to those in PH, RH individuals tend to be older and are more likely to have greater cognitive and physical impairment, have fallen recently, experience incontinence and show aggressive or wandering behaviour. Their support network also differs. Home care patients in RH are much less likely to live with their informal caregiver and thus receive less informal help overall. In contrast, RH individuals have significantly lighter care needs compared to LTCH residents.

Caution is advised in comparing these descriptive findings and inferring their relationship (for example, falls or antipsychotic use) to quality of care provided. To make comparisons, much more sophisticated adjustment for what are clearly different levels of risk would be required.

The area served by the HNHB CCAC has an estimated 114,000 persons aged 75 and

older (Statistics Canada 2015). Of these, our analyses count 9,243 (8.1%) as LTCH residents, 9,750 (8.6%) as long-stay home care patients in PH and 2,503 (2.2%) as long-stay home care patients in RH. A small number of individuals may have been counted in both long-stay home care and LTCH. An estimated 6,100 (CMHC 2015) to 7,200 (RHRA 2015b) individuals live in HNHB RHs, suggesting that long-stay home care reaches ~40% of RH residents. Conversely, RH residents constitute about one in every six long-stay home care patients of the CCAC. The relationship between RH settings and the CCAC is a significant one.

A major finding was the higher number but shorter duration of CCAC personal support visits in RH. This finding may be related to efficiency in the organization and delivery of the care. The congregate nature of RH enables one or more workers to provide services at a single location that possibly explains some of the lower-than-expected service costs in RH. Another contributor may be the provision of some services by the RH operator as part of purchased or bundled services. The drivers and health outcomes that may be linked to this type of service pattern are compelling questions for future study.

This cross-sectional examination cannot show the transitions related to RH and long-stay home care services, for example, the proportions in RH who moved there as existing CCAC patients, those whose transition coincided with needs resulting in CCAC services, or those whose needs increased after some time in RH. It is likely that a change in social supports, for example, becoming widowed, may play a role in the decision to move to RH (Erickson et al. 2006).

Each of the three locations of care captures a range of individuals, something that is obscured by the collective treatment of these cohorts. Some degree of overlap is likely, more so between the PH and RH cohorts. Undoubtedly, there are some in LTCH who could safely reside in PH or RH, and some in PH or RH who stretch the limits of appropriate care and will soon be transitioning to a different setting. This speculation is supported by a third of RH residents and their caregivers who rated the person as better off in another living environment and where a higher proportion are waiting for long-term care placement. Person–environment theory offers a framework for exploring transitions between locations of care (Kahana et al. 2003). Central to the theory is that discrepancy between personal needs or preferences and environmental characteristics (e.g., physical help, safety) is a precursor to environmental dissatisfaction, poor well-being and chronic stress. Where a community-dwelling person is older, has functional and/or medical needs and depends on informal support, the person–environment fit is a useful construct. Decisions to relocate may be constrained by many things not measured here, including patient/family wishes, availability of options and cost.

With rents in Ontario for RH averaging \$3,236 per month (CMHC 2014), the decision to move there may be financially open only for some. Persons with mild-to-moderate dementia are residing in RH, often with low levels of informal support, suggesting that RH may serve to either postpone or avoid admission to LTCH, but only for those economically able to do so. This would be consistent with evidence that lower socioeconomic status is predictive of LTCH entry (Mustard et al. 1999).

The role of long-stay home care in retirement homes, compared with those in private residences, has not been reported before. Measures of clinical characteristics and services attempt to capture the experience of these persons requiring care; future work may extend the picture to consider unmet needs and quality of life.

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