Longwoods Review

Volume 7, Number 1 • 2009 www.longwoods.com

Balancing Institutional and Community-Based Care: Why Some Older Persons Can Age Successfully at Home While Others Require Residential Long-Term Care

A. Paul Williams, David Challis, Raisa Deber, Jillian Watkins, Kerry Kuluski, Janet M. Lum and Stacey Daub

Why can many older persons with relatively high needs age successfully at home, while others with similar needs require residential long-term care (LTC)? How can healthcare investments best be balanced to ensure that older persons have access to the most appropriate, cost-effective care?

In Ontario, as in other jurisdictions nationally and internationally, converging factors have pushed such questions to the top of the health policy agenda. These include increasing healthcare expenditures that potentially erode the sustainability of universal, publicly funded healthcare; an aging population and more older persons living longer with multiple chronic conditions; and changing public expectations about the right of older persons to live as independently as possible, for as long as possible, in their own homes and communities. Added to this is growing international evidence that when appropriately integrated, targeted and managed, home and community care (H & CC) can moderate the demand for more costly hospital and residential care, while mitigating the human costs that a loss of independence can entail (Billings and Leichsenring 2005; Chappell et al. 2004; Hollander and Prince 2008; Leichsenring and Alaszewski 2004; MacAdam 2008; Onder et al. 2007).

In this article, we report the findings from a groundbreaking 2007–2008 study in which we used home care client assessment data to analyze key characteristics and needs of approximately 1,700 individuals waiting for residential LTC in Toronto. While others, including a growing number of children with complex care needs and persons with disabilities, also use H & CC, the majority of those waiting for residential LTC are older persons. Further, the characteristics and needs of those on LTC wait lists are particularly well documented since all have had a full assessment using the Resident Assessment Instrument – Home Care and all have been judged eligible for LTC by a professional case manager. Our aim was to estimate what proportion, if any, of those waiting for residential LTC could be safely and cost-effectively supported at home if given access to appropriate H & CC packages.

In conceptualizing and conducting our analysis, we adapted the "balance of care" (BoC) model pioneered in the United Kingdom by one of our investigators (D.C.) and his colleagues at the Personal Social Services Research Unit, University of Manchester (Challis and Hughes 2002; Clarkson et al. 2005; Hughes and Challis 2004; Tucker et al. 2008). In contrast to conventional projections of the care needs of an aging population that often assume that a greater number of older persons will require a proportionately greater number of residential LTC beds, the BoC emphasizes

that the need for such beds will be determined as well by supply-side factors such as access to appropriate, cost-effective community-based care. Other things being equal, where H & CC is more accessible, the "tipping point" for residential LTC will be higher and older persons will be more likely to age successfully at home. Here we define success not in terms of maintaining full functional capacity, since older persons are likely to experience decline regardless of the appropriateness or quality of the care they receive, but in terms of their ability to adapt to changes that are part of the normal aging process and to maintain high levels of independence, well-being and quality of life (von Faber et al. 2001).

It is important to note that the population of older persons in Ontario, as in other jurisdictions, is not homogeneous and that only a minority is likely to require residential LTC in any case. In the United Kingdom, for example, an estimated 80% of individuals with conditions requiring LTC need only minimal levels of formal support (Department of Health 2005). Conversely, only a minority of older persons have such high needs that residential LTC is the only safe option. Our focus is on those individuals whose needs are sufficiently high that they are at risk of losing independence and requiring residential LTC, but who could still be supported safely and cost-effectively at home if appropriate H & CC was available.

A particular strength of the BoC is that it integrates the real-life insights and experiences of senior leaders and front-line case managers from across the healthcare and social care continuum to guide the research, interpret the data and mobilize the results. It is, in effect, an "in vivo" simulation, drawing upon the best available evidence and the most experienced practitioners, of how care decisions are made at the local level and how they could be made given different service configurations. As such, the BoC aims to establish realistic, evidence-based benchmarks for "the correct mix and provision of institutional and community based services" in any given geographical area (Challis and Hughes 2002; Hughes and Challis 2004), knowing that "cookie cutter" solutions that do not take local realities into account rarely work.

In the sections below, we begin by describing the policy context for the Toronto BoC project. We then detail our methodology, present key findings and discuss implications for policy makers, providers and consumers.

The Ontario Context

Canada's universal, publicly funded health insurance plan (medicare) defines insured services as "medically necessary" care, but only if the care is delivered in hospitals or by physicians. Provincial plans can, but are not required to, extend coverage beyond these boundaries. As a result, there is considerable variation between and within the provinces in public coverage of, and access to, H & CC.

In Ontario, care for the approximately 1.7 million individuals who were 65 years of age or older in 2007 (Ontario Ministry of Finance 2008) spans multiple sectors or "silos" (Baranek et al. 2004), each funded in different ways, with different access points, eligibility requirements and costs. For example, when older persons access home care services such as personal support, nursing, social work and therapy through Ontario's 14 publicly funded, geographically based community care access centres (CCACs) – whose mandate also includes information and referral, care coordination and equipment and supplies – services are fully insured and provided without cost. However, while individuals have the right to an assessment, there is no universal entitlement to services. CCACs purchase services on a competitive basis from for-profit and not-for-profit private providers within capped budgets set by the province, effectively constraining overall service volume. They allocate services to individuals within provincial service maxima that effectively set a ceiling (but no floor) on services individuals can receive, regardless of assessed need. Until June 2008, when the province lifted service maxima for individuals on LTC wait lists, CCAC clients could receive no more than 80 hours of publicly paid personal support in the first 30 days of care, and no more than 60 hours in any subsequent 30-day period (Government of Ontario 2008). Combined with the effects of fewer hospital beds and a declining in-patient length of stay, such constraints have meant that CCAC resources have increasingly shifted toward post-acute patients and away from individuals (including many older persons) with chronic needs (Ontario Association of Community Care Access Centres 2007).

For their part, community support services such as transportation, Meals-on-Wheels, respite care and caregiver support are accessed through scores of mostly local, not-for-profit, volunteer-driven agencies, financed through a mix of provincial, municipal and charitable sources. These agencies charge user fees on a sliding scale geared to income, even for services such as homemaking that, if accessed through a CCAC, would be free of charge (Baranek et al. 2004). While many such agencies provide a range of services in settings including adult day centres and supportive housing, others focus on a single service (e.g., Meals-on-Wheels) or a particular needs group (e.g., older persons with dementia). Access varies considerably by geographical region, with relatively few services available in rural and remote areas of the province. CCAC case managers can refer to community support services, and vice versa, but there is no formal mechanism for coordinating, managing or monitoring care across different organizations.

In Ontario, residential LTC is provided by a mix of for-profit nursing homes and not-for-profit municipal and charitable homes for the aged. Average costs of about $130

per day are shared between the provincial government, which pays about $80 per day, and individuals, who pay about $50, subject to ability to pay. Placement to residential LTC is managed by the CCACs, which conduct client assessments (using the Resident Assessment Instrument – Home Care) and maintain wait lists. Individuals experiencing a crisis have priority, with leeway given for spousal reunification and those requiring ethnic-, culture-, or religion-specific care.

Additionally, older persons who can afford it can purchase services. In contrast to the medicare "mainstream" of hospital and doctor care, where there is an effective prohibition on the private purchase of insured services, there is no such prohibition in H & CC, even for services that would be considered "medically necessary" in a hospital or provided free of charge by a CCAC (e.g., nursing) if available. Included is a growing number of unregulated private "retirement homes" that charge fees both for accommodation and care.

Thus, care for older persons in Ontario has been characterized by a patchwork of programs and services, with multiple points of access and different institutional "rules." Although there has been relatively little evaluation of the outcomes in Ontario, it is widely suspected that this "non-system" poses significant barriers to access to appropriate care, particularly for older persons with physical and cognitive deficits. In addition to the potentially negative consequences for individuals and their caregivers of failing to access appropriate care, there may also be substantial system-level costs as at-risk older persons may move toward residential LTC earlier than needed and, along the way, access more readily available, even if more costly and sometimes inappropriate, healthcare in hospitals (Armstrong and Armstrong 2003).

In response, the Ontario government introduced two interlinked policy initiatives. The first, in 2006, established 14 Local Health Integration Networks (LHINs), regional entities responsible for planning, funding and monitoring a range of providers including hospitals, CCACs, community support agencies, community-based services for mental health and addictions and LTC facilities (Ministry of Health and Long-Term Care [MOHLTC] 2008). According to MOHLTC (2008), "LHINs are a critical part of the evolution of healthcare in Ontario from a collection of services to a true system that is patient-focused, results-driven, integrated, and sustainable."

The second initiative, unveiled in 2007, is a four-year, $1.1 billion "aging at home" strategy. Effectively reversing the policy direction of a previous provincial government that, in the early 2000s, built 20,000 additional LTC beds (Coyte et al. 2002) while capping CCAC budgets and constraining increases to community support agency budgets at or below the rate of inflation, this strategy promises instead to expand community living options "to enable people to continue leading healthy and independent lives in their own homes." Included are CCAC services as well as community supports such as meals, transportation, shopping, friendly visiting, snow shovelling, adult day programs and caregiver relief/respite (MOHLTC 2007a, 2007b). This strategy is now being implemented by the LHINs, many of which have explicitly linked enhanced H & CC to individual goals such as improved quality of life for older persons, as well as system goals such as shorter wait lists for residential LTC, less inappropriate hospital emergency department use and fewer alternative level of care (ALC) beds (acute care hospital beds occupied by individuals who no longer require acute care but who cannot be discharged because of a lack of care options) (Toronto Central Local Health Integration Network 2007).

However, the question remains, to what extent does H & CC offer a viable solution to individual and system-level problems? More specifically, what proportion of individuals now waiting for LTC could be safely and cost-effectively supported at home if given access to integrated H & CC packages?

Methods

The Toronto BoC project was conducted between September 2007 and March 2008 by our multidisciplinary, multi-university research team, in partnership with the Toronto Central CCAC. It was assisted by a Steering Committee composed of 14 senior leaders (i.e., executive directors, chief executive officers and general managers) of major organizations providing residential LTC, acute care, home care, community supports, supportive housing, social housing and community health, and by an Expert Panel of 15 experienced front-line case managers also spanning these sectors.

We began by stratifying the 1,681 individuals on the Toronto Central LTC wait list (as of October 2007) into 36 relatively homogeneous subgroups based on four key variables:

1. Cognitive performance (short-term memory, cognitive skills for decision-making, expressive communication, eating self-performance) – intact, not intact
2. Level of difficulty with activities of daily living (ADLs, including eating, personal hygiene, locomotion, toilet use) – no difficulty, some difficulty, great difficulty
3. Level of difficulty with instrumental activities of daily living (IADLs, such as meal preparation, housekeeping, phone use and medication management) – no difficulty, some difficulty, great difficulty
4. The presence of an informal or family caregiver in the home – yes, no

We also calculated average Method of Assigning Priority Level (MAPLe) scores for individuals in each subgroup. These scores, ranging from 1 (low) to 5 (very high), classify

individuals according to their level of need and risk of adverse outcomes (Hirdes et al. 2008). With some minor variation, individuals in subgroups at higher levels of need in our stratification also had higher MAPLe scores.

We then wrote detailed "vignettes" for typical individuals in each of 14 subgroups containing more than 2.5% of the population; in Toronto, these 14 subgroups accounted for 88% of those on the LTC wait list. Vignettes were written to simulate the notes that case managers use when making actual care decisions. Subsequently, we presented these vignettes to our Expert Panel. Case managers were asked to indicate what H & CC services, regardless of cost, would be needed to maintain typical individuals in each vignette safely and appropriately at home. The Expert Panel met for three full working days and constructed H & CC packages for typical individuals in all 14 vignettes; consensus was achieved in every case.

We then used MOHLTC costing data to estimate the direct ministry cost of each H & CC care package for 13 weeks, a typical planning period. We also worked with three leading supportive housing providers (supportive housing combines affordable housing with case-managed H & CC including access to personal support workers on site) to estimate the costs of comparable supportive housing packages.

Finally, we estimated potential "diversion rates" by comparing the direct ministry cost of H & CC and supportive housing packages to the direct ministry cost of a residential LTC bed. To ensure "apples to apples" comparisons, user fees and copayments were excluded across the board (e.g., for H & CC, supportive housing and residential LTC). At the time of this study, the ministry paid, on average, $79.77 per day for an LTC bed. Thus, for subgroups where H & CC or supportive housing packages were of equal or lower cost to the ministry than an LTC bed ($7,259.07 for a 13-week period), we concluded that individuals in these subgroups could be safely and cost-effectively "diverted" to home and community. We then calculated overall diversion rates by summing the total number of individuals in "divertible" subgroups and dividing by the total number of individuals in the 14 subgroups for which we wrote vignettes and constructed care packages.

Findings

Table 1 presents data for all 1,681 individuals on the Toronto Central CCAC LTC wait list, categorized into 36 subgroups. The MAPLe scores indicate that about a fifth (20%) of those on the wait list had low to mild needs, while just under half (47%) had high to very high needs. In more detail:

- Almost half (48%) were cognitively intact: they had good short-term memory, could make decisions and were able to communicate with others.
- Four in 10 (43%) had little or no difficulty performing the "heavier care" ADLs such as eating, personal hygiene, toilet use and locomotion in the home. An additional 28% had some difficulty, requiring limited assistance (e.g., they could toilet themselves but required guided manoeuvring in the bathroom), while less than a third (29%) experienced great difficulty and could not perform such tasks by themselves.
- In contrast, only a small minority (3%) could perform the "lighter care" IADLs such as meal preparation, housekeeping, telephone use and medication management by themselves. About a third (32%) required some help, while two thirds (65%) needed others to perform these tasks for them.
- Just under a third of wait-listed individuals (35%) had a caregiver residing in their own home, although they might have been receiving informal support from friends and family members living elsewhere.

The "Vignette Written" column in Table 1 identifies the 14 subgroups that met our 2.5% threshold and for which we constructed vignettes and care packages. The vignette for Copper is presented as an example in Figure 1. It indicates that individuals in this subgroup were cognitively intact, had a caregiver living with them and required little or no assistance with most ADLs or IADLs. However, these individuals typically required some assistance with meal preparation and were completely dependent on others for housekeeping and transportation.

In Table 2, we show the H & CC package constructed for Copper by our Expert Panel of front-line case managers, along with estimated costs for providing care in the individual's residence (e.g., a conventional home care model) and in supportive housing (cost estimates from our three supportive housing providers are given). This package addresses Copper's key needs (as well as those of Copper's caregiver) through services such as in-home assessment by an occupational therapist, meals (both Meals-on-Wheels and congregate dining), homemaking (home help/homemaking services through community support agencies) and personal support provided through the CCAC (which may include help with bathing), home maintenance, transportation and caregiver support. Care packages for higher-needs subgroups (not shown) included more frequent services, as well as a wider range of services such as Alzheimer's counselling and caregiver support, adult day programs, day treatment programs, LTC respite short stays, caregiver respite, nursing and physiotherapy and emergency response systems.

Note that the Expert Panel did not construct care packages for two of the highest-needs subgroups (D. Daniels and J.

Table 1. Characteristics of all individuals on Toronto LTC wait list

Subgroup Name	Cognition	Difficulty with ADLs	Difficulty with IADLs	Live with Caregiver?	Average MAPLe Score*	Vignette Written	Frequency (%)
Appleton	Intact	No	No	Yes	1.8	No	5 (0.3)
Bruni	Intact	No	No	No	1.1	No	28 (1.7)
Copper	Intact	No	Some	Yes	1.9	Yes	75 (4.5)
Davis	Intact	No	Some	No	2.1	Yes	281 (16.7)
Eggerton	Intact	No	Great	Yes	2.9	No	36 (2.1)
Fanshaw	Intact	No	Great	No	3.1	Yes	84 (5.0)
Grimsby	Intact	Some	No	Yes	NA	No	0 (0)
Hamilton	Intact	Some	No	No	NA	No	3 (0.2)
Islington	Intact	Some	Some	Yes	3.4	No	18 (1.1)
Jones	Intact	Some	Some	No	3.2	Yes	43 (2.6)
Kringle	Intact	Some	Great	Yes	3.3	No	34 (2.0)
Lambert	Intact	Some	Great	No	3.4	Yes	63 (3.7)
Moore	Intact	Great	No	Yes	NA	No	0 (0)
Nickerson	Intact	Great	No	No	NA	No	0 (0)
Opus	Intact	Great	Some	Yes	3.4	No	8 (0.5)
Pringle	Intact	Great	Some	No	3.5	No	14 (0.8)
Quinn	Intact	Great	Great	Yes	3.4	Yes	44 (2.6)
Rogers	Intact	Great	Great	No	3.4	Yes	77 (4.6)
Smith	Not intact	No	No	Yes	4.4	No	5 (0.3)
Thompson	Not intact	No	No	No	NA	No	1 (0.1)
Upperton	Not intact	No	Some	Yes	4.2	No	17 (1)
Vega	Not intact	No	Some	No	4.2	Yes	56 (3.3)
Wong	Not intact	No	Great	Yes	4.4	Yes	52 (3.1)
Xavier	Not intact	No	Great	No	4.5	Yes	83 (4.9)
Yeung	Not intact	Some	No	Yes	NA	No	0 (0)
Zeleny	Not intact	Some	No	No	NA	No	1 (0.1)
A. Armour	Not intact	Some	Some	Yes	4.0	No	7 (0.4)
B. Biloski	Not intact	Some	Some	No	4.1	No	16 (0.9)
C. Cameron	Not intact	Some	Great	Yes	4.2	Yes	107 (6.4)

Table 1. Continued

D. Daniels	Not intact	Some	Great	No	4.1	Yes	176 (10.5)
E. Edwards	Not intact	Great	No	Yes	NA	No	0 (0)
F. Fish	Not intact	Great	No	No	NA	No	1 (0.1)
G. Gallo	Not intact	Great	Some	Yes	NA	No	1 (0.1)
H. Hogan	Not intact	Great	Some	No	3.9	No	9 (0.5)
I. Innis	Not intact	Great	Great	Yes	4.4	Yes	175 (10.4)
J. Johns	Not intact	Great	Great	No	4.3	Yes	161 (9.5)
Total							1,681 (100.0)

ADLs = activities of daily living; IADLs = instrumental activities of daily living; LTC = long-term care; MAPLe = Method of Assigning Priority Level.
*1 = low; 2 = mild; 3 = moderate; 4 = high; 5 = very high; NA = average MAPLe scores not calculated for subgroups with <5 individuals.

Johns). Because individuals in these subgroups were not cognitively intact, could not perform ADL and IADL tasks without help and did not have a caregiver living with them, case managers concluded that H & CC would not be a safe option at any cost. However, the Expert Panel did construct a care package for I. Innis; although they had similarly high needs, individuals in this subgroup had a caregiver at home.

Table 2 also shows, for each service, the unit of service (e.g., a single meal delivered to the individual's home), the average ministry cost per unit of service in the Toronto area (e.g., $11.00 per meal), the number of units to be provided over 13 weeks (e.g., three meals per week or 39 meals total), the ministry cost (e.g., $429.00 for 39 meals) and the total ministry cost for all H & CC services in the package ($2,682.65) in comparison to the direct ministry cost for an LTC bed ($7,259.07).

As noted, we also used data provided by senior managers in three supportive housing provider organizations to estimate the costs of comparable care packages in that specific setting. Reflecting the fact that supportive housing providers vary considerably in terms of the populations they serve and the ways in which they organize and manage services, these estimates varied considerably. For example, while one provider included the costs of meals within its base budget, others added costs since meals were purchased from other sources. As a result, supportive housing cost estimates for Copper's service package range from $1,795.30 to $3,498.43, with similar variations across all 14 subgroups. Nevertheless, with some exceptions, even the highest supportive housing cost estimates were comparable to or lower than those for corresponding H & CC packages.

To summarize our overall diversion rates, if H & CC were provided in the individual's residence, 37% of those in the 14 subgroups for which we constructed care packages could be supported safely and cost-effectively. If care were provided in supportive housing, potential diversion rates would range from 46 to 53%. Conversely, for 20% with very high needs, residential LTC was considered the only safe option.

We note one exception to our "cost neutral" rule for estimating diversion rates. In Toronto, our Expert Panel concluded that higher costs for H & CC would be justified if spouses and families were kept together, although they did not specify a threshold. Consequently, our H & CC diversion rate includes one subgroup (Wong, containing 52 individuals) for which the total cost of H & CC, including caregiver support and respite, was slightly higher (by about 4%) than the cost of residential LTC.

Discussion

The Toronto BoC project presents valuable insights into factors driving LTC wait lists and the extent to which system factors, as well as individual needs, impact on the potential for "aging at home." A first key finding is that between a third and a half of individuals assessed as having needs sufficiently high to qualify for an LTC placement in Toronto could be supported safely and cost-effectively in their family residences or in supportive housing. In fact, the data show that about a fifth of those slated for residential LTC have mild to moderate levels of need. Conversely, residential LTC appears to be the sole option for an additional fifth due to a combination of high needs and the absence of a caregiver in the home. Located between these two groups is a sizable number of individuals who might be safely and appropriately supported in home and community, although the current costs are estimated to

Figure 1. Vignette for Copper

ADLs = activities of daily living; IADLs = instrumental activities of daily living.
Copper is cognitively intact and functionally independent in all ADLs with the exception of bathing (limited assistance is required). Copper has no difficulty using the phone and managing medications, some difficulty preparing meals and great difficulty with housekeeping and transportation. Copper has a live-in caregiver. This live-in caregiver provides advice/emotional support and assistance with IADLs.

1. Cognition – Intact (memory recall is good, makes consistent/reasonable/safe decisions and can express ideas without difficulty)
2. ADL – No help required with most ADLs (locomotion inside the home, eating, toilet use and personal hygiene); client requires limited assistance when bathing (still highly involved in activity but requires some assistance/guided manoeuvring)
3. IADL – No difficulty using the phone and managing medications, but some difficulty with preparing meals (needs some help, is very slow/fatigues); great difficulty with housekeeping and transportation (little or no involvement in the activity is possible)
4. Caregiver (in home?) – Yes, provides advice/emotional support and assistance with IADLs

be higher than the costs of residential LTC.

We note, in this connection, that our comparative cost base, which includes only the direct ministry per diem contribution to a residential LTC bed, is relatively conservative. For example, these comparisons do not take into consideration the capital costs of building LTC capacity. On the other side of the equation, H & CC packages do include the costs of caring for caregivers, which, strictly speaking, could be excluded from our estimates. Further, by removing user fees from both sides of the equation, our estimates assume that they equal out – that fees for community support services (CCACs do not charge fees) approximate the resident copayment of $50 per in LTC; however, this is rarely the case, particularly at lower levels of need. The results of a sensitivity analysis conducted by our team showed that when user fees/copayments were included, the potential diversion rates rose. H & CC packages also tend to be relatively "rich," that is, service intensive, a consequence of

Table 2. Cost estimates for Copper (13 weeks)

Service	Ministry Code	Unit of Service	Cost ($) to Ministry per Unit of Service	Units of Service for 13 Weeks	Total Cost ($) to Ministry
Meals-on-Wheels	02A	Meal	11.00	39	429.00
Congregate dining	03A	Attendance	12.43	3.25	40.40
Transportation	04A	1-way trip	17.26	26	448.76
Home maintenance	05C	1 job	15.11	3.25	49.11
Home help/homemaking	09B	Hour	28.63	13	372.19
Caregiver support group	08A	Hour	72.30	6.5	469.95
In-home support PSW (CCAC)	10A	Hour	26.29	26	683.54
Occupational therapy	17A	Visit	94.85	2	189.70
Community care package total cost					2,682.65
SH cost estimate (provider 1)					2,835.95
SH cost estimate (provider 2)					1,795.30
SH cost estimate (provider 3)					3,498.43
Residential LTC at $79.77 per day					7,259.07

CCAC = community care access centre; LTC = long-term care; PSW = personal support worker; SH = supportive housing.

case managers having to "bargain up" to achieve agreement. Therefore, our findings are more likely to underestimate than overestimate potential diversion rates.

Second, the Toronto BoC findings highlight the crucial role of the informal caregiver and the need to support this role. Steering Committee and Expert Panel members emphasized that while policy makers often think about H & CC in the same way they think about acute care – with patients apart from their social context and services focused on the individual, if not the individual's body parts (e.g., heart, hips and knees, eyes) – the true unit of care in H & CC is the individual and the caregiver(s), with support for the latter being inseparable from care for the former. Although there was considerable discussion and some disagreement about the level and type of support that should be given to caregivers, who are themselves increasingly likely to be frail older persons, there was strong consensus that they were often the "glue" that held H & CC packages together, particularly for individuals experiencing cognitive deficits. In addition to providing direct instrumental and emotional support, caregivers frequently monitored needs, coordinated multiple services and providers in the home and kept older persons socially connected.

Third, while it is often assumed that the LTC placements are "triggered" by cognitive decline or difficulties performing "heavy care" ADLs, "lighter care" IADLs, such as transportation, nutrition and housekeeping, emerged as a key determinant of the care pathway. This finding was unanimously confirmed by Steering Committee and Expert Panel members who noted that "it was no surprise" and that they had "known it all along." For example, while transportation is not considered medically necessary, an inability on the part of older persons to get out of their homes can jeopardize health and independence if the result is social isolation and depression or an inability to perform essential daily tasks such as banking, grocery shopping and attending medical appointments (Hollander and Prince 2002). Likewise, a failure to manage medications, particularly for older persons with multiple health and cognitive problems, can quickly convert into medical emergencies, hospital admissions and residential LTC placements.

This finding is consistent with a growing body of evidence nationally and internationally that suggests that in integrated care models where the most appropriate services can be selected from across the health and social care continuum, there is a consistent tendency toward "downward substitution," that is, the use of lighter care IADL supports instead of healthcare. A classic example is the groundbreaking On Lok/PACE (Program of All Inclusive Care for the Elderly) project in the United States, which showed that when multidisciplinary teams could use predetermined budgets to access the most appropriate services needed by frail older persons eligible for residential LTC, there was a progressive shift in resource use from healthcare (e.g., hospitals, radiography, laboratory tests, medications, medical specialists) to community supports (e.g. transportation, adult day programs) (Bodenheimer 1999; Zawadski 1984). Similarly, a particularly well-documented Canadian example is Quebec's SIPA (Système de services intégrés pour personnes âgées en perte d'autonomie) experiment, which showed that when case managers were able to access services for frail older persons on the basis of need, the use of H & CC rose while the use of hospital emergency departments, acute care and LTC declined (Johri et al. 2003).

However, Ontario's current system was seen to offer few mechanisms for accessing and coordinating services across a continuum. As noted, CCAC case managers can directly access a relatively limited range of mostly professional home care services when services are available; even then, they must work within provincial service maxima. In addition, they can provide information and counselling and refer individuals to community service agencies that provide key IADL supports such as transportation and home maintenance, but they cannot directly coordinate and monitor such services or fill gaps if services do not appear or are inappropriate. Similarly, community service agency case managers control only those services provided directly by their agencies, while the aegis of hospital discharge planners extends only to the door of the hospital. Faced by heavy caseloads and increasingly complex needs requiring services from multiple providers, including those providing culturally and linguistically specific services (Bigby 2003; Brotman 2003; Lassiter 1995; Yeo et al. 2004), the "default" option, even for older persons at relatively low levels of need, is residential LTC. This point is well illustrated in the case of Copper, where individuals dependent on others for transportation and housekeeping were slated for LTC. Expert Panel members emphasized that when residential LTC is the only viable tool in the case manager's tool kit, it will be used.

In contrast, as experience in UK BoC initiatives suggests, where case managers have access to a more flexible use of a broader range of community-based resources, downward substitutions can occur, with consequent reductions in LTC use (Challis and Davies 1986; Challis et al. 1995, 2002a, 2002b). Closer to home, case managers associated with the federal Veterans Independence Program (VIP) use negotiated budgets to purchase the most appropriate H & CC services for older persons assessed as LTC eligible to allow them to age at home; the VIP has had considerable success in substituting community supports such as grounds maintenance and housekeeping for residential LTC (Pedlar and Hollander 2008, October).

Fourth, line-by-line approaches to H & CC have inherent challenges. Case managers observed that coordination problems increase and costs often rise when multiple providers, often from different agencies, have to be scheduled, managed and transported to the individual's residence, and when services have to be provided and accounted for using standard service units such as an hour of care, which reduces the provider's flexibility to increase or decrease the length of a visit as needed.

In this connection, supportive housing emerged in the Toronto BoC project as a preferred alternative on the grounds that it provides a more flexible framework for integrating care "from the ground up," around the needs of the individual. This is consistent with findings from our previous research that suggest not only that many high-needs older persons who would otherwise require residential LTC live relatively independently in supportive housing, but that they are less likely to use emergency medical services and hospital emergency rooms since assistance is close at hand in supportive housing (Lum et al. 2005, 2006, 2007). Of course, such benefits may also be achieved through other models. For example, Vancouver Coastal Health, a regional health authority in British Columbia, is now experimenting with forms of "cluster care" that, instead of organizing care separately for each individual living in a given building or geographically proximate group of buildings, aims to manage care for the cluster as a whole, thus achieving many of the efficiencies attributed to supportive housing but without the need for additional housing stock (Kelly 2007, October).

We emphasize, in this connection, that we do not see the diversion rates estimated in the Toronto BoC project as being fixed – they are clearly sensitive to a range of factors including individual and family preferences that we have not been able to take into account in this project. There is also the issue, raised by both Steering Committee and Expert Panel members, of what exactly wait lists mean in the local context. In a context of scarcity or inappropriateness of resources, wait lists can be a mechanism by which case managers can demonstrate, particularly to concerned family members, that "something is being done." Alternatively, they may be seen as an insurance policy for when things "get worse" and older persons experiencing decline require a higher level of care. While Ontario does not yet have a data system in place to conduct a similar analysis of actual LTC admissions (as compared with LTC wait lists), such an analysis could go a long way toward differentiating between potential (e.g., the wait list) and actual demands (e.g., a cohort of admissions). Indeed, it is likely that part of the explanation for the higher diversion rates observed in this project, as compared with those in the UK BoC, is due to the fact that the UK projects focused on older persons already admitted to residential facilities. Nevertheless, the magnitude of the diversion rates observed in Toronto suggests considerable potential to support older persons in their own homes and communities.

Finally, we emphasize that both the challenges and considerable opportunities highlighted by the Toronto BoC project are systemic and cross-sectoral. Indeed, the BoC emphasizes that shifts in one sector (e.g., H & CC) are likely to impact on others (e.g., residential LTC) and that planners and policy makers need to consider these connections as they contemplate resource investments into the future. Thus, our findings, while pointing toward a proportionately greater investment in H & CC, also caution against policies that would precipitously "de-institutionalize" large numbers of older persons, fail to properly fund or regulate existing LTC beds or attempt to use H & CC as a convenient means of solving problems elsewhere in the healthcare system (e.g., inappropriate emergency department visits, high numbers of ALC beds), unless and until sufficient capacity is present in home and community to deal with the "ripple effects." Indeed, such moves could have perverse outcomes as older persons, and other vulnerable groups, lacking access to appropriate H & CC would seek care in hospitals and doctors' offices, or be directed toward residential LTC, thus pulling on an already stretched healthcare system and diminishing the prospects for successfully aging at home.

Acknowledgements

Support for this research came from the Canadian Institutes of Health Research Team in Community Care and Health Human Resources, Department of Health Policy, Management and Evaluation at the University of Toronto (grant no. 79849) and from the Canadian Research Network for Care in the Community (www.CRNCC.ca), funded by the Social Sciences and Humanities Research Council of Canada (grant no. 410652352) and Ryerson University.

We acknowledge the invaluable contributions of the Toronto Central Community CCAC and all members of the project Steering Committee and Expert Panel.

References

Armstrong, P. and H. Armstrong. 2003. *Wasting Away: The Undermining of Canadian Healthcare* (2nd ed.). Toronto, ON: Oxford University Press.

Baranek, P., R. Deber and A. Williams. 2004. *Almost Home: Reforming Home and Community Care in Ontario.* Toronto, ON: Toronto University Press.

Bigby, J., ed. 2003. *Cross-Cultural Medicine.* Philadelphia: American College of Physicians.

Billings, J. and K. Leichsenring. 2005. *Integrating Health and Social Services for Older Persons: Evidence from Nine European Countries.* Aldershot, England: Ashgate.

Bodenheimer, T. 1999. "Long-Term Care for Frail Elderly People: The On Lok Model." *New England Journal of Medicine* 341(17): 1324.

Brotman, S. 2003. "The Limits of Multiculturalism in Elder Care Services." *Journal of Aging Studies* 17(2): 209–29.

Challis, D. and B. Davies. 1986. *Case Management in Community Care*. Aldershot, England: Ashgate.

Challis, D., J. Chesterman, R. Luckett, K. Stewart and R. Chessum. 2002a. *Case Management in Social and Primary Health Care: The Gateshead Community Care Scheme.* Aldershot, England: Ashgate.

Challis, D. and J. Hughes. 2002. "Frail Old People at the Margins of Care: Some Recent Research Findings." *British Journal of Psychiatry* 180(2): 126–30.

Challis, D., R. Darton, L. Johnson, M. Stone and K. Traske. 1995. *Care Management and Health Care for Older People: The Darlington Community Care Project.* Aldershot, England: Ashgate.

Challis, D., R. von Abendorff, P. Brown, J. Chesterman and J. Hughes. 2002b. "Care Management, Dementia Care and Specialist Mental Health Services: An Evaluation." *International Journal of Geriatric Psychiatry* 17(4): 315–25.

Chappell, N., B. Havens, D. Honorary, M. Hollander, J. Miller and C. McWilliam. 2004. "Comparative Costs of Home Care and Residential Care. *The Gerontologist* 44(3): 389–400.

Clarkson, P., J. Hughes and D. Challis. 2005. "The Potential Impact of Changes in Public Funding for Residential and Nursing-Home Care in the United Kingdom: The Residential Allowance." *Aging and Society* 25(2): 159–80.

Coyte, P., A. Laporte, P. Baranek and W. Croson. 2002. *Forecasting Facility and In-Home Long-Term Care for the Elderly in Ontario: The Impact of Improving Health and Changing Preferences.* Toronto, ON: University of Toronto.

Department of Health (United Kingdom). 2005. *Supporting People with Long Term Conditions: An NHS and Social Care Model to Support Local Innovation and Integration.* Quarry Hill, Leeds: Author.

Government of Ontario. 2008. "Ontario Regulation 164/08 Made under Long-Term Care Act, 1994." *Ontario Gazette* 141(24): 21.

Hirdes, J., J. Poss and N. Curtin-Telegdi. 2008. "Method for Assigning Priority Levels (MAPLe): A New Decision-Support System for Allocating Home Care Resources." *BMC Medicine* 6(9).

Hollander, M. and M. Prince. 2002. *Analysis of Interfaces along the Continuum of Care. Final Report: "The Third Way": A Framework for Organizing Health Related Services for Individuals with Ongoing Care Needs and Their Families.* Victoria, BC: Hollander Analytical Services Ltd.

Hollander, M. and M. Prince. 2008. "Organizing Health Care Delivery Systems for Persons with Ongoing Care Needs and Their Families: A Best Practices Framework." *Healthcare Quarterly* 11(1): 44–54.

Hughes, J. and D. Challis, D. 2004. "Frail Older People – Margins of Care." *Reviews of Clinical Gerontology* 14(2): 115–64.

Johri, M., F. Beland and H. Bergman. 2003. "International Experiments in Integrated Care for the Elderly: A Synthesis of the Evidence." *International Journal of Geriatric Psychiatry* 18: 222–35.

Kelly, J. 2007, October. *Supportive Housing.* Paper presented at the Supportive Housing: The Winning Formula for Supporting People and Sustaining the Health Care System, Sheraton Parkway North Hotel, Richmond Hill, ON.

Lassiter, S. 1995. *Multicultural Clients: A Professional Handbook for Health Care Providers and Social Workers.* Westport, CT: Greenwood Press.

Leichsenring, K. and A. Alaszewski. 2004. *Providing Integrated Health and Social Care for Older Persons: A European Overview of Issues at Stake.* Aldershot, England: Ashgate.

Lum, J., V. Leung, A. Ying and P. Williams. 2006. *In Focus: Supportive Housing.* Toronto, ON: Canadian Research Network for Care in the Community. Retrieved June 19, 2008. <http://www.crncc.ca/knowledge/factsheets/download/InFocus-SupportiveHousingOct4intemplate.pdf>.

Lum, J., J. Sladek and A. Ying. 2007. *In Focus: Supportive Housing from the Ground Up: Frequently Asked Questions.* Toronto, ON: Canadian Research Network for Care in the Community. Retrieved June 19, 2008. <http://www.crncc.ca/knowledge/factsheets/download/InFocus-SupportiveHousing-FromtheGroundUp-FrequentlyAskedQuestions.pdf>.

Lum, J., S. Ruff and A. Williams. 2005. *When Home Is Community: Community Support Services and the Well-Being of Seniors in Supportive and Social Housing.* Toronto, ON: Canadian Research Network for Care in the Community. Retrieved July 2, 2006. <http://www.crncc.ca/download/FinalReportWhenHomeisCommunity.pdf>.

MacAdam, M. 2008. *Frameworks of Integrated Care for the Elderly: A Systematic Review.* Ottawa, ON: Canadian Policy Research Networks.

Ministry of Health and Long-Term Care. 2007a. *McGuinty Government Transforming Community Living to Help Seniors Live Independently at Home.* Toronto, ON: Author. Retrieved August 2, 2008. <http://www.torontocentrallhin.on.ca/uploadedFiles/Home_Page/Integrated_Health_Service_Plan/agingathome_nr_18_20070728.pdf>.

Ministry of Health and Long-Term Care. 2007b. *Ontario's Aging at Home Strategy.* Toronto, ON: Author. Retrieved April 8, 2008. <http://www.health.gov.on.ca/english/public/program/ltc/33_ontario_strategy.html>.

Ministry of Health and Long-Term Care. 2008. *Local Health System Integration Act, 2006.* Toronto, ON: Author. Retrieved July 27, 2008. <http://72.14.205.104/search?q=cache:nCl5XSJigT4J:www.health.gov.on.ca/english/public/legislation/lhins/hu_lhins.html+LHINs+are+a+critical+part+of+the+evolution+of+healthcare+in+Ontario+from+a+collection+of+services+to+a+true+system+that+is+patient-focused,+results-driven,+integrated,+and+sustainableandhl=enandct=clnkandcd=1andgl=ca>.

Onder, G., R. Liperoti, M. Soldato, I. Carpenter, K. Steel, R. Bernabei and F. Landi. 2007. "Case Management and the Risk of Nursing Home Admission for Older Adults in Home Care: Results of the AgeD in HOme Care Study." *Journal of the American Geriatrics Society* 55(3): 439–44.

Ontario Association of Community Care Access Centres. 2007. *Building Bridges to Better Health: Ontario Association of Community Care Access Centres Submission to the Standing Committee on Finance and Economic Affairs.* Toronto, ON: Author. Retrieved March 11, 2007. <http://www.oaccac.on.ca/media/Budget_Submission_07.doc>.

Ontario Ministry of Finance. 2008. Ontario Population Projections Update, 2006–2031: Ontario and Its 49 Census Divisions. Toronto, ON: Author. Retrieved August 10, 2008. <http://www.fin.gov.on.ca/english/economy/demographics/projections/demog08.pdf>.

Pedlar, D. and M. Hollander. 2008, October. *The Weight of Evidence: Results from the Continuing Care Research Study.* Paper presented at the Look Globally, Act Locally: Integrating Care in the Community for Vulnerable Populations, Sheraton Parkway North Hotel, Richmond Hill, ON.

Toronto Central Local Health Integration Network. 2007. *Aging at Home Strategy: Directional Plan.* Toronto, ON: Author.

Tucker, S., J. Hughes, A. Burns and D. Challis. 2008. "The Balance of Care: Reconfiguring Services for Older People with Mental Health Problems." *Aging and Mental Health* 12(1): 81–91.

von Faber, M., A. Bootsma-van der Wiel, E. van Exel, J. Gussekloo, A. Lagaay, E. van Dongen, E., D.L. Knook, S. van der Geest and R.G. Westendorp. 2001. "Successful Aging in the Oldest Old: Who Can Be

Characterized as Successfully Aged?" *Archives of Internal Medicine* 161: 2694–700.

Yeo, G., K. Ashbridge, K. Jedrziewski, B. Choplick and J. Johnson. 2004. *SHARE: Unique Role of Community Based Organizations in Health Service Delivery to Older Ethnic and Cultural Minorities.* Philadelphia: Institute of Aging, University of Pennsylvania, GlaxoSmithKline.

Zawadski, R. 1984. *Community-Based Systems of Long-Term Care.* New York: Haworth Press.

About the Authors

A. Paul Williams, PhD., is Professor and Co-Director of the Canadian Institutes for Health Research Team in Community Care and Health Human Resources, Department of Health Policy, Management and Evaluation, University of Toronto, Toronto, Ontario. He can be contacted at 416-978-8327, by fax at 416-978-7350 or by e-mail at paul.williams@utoronto.ca.

David Challis, PhD., is Professor of Community Care Research and Director of the Personal Social Services Research Unit, University of Manchester, Manchester, England. You can reach him at 0161-275-5250, by fax at 0161-275-3790 or by e-mail at d.j.challis@manchester.ac.uk.

Raisa Deber, PhD., is Professor and Co-Director of the Canadian Institutes for Health Research Team in Community Care and Health Human Resources, Department of Health Policy, Management and Evaluation at the University of Toronto. She can be reached at 416-978-8366, by fax at 416-978-7350 or by e-mail at raisa.deber@utoronto.ca.

Jillian Watkins is a doctoral student in the Department of Health Policy, Management and Evaluation at the University of Toronto. She can be reached at 416-978-8366, by fax at 416-978-7350 or by e-mail at jillian.watkins@utoronto.ca.

Kerry Kuluski is a doctoral student in the Department of Health Policy, Management and Evaluation at the University of Toronto and can be contacted at 416-978-8366, by fax at 416-978-7350 or by e-mail at kerry.kuluski@utoronto.ca.

Janet M. Lum, PhD., is Associate Professor and Co-Director of the Graduate Program, Department of Politics and Public Administration, Ryerson University, Toronto, Ontario. You can contact her at 416-979-5000, ext. 7045, by fax at 416-979-5289 or by e-mail at jlum@ryerson.ca.

Stacey Daub is Director of Client Services, Toronto Central Community Care Access Centre, Toronto, Ontario. You can reach Stacey at 416-506-9888 or by e-mail at stacey.daub@toronto.ccac-ont.ca.