

Balance of Care Research Group
University of Toronto

The North West Balance of Care Project II: Final Report

Submitted to
North West Community Care Access Centre

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Executive Summary

1.0 Background

The North West Balance of Care Project II (NW BoC II) aimed to estimate the potential of supportive housing (SH) to maintain the region's growing population of older persons safely and cost-effectively "closer to home."

Project II is built on the foundation of the North West Balance of Care Project I (NW BoC I) led by Kerry Kuluski. Conducted in 2008, Project I concluded that 8% of individuals "at risk" of institutionalization in Thunder Bay, and 49% of wait listed individuals in the surrounding Region could potentially be supported, safely and cost-effectively in the family residence if given access to coordinated packages of home and community care (H&CC).

2.0 Data and Methods

To maximize comparability, NW BoC II adapted the multi-stage approach used in NW BoC Project I and in BoC projects conducted in 8 other regions of Ontario:

- A Steering Committee was convened, comprised of 10 experienced leaders from organizations across the health and social care continuum in North West Ontario; 6 of these individuals had previously participated on the Steering Committee for Project I.
- Key multi-measure indicators of need from RAI-HC assessments were used to stratify 975 individuals on the NW CCAC LTC Wait List (as of November 2009) into 36 relatively homogenous BoC sub-groups. These indicators were:
 - Cognitive performance including short term memory, cognitive skills for decision-making, expressive communication and eating self-performance;
 - Level of difficulty with activities of daily living (ADLs) including eating, personal hygiene, locomotion, and toilet use
 - Level of difficulty with instrumental activities of daily living (IADLs) including meal preparation, housekeeping, phone use, and medication management
 - Presence of an informal/family caregiver in the home.
- 2009 data were used to refresh the "vignettes" and home and community care (H&CC) care packages constructed for Project I in 2008. Vignettes describe key characteristics of typical individuals in each of the BoC sub-groups populated with sufficient numbers of individuals to warrant analysis; the same 16 vignettes were used in both Projects I and II. Care packages specify the mix and volume of home and community support services judged by experienced case managers required to maintain individuals safely and appropriately at home.
- In-depth interviews (sometimes lasting several hours over two or more days) were conducted with 6 key informants representing 4 SH providers, operating 6 SH sites in the NW (two SH providers operated satellite sites). Of these, 2 sites were located in Thunder Bay, with the remaining 4 sites located in small municipalities in the Region.
- Costs were estimated for individuals represented in each of the 16 BoC vignettes for each SH site over a 13 week period (a typical planning time frame). Subsequently, we estimated the proportion of LTC wait-listed individuals that could be safely and cost-effectively supported at each site (compared to LTC).

3.0 Findings

Characteristics of All Wait Listed Individuals, 2008 and 2009. The NW CCAC LTC wait list included 975 individuals as of November, 2009; this compared to 864 wait-listed individuals in March, 2008. While numbers thus increased, overall levels of need also increased.

Distribution by Sub-Region. In both 2008 and 2009, considerably higher proportions of “low needs” wait-listed individuals were observed in the Region as compared to Thunder Bay. The threshold or “tipping point” for LTC is lower in rural and remote areas where there is more limited access to H&CC.

Characteristics of Supportive Housing Sites. Key informants provided rich descriptions of the 6 SH sites in the NW and indicated the number of current residents falling into each of the 16 BoC sub-groups and vignettes. While considerable variation was observed, 4 of 6 SH sites provided 24/7 staff coverage; all provided a range of services including emergency response, personal support, assistance with meals, congregate dining, life enrichment, physiotherapy, transportation, foot care and social activities. Admissions criteria included age (60+ years), need for support services, and ability to function relatively independently (no disruptive or wandering behavior; two-person transfers not required).

Overall Distribution of SH Residents. According to the key informants, most SH residents had low to moderate needs: 90% were cognitively intact; most experienced little or no difficulty with ADLs and IADLs; most had MAPLe scores in the mild (2) to moderate (3) range.

Comparison of SH Residents to LTC Wait List. While SH residents tended to be at the lower end of the needs spectrum, individuals on the LTC wait list tended to be at the higher end: 91% of SH residents fell into BoC sub-groups before Upperton – they were cognitively intact; by contrast, almost three quarters (74%) of LTC wait-listed individuals fell into sub-groups after Upperton – they experienced cognitive impairments. Nevertheless, there was important overlap in these two populations: a quarter (26%) of LTC wait-listed individuals fell into BoC sub-groups below Upperton.

Vignettes and Care Packages. Vignettes simulated the notes case managers would use when making actual care decisions. SH Key informants constructed packages of services needed to support individuals represented in each vignette safely and appropriately in supportive housing. Packages differed from those constructed for individuals living in their family residences since in SH, transportation needs for residents and workers were minimized, and many services were provided on site (e.g., meals).

SH Costs and Estimated Divert Rates. Using two different costing methods where possible, we estimated the potential, on a site by site basis, to “divert” individuals currently on the NW CCAC LTC wait list safely and cost-effectively to SH. Estimated divert rates ranged from 20% to 66% depending on site and costing method.

Supportive Housing “Wish List.” SH providers made a number of suggestions going forward:

- **Expand SH capacity.** SH currently works for many older persons, informal carers and the health care system. However, current capacity is limited and needs to be expanded.
- **Build capacity where older persons have naturally congregated.** SH can “follow the seniors” particularly where they are concentrated in municipal housing buildings, in private apartment buildings, or even in hospital wings. In smaller communities, larger houses can be adapted to build “Abbeyfield” SH models characterized by 6 – 10 private rooms (rather than self-contained

apartments) and a range of congregate activities and meals.

- **Continue to emphasize prevention and maintenance.** SH sites do not now have the capacity to admit older persons with cognitive impairments or high personal care needs. The key is to admit individuals earlier, focus on prevention and maintenance, develop care routines and coping skills, delay or avoid institutionalization, and smooth transitions when needed.
- **Allow SH sites to manage admissions and resident mix.** SH care managers strongly emphasized that resources are finite and that to ensure high quality, appropriate care, and avoid risks to residents, informal carers and workers, they need to continuously balance resident mix and available resources. While SH wait lists might be maintained centrally, admissions must be managed locally to ensure the best possible “fit” between needs and capacity.
- **Promote closer links between SH and LTC.** Some SH sites are located near LTC facilities and share resources. This offers advantages to residents in both SH and LTC who can access programs and services which might otherwise not be available. Familiarity with the LTC facility also offers smoother transitions when independent living is no longer possible.
- **Promote closer links between SH and other providers.** Particularly in smaller communities, there is a tradition of collaboration between providers. Existing partnerships with recreational facilities enhance social opportunities for older persons while maintaining functional independence and mobility. Visiting nurses or nurse practitioners can organize clinics on-site in SH to manage medications, conduct blood tests and diagnose health conditions. One SH site has partnered with a family health team to provide access to needed primary care.
- **Invest in workers.** The availability of health human resources is an ongoing challenge. Some providers commented that adequate compensation is needed to attract and retain workers and improve continuity and quality of care. Training programs could potentially expand capacity to help support a growing number of older persons experiencing cognitive challenges.
- **Make programs equitable.** SH programs and services require user fees which vary by provider. If user fees are required, thought should be given to standardizing them across the NW to ensure equal treatment.
- **Enhance palliative care.** Currently there is little capacity to support end-of-life care in SH. Such capacity is needed so that SH does not become a form of transitional care.

4.0 Conclusions

SH Offers Considerable Potential to Support “At Risk” Older Persons in the NW. NW BoC I (conducted in 2008) concluded that 8% of individuals “at risk” of institutionalization in Thunder Bay, and 49% of wait listed individuals in the surrounding Region, could be supported safely and cost-effectively in the family residence if given access to needed home and community care. By contrast, NW BoC II estimates higher divert rates for SH: in Thunder Bay, SH divert rates approach one third (30% to 33%), while in the Region divert rates range from 20% to 66% depending on site and method of cost calculation. Of course, it is important to emphasize that these divert rates estimate potential, not current capacity.

Prevention and Maintenance are Key. SH aims to admit individuals earlier and keep them later as part of a dynamic and proactive process of continuously monitoring needs and making the best use of available resources. Early entry to SH allows staff to anticipate needs and plan care pathways, including transitions to LTC or hospital when required.

Risk Management is Crucial. While there is always some risk associated with caring for older persons with declining mental and physical abilities, risk increases unacceptably as needs outstrip organizational capacity. This means that there has to be ongoing assessment of who to admit, how to care for them, and when to transition to LTC if required. SH sites in the NW currently do not have the capacity to support Individuals with cognitive impairments or heavy personal care needs.

Realizing SH's Potential. Finally, our key informant interviews and review of the literature suggest a number of strategies for realizing SH's potential in the NW.

- *“Follow the seniors.”* Begin by identifying concentrations of older persons in existing housing stock (including public housing) and build SH capacity around them.
- *Clone satellites.* Two current SH providers in the NW have used this strategy effectively, establishing services at one site, building capacity, and then extending services to a new site.
- *Network SH sites.* Web-based and video technologies offer ever-expanding opportunities for SH providers in different locations to communicate, develop common approaches and protocol, share innovations and best practices, and anticipate and respond proactively to changing population needs.
- *Develop SH sites into regional service integration hubs.* In addition to offering a range of services to residents, SH sites could radiate out key services including scheduled health care clinics (e.g., primary care, pharmacy, nutrition, social work) to the broader community. There are valuable precedents: in the U.S., rural PACE (Programs of All-inclusive Care for the Elderly) models use interdisciplinary teams (including primary care physicians) to provide a coordinated range of services (preventive, acute and long-term care) to concentrations of older persons (55+ years of age) living in rural areas. Closer to home, an ongoing project in North Renfrew, Ontario, has achieved considerable success in providing an integrated range of supportive services to its scattered population of older persons, by building SH and LTC capacity at a central site, and then pushing services out to the broader community.

North West Balance of Care Project II

1.0 Background

1.1 Goals

The North West Balance of Care Project II (NW BoC II) aimed to estimate the potential of supportive housing (SH) to maintain the region's growing population of older persons safely and cost-effectively "closer to home."

While there are many different definitions of supportive housing in the literature, and a wide range of different supportive housing models "on the ground" across Ontario, we defined SH broadly to include combinations of mostly rent-g geared-to-income housing and a range of home and community supports designed to maintain the well-being, independence and quality of life of older persons and their informal carers while moderating demand for hospital and residential long-term care (LTC). According to the website of the Ontario Ministry of Health and Long-Term Care (OMHLTC), "Supportive Housing is designed for people who only need minimal to moderate care -- such as homemaking or personal care and support -- to live independently" (for details go to http://www.health.gov.on.ca/english/public/program/ltc/13_housing.html).

Project II built on the foundation of the North West Balance of Care Project I (NW BoC I) led by Kerry Kuluski. Conducted in 2008, Project I concluded that 8% of individuals waiting for LTC in Thunder Bay and 49% of those waiting in the surrounding Region could potentially be supported, safely and cost-effectively at home if given access to coordinated packages of home and community care (H&CC). An inability to perform "lower level" instrumental activities of daily living (IADLs) such as housekeeping, medication management and meal preparation was a key LTC wait list driver.

Note that these 2008 estimates assumed a conventional home care model, with line-by-line H&CC services delivered, often by multiple providers, at different times, to older persons and carers in their family residences. While doable, this posed challenges. As needs increased, and a greater volume and mix of services was required, coordination and scheduling complexities also increased, as did travel time and costs; this was particularly problematic in rural and remote areas characterized by few providers, low population densities, and long distances. It was observed that alternative models of care delivery already present in some communities in the North West, such as supportive housing (SH), offered greater potential to achieve individual and system level goals in large part due to the ability to concentrate and coordinate resources at geographic points.

The NW BoC Project II thus looked beyond the findings of Project I to analyze the potential of SH to create additional value in the NW: for older persons, by maintaining well-being, independence and quality of life; for carers, by reducing burden and stress; and for the health care system, by moderating demand for LTC.

Goals of the NW BoC II were to:

- document key characteristics of current SH models in the North West; and
- estimate the potential for SH to divert individuals safely and cost-effectively from LTC wait lists.

1.2 Balance of Care Approach

In conducting NW BoC II, we again adapted the Balance of Care (BoC) model pioneered in the U.K. by Dr. David Challis and his group at the Personal Social Services Research Unit (PSSRU), University of Manchester, UK.

The BoC is a planning tool which aims to set evidence-based benchmarks for the most appropriate mix of community-based and institutional resources needed at the local level to support an aging population. While conventional projections of care needs often assume that a growing population 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 the availability of safe, cost-effective H&CC. Other factors being equal, where needed H&CC is more accessible, greater proportions of older persons will be able to age successfully at home.

Nevertheless, there are limits to this potential. H&CC will not be a safe option for all older persons, particularly those with very high levels of need who lack informal carers. Further, even when safe, H&CC may not be cost-effective since the costs of home care for some older persons in some localities may exceed the cost of residential LTC by a significant margin. The BoC question is: “for which groups of older persons, under what conditions, is H&CC both a safe and cost-effective option?”

As noted, the BoC approach emphasizes that answers to this question will depend as much upon “supply side” factors, related to how care is organized and delivered, as to “demand side” factors, related to the characteristics and needs of individuals. Some delivery models, such as SH, may offer greater (or at least different) scope for delivering safe, cost-effective H&CC, as compared to conventional home care in the family residence.

In considering such questions, Ontario BoC projects (including NW BoC Projects I and II) have convened panels of local experts from across the care continuum (including home care, community supports, hospitals, LTC, primary care) to review the assessed needs of individuals on LTC wait lists (using the most up-to-date Resident Assessment Instrument – Home Care (RAI-HC) data), and consider what H&CC services would be required to support them and their carers safely at home (i.e., in the family residence). H&CC costs have then been calculated using the most current data and compared to the costs of residential LTC. The strength of this approach is that it combines the best available evidence with the best available knowledge and insight of experienced decision-makers and front-line case managers who understand needs, as well as local capacity to meet needs, realizing that capacity varies greatly across urban, rural and remote areas. The BoC is, in effect, an “in vivo” simulation of how care decisions are made given existing resource mixes, and how they could be made given different mixes.

In this connection, a number of BoC projects have specifically examined the potential of SH to support older persons and carers safely and cost-effectively. These include a 2009 study conducted for the North East LHIN (see “Seniors’ Residential/Housing Options – Capacity Assessment and Projections” at <http://www.nelhin.on.ca/WorkArea/showcontent.aspx?id=3434>) and a BoC project conducted in Champlain in the same year (see “The Champlain Balance of Care Project: Final Report” at <http://www.unitedwayottawa.ca/downloads/ChamplainBoCProject.pdf>). The findings of an earlier BoC study in Toronto Central also consider supportive housing (see “Balancing Institutional and Community-Based Care: Why Some Older Persons Can Age Successfully at Home While Others Require Residential Long-Term Care” at <http://www.longwoods.com/product.php?productid=20694>). Key findings from these studies are summarized below.

1.3 Key Findings from Previous Balance of Care Projects in Ontario

To date, BoC projects have been conducted in 9 regions of Ontario; those including a focus on SH are designated with an asterisk (*) below:

- Waterloo-Wellington
- Toronto Central (*)
- North West
- Central (*)
- North East (*)
- Central West
- South West (*)
- North Simcoe Muskoka (*)
- Champlain (*)

These projects have concluded that:

- Significant proportions (between 15% and 50%) of those on LTC wait lists could potentially be “diverted” safely and cost-effectively to home and community if given access to needed H&CC.
- In home and community the unit of care is the individual and informal carer; needs must be assessed, care packages designed and outcomes measured considering both.
- Instrumental activities of daily living (IADLs) including transportation, meal preparation, ability to use the telephone and medication management are a key LTC wait list driver. Although not health care per se, an inability to perform such everyday activities can result in functional decline, illness and the utilization of costly, but often avoidable, hospital and institutional care.
- In order to achieve H&CC’s full potential, additional capacity is required at the local level across the province. While existing services support large numbers of older persons and their carers, including many at high levels of need, there is insufficient capacity to increase numbers substantially. Inadequate H&CC capacity is almost universally cited as a main reason why many individuals who might otherwise age at home, instead require residential LTC.
- H&CC capacity is particularly problematic in rural and remote areas due to distance, a lack of transportation and few providers. Combined with demographic shifts such as the out-migration of younger persons resulting in fewer informal carers and attenuated social networks, the “tipping point” for LTC appears substantially lower outside of urban areas.
- While the presence of H&CC services is a necessary condition for supporting older persons at home, it is not sufficient. Particularly for older persons with cognitive deficits who do not have carers living with them and who cannot manage on their own, system-level coordination mechanisms need to be in place. In Ontario there are few mechanisms to manage a full range of H&CC for persons with complex health and social needs. Lacking such mechanisms, LTC can become the default option even when needed services are present.

Regarding supportive housing more specifically, BoC projects have found that:

- SH providers and sites across Ontario vary extensively in terms of the volume and mix of care provided, populations served, and costs. In fact, while identified as “supportive housing,” some providers and sites in some regions are better characterized as “attendant care” serving adults

with physical disabilities; “cluster care,” serving older persons in physically proximate family residences; or “home care outreach,” serving older persons in their homes in rural and remote communities where congregate housing is not readily available.

- Compared to conventional home care models, where care is provided on a service-by-service basis, often by different providers, at different times, SH offers greater scope to plan and coordinate care for older persons with multiple needs. Workers are familiar with their communities, buildings and residents, work in close proximity, communicate on an ongoing basis, and proactively monitor and respond to changing resident needs in “real time.”
- In contrast to a conventional home care visit of a standard length (e.g., an hour of home nursing care) SH allows greater flexibility in the use of available resources. When residents need only a few minutes of care, or when they need more than a standard unit, workers can flex schedules to accommodate. This allows care to be “ratcheted up” or “ratcheted down” as needed and shared across all residents in a building.
- Transportation is minimized for residents and workers. Meals and social activities are often organized on-site, so that residents don’t have to leave their buildings to access them, and workers can concentrate their efforts at a single geographic location.
- Congregate activities in SH can serve multiple purposes. For example, in addition to nutrition and social connectedness, congregate meals offer a regular opportunity to observe, assess and communicate with residents in a normal setting. They also offer opportunity for regular medication checks, a key consideration given that many older persons take multiple medications, often from multiple prescribers (i.e., poly-pharmacy).
- In the family residence, the first line of care is the informal carer; particularly with older persons experiencing multiple chronic conditions including dementia, this can lead to carer stress, burnout and crisis. In SH, first line care is provided by trained workers, with family members and friends providing enhanced supports and social connectedness. “Peace of mind” for older persons and carers is high, knowing that basic needs will be met on a predictable basis.
- In the family residence, older persons living alone may have few options when a crisis occurs particularly outside of normal business hours; a too frequent recourse is the use of 911 and hospital emergency departments even for minor problems. In SH, residents usually have access to a call system and 24/7 staff, reducing reliance on emergency services.

2.0 Data and Methods

To maximize comparability, NW BoC II adapted the multi-stage approach used in Project I and other Ontario projects.

Stage 1: Convene NW BoC II Steering Committee

We convened a Steering Committee comprised of 10 experienced leaders from organizations across the health and social care continuum in North West Ontario including:

- 6 NW BoC I Steering Committee members;
- New representatives from 3 organizations participating on the NW BoC I Steering Committee;
- A health care leader from Dryden who strengthened representation from the Region.

Note that 3 individuals from the NW BoC I Steering Committee did not participate in Project II because their organizations operated SH sites; this avoided potential conflicts-of-interest.

Project II Steering Committee members (listed in alphabetical order) were:

- Cindy Backen, Psychogeriatric Resource Consultant, St. Joseph's Care Group, Thunder Bay
- Cathy Collinson, Chief Nursing Officer, Nipigon District Memorial Hospital
- Paula Donylyk, Senior Director, Client Services, NW CCAC
- Chris Fell, Case Manager, Seniors Behavioral Health Outreach Team, St. Joseph's Care Group, Thunder Bay
- Darlene Furlong, Senior Vice President, Patient Care Services, Dryden Regional Hospital
- Sandi Homeniuk, Community Care Manager, NW CCAC
- Wendy Kirkpatrick, Administrator, Grandview Lodge Home for the Aged, Thunder Bay
- Carole Neff, Community Services Facilitator, Wesway, Thunder Bay
- Karen Ryback, Utilization Manager, Thunder Bay Regional Health Sciences Centre
- Lisa Siimi, Senior Consultant- Funding and Allocation, NW LHIN

An initial meeting to describe the project and receive advice was conducted in Thunder Bay on December 17, 2009; one member of the research group (KK) attended in person while two others (APW and JW) participated via the Ontario Telemedicine Network (OTN).

A final meeting to present the results and confirm the findings took place on May 6, 2010, with three members of the research group (APW, KK and JW) participating via OTN.

Stage 2: Update NW BoC I Wait List

In the project's second stage, the NW CCAC provided RAI-HC assessment data for 975 individuals on the LTC wait list as of November, 2009.

These data included 4 key multiple-item measures of individual characteristics and needs:

- *Cognitive performance* including short term memory, cognitive skills for decision-making, expressive communication and eating self-performance (coded into 2 categories: intact, not intact).
- *Difficulty with ADLs* (activities of daily living) including eating, personal hygiene, locomotion, and toilet use (coded into 3 categories: no difficulty, some difficulty, great difficulty).

- *Difficulty with IADLs* (instrumental activities of daily living) including meal preparation, housekeeping, phone use, and medication management (coded into 3 categories: no difficulty, some difficulty, great difficulty).
- *Presence of an informal/family caregiver in the home* (coded into 2 categories: present, not present).

As in previous BoC projects including NW BoC Project I, we used these 4 multiple-item measures to categorize all LTC wait listed individuals into 36 relatively homogenous sub-groups. Each sub-group was assigned a fictitious family name and the distribution of individuals across sub-groups was determined. The first of these sub-groups, named “Appleton,” contained 1 individual who was cognitively intact, experienced no difficulty performing ADL or IADL tasks, and had a live-in caregiver. In contrast, the 36th and highest needs sub-group, “J. Johns,” contained 100 individuals who were not cognitively intact, could not perform ADL and IADL tasks independently, and did not have a caregiver living with them.

In addition to providing an up-to-date portrait of wait-listed individuals in the North West, the 2009 data allowed us to examine how characteristics and needs had changed since Project I in 2008.

We also calculated average MAPLe (Method for Assigning Priority Levels) scores ranging from 1 (low) to 5 (very high) for each of the 36 BoC sub-groups, both to validate our stratification, and to assist planning, since MAPLe is now widely used in Ontario as an index of need. Note however, that unlike the BoC stratification, MAPLe *does not* consider the presence or capacity of informal carers, contributing to some divergence in results.

No personal identifiers (e.g., name, OHIP number) were included in the data provided by the NW CCAC, nor were any individuals identified in our analysis. As described below, our analysis specifically excluded sub-groups containing low numbers precluding any chance that individuals could be identified by the research team or by others accessing the results.

Stage 3: Refresh Vignettes

In the third stage, we used the 2009 data to refresh the “vignettes” constructed in 2008 for Project I. Vignettes describe key characteristics of typical individuals in each of the BoC sub-groups populated with sufficient numbers of individuals to warrant analysis. Although, as detailed below, there were differences in the distributions of wait listed individuals in Projects I versus Project II, we used vignettes for the same 16 sub-groups for both years to maximize comparability. In Project I, these 16 sub-groups (and associated vignettes) accounted for 92% of all wait listed individuals in the NW; in Project II, they accounted for 96% of those on the wait list.

Stage 4: Construct Care Packages

As part of the NW BoC Project I, a cross-sectoral Expert Panel comprised of 17 experienced care managers from organizations across the care continuum (including hospitals, LTC, CCAC, community support services, supportive housing) constructed H&CC packages required to support typical individuals in each of the 16 vignettes safely and appropriately at home. Since a key focus of Project I was urban/rural/remote differences, two sets of care packages were constructed for each vignette, one for Thunder Bay and one for the surrounding Region.

While also analyzing geographic differences in Project II, our focus was on SH as an alternative to LTC. Using the detailed information generated in Project I, we therefore constructed a single, composite care package for each vignette assuming home care in the family residence; we then asked SH key informants

to consider how care organization, delivery and costs would change if individuals with the same characteristics and needs lived in supportive housing.

Stage 5: Conduct Supportive Housing Key Informant Interviews

We conducted in-depth, semi-structured interviews (sometimes lasting several hours over two or more days) with 6 key informants representing 4 SH providers, operating 6 SH sites in the NW (two SH providers operated satellite sites). Of these, 2 sites were located in Thunder Bay, with the remaining 4 sites located in small municipalities in the Region. SH sites and key informants were identified by members of the Project II Steering Committee.

For each site, informants were asked to describe:

- Key organizational characteristics (e.g., number of units, number of residents, admissions criteria, services or programs offered);
- Key resident characteristics (e.g., functional ability, hours and types of services required);
- The mix and volume of services provided by SH staff to SH residents (e.g., housekeeping, congregate dining and/or meal preparation, social/recreation programs, transportation, 24/7 on call, emergency call system);
- The mix and volume of services provided by external organizations to SH residents (e.g., CCAC, community support services (CSS), LTC facilities, hospitals);
- Planned or possible changes in SH organization, resident mix or services;
- Their “wish list” for how SH capacity could be expanded.

Key informants were then asked to review each of the 16 BoC vignettes and, for each SH site, to indicate:

- The proportion of current SH residents falling into each vignette;
- The mix and volume of services typically provided to SH residents in each vignette, noting particularly how mix and volume might change in SH as compared to home care in the family residence (e.g., fewer transportation services required).

Finally, key informants were asked which services would be funded:

- Within their SH base budget (e.g., congregate dining on site);
- Through the budgets of other providers (e.g., meals-on-wheels).

Stage 6: Estimate Costs and Divert Rates

In the 6th stage, the research group estimated the costs of care for typical individuals in each of the 16 BoC vignettes for each SH site over a 13 week period (a typical planning time frame). We then estimated the proportion of LTC wait-listed individuals that could be safely and cost-effectively supported at each site (compared to LTC).

To estimate SH costs we used two methods (where possible) to determine the total cost of care to the LHIN; each captured direct SH costs (those paid by the SH provider) as well as indirect SH costs (services provided and paid for by other agencies such as the CCAC). Both methods excluded user fees and rent.

- Method A used the average cost of SH services per resident, per day, per site, as calculated by SH key informants; to this average we added the costs of any additional CCAC services or CSS required by residents represented in each BoC vignette. This method did not differentiate SH costs by the resident’s level of need; rather it assumed a “pooling” or averaging of costs over all residents at a particular SH site. A number of SH key informants suggested that this accurately reflected how resources and costs were managed in their organizations as available resources

were accessed flexibly on an as-needed basis. While SH costs were thus constant across BoC vignettes, overall costs for each vignette still varied due to the variable use of “external” CCAC services and CSS. Method A was applied in all 6 SH sites.

- Method B involved estimating the actual number of SH staff hours provided to residents in each BoC vignette; as in Method A, the costs of any additional CCAC services and CSS were then added. Thus, SH costs were generally lower for lower needs vignettes, and higher for higher needs vignettes. Method B was applied in 2 SH sites which could estimate actual care hours for each resident.

To estimate divert rates, we compared SH costs for each vignette, for each SH site, against the costs of LTC. To estimate LTC costs we used:

- An average LHIN cost of \$89.00 per day or \$8,099 for a 13 week period. Resident co-payments of \$53.07 per day (primarily for accommodation) were not included to ensure comparability. According to the website of the Ontario Association of Non-Profit Homes and Services for Seniors (OANHSS), these costs were valid as of July 2009. (For details go to <http://www.oanhss.org/Content/NavigationMenu/Consumers/AboutLongTermCare/default.htm#LTC4>).

In applying these two costing methods and calculating SH divert rates, we made two adjustments.

- First, we adjusted for urban/rural differences in CSS costs; in the surrounding Region such costs tended to be higher than in Thunder Bay. Thus, for SH sites in the region, CSS costs were based on LHIN costs for CSS providers in the region; likewise, for SH sites in Thunder Bay, CSS costs were based on LHIN costs for CSS providers in Thunder Bay. No similar adjustments were made for CCAC costs since these were consistent across the NW.
- Second, we adjusted for urban/rural differences in LTC wait lists; wait listed individuals in the surrounding Region tended to be at lower levels of need than wait listed individuals in Thunder Bay (even though, for the population as a whole, health needs tended to be higher in the region). Thus, divert rates for SH sites in Thunder Bay were calculated against the distribution of wait listed individuals in Thunder Bay; divert rates for SH sites in the Region were calculated against the distribution of wait listed individuals in the Region.

3.0 Findings

3.1 Characteristics of All LTC Wait Listed Individuals, 2008 and 2009

As noted, the NW CCAC LTC wait list included 975 individuals as of November, 2009; this compared to 864 wait-listed individuals in March, 2008.

A first observation, therefore, was that the 2009 NW LTC wait list was 13% longer than a year and a half earlier. However, compared to 2008, it was characterized by higher levels of need.

The data presented in this section are for all wait listed individuals (i.e., including, but not limited to, the 16 BoC sub-groups for whom vignettes and care packages were constructed). They show that:

- In 2008, 40% of wait listed individuals were cognitively intact -- they experienced few problems with short-term memory, cognitive skills for decision-making, expressive communication or eating self-performance; in 2009, only 30% were cognitively intact.
- In 2008, 44% experienced little or no difficulty (“none”) with ADL tasks such as eating, personal hygiene, toilet use and locomotion in the home while only about a quarter (28%) experienced “great” difficulty requiring others to perform these tasks for them; in 2009, a somewhat smaller percentage (37%) experienced no difficulty with ADLs and a slightly larger percentage (30%) experienced great difficulty.
- In 2008, two thirds (65%) experienced “great” difficulty with IADLs such as meal preparation, housekeeping, telephone use and medication management, requiring others to perform these tasks for them; in 2009, three quarters (76%) experienced great difficulty with IADLs.
- The likelihood of having a caregiver living in the home was similar; in 2008, just over a third (36%) reported having a caregiver living with them, compared to 40% in 2009.

Cognition	2008	2009
Intact	40%	30%
Not Intact	60%	70%
Total N	864	975

Difficulty with ADLs	2008	2009
None	44%	37%
Some	28%	32%
Great	28%	30%
Total N	864	975

Difficulty with IADLs	2008	2009
None	1%	.4%
Some	34%	24%
Great	65%	76%
Total N	864	975

Live-in Caregiver?	2008	2009
Yes	36%	40%
No	64%	60%
Total	864	975

These data do not show *why* the wait list was longer in 2009 than in 2008, or why needs tended to be higher. Also, because we did not have individual identifiers, it was not possible to see what proportion of the 2008 wait list remained in 2009, or how individual needs had changed. Nevertheless, it is possible that overall changes reflected some combination of: increasing needs in an aging population; previously unmet needs now being identified; more intensive triaging or targeting; and efforts aimed at reducing the number of hospital alternative level of care (ALC) beds by discharging patients “quicker and sicker” to community care. What is clear, however, is that growing wait list numbers were not the result of “cream skimming,” that is, placing individuals on the wait list earlier; in fact, the reverse appeared to be true as overall levels of need increased.

3.2 Distribution by Sub-region

As noted, 4 multiple item measures of need were combined to define 36 relatively homogeneous BoC sub-groups. To get a better sense of where change had occurred, we calculated numbers of individuals falling into “low needs,” “medium needs” and “high needs” sub-groups, for the NW overall, and for Thunder Bay and the Region separately.

We found that:

- For the whole NW, 24.1% of all wait listed individuals fell into relatively “low needs” sub-groups (sub-groups 1 – 6: Appleton to Fanshaw) in 2008; in 2009, only 15.7% were low needs.
- In Thunder Bay, the proportion of low needs individuals was halved: in 2008, 13.2% qualified as low needs; in 2009 only 6.0% were low needs.
- In the Region, proportions of individuals in low needs sub-groups were considerably higher than in Thunder Bay in both years, although these proportions declined considerably between 2008 (40.0%) and 2009 (25.4%).

BoC Sub-Groups	Thunder Bay, 2008	Thunder Bay, 2009	Region, 2008	Region, 2009	Overall North West, 2008	Overall North West, 2009
Low Needs (Sub-groups 1-6)	13.2%	6.0%	40.0%	25.4%	24.1%	15.7%
Medium Needs (Sub-groups 7-30)	60.6%	66.7%	47.0%	57.2%	55.6%	62.0%
High Needs (Sub-groups 31-36)	26.2%	27.3%	13.0%	17.4%	20.3%	22.3%
N	475	481	383	487	864*	975*

* Location (Thunder Bay/Region) was not known for 6 individuals in 2008 and 7 individuals in 2009

In summary, between 2008 and 2009:

- The NW LTC wait list grew by 111 individuals (13%) largely due to increasing numbers of LTC wait-listed individuals in the Region (104 or 27%);
- Overall levels of need increased. There was considerable movement out of “low needs” sub-groups into “middle needs” sub-groups; movement into “high needs” sub-groups was less marked;
- In both years, considerably higher proportions of “low needs” wait-listed individuals were observed in the Region as compared to Thunder Bay. This emphasizes a key finding of Project I that the threshold or “tipping point” for referral to LTC is lower in rural and remote areas where there is more limited access to H&CC.

3.3 Characteristics of Supportive Housing Sites

Our key informants provided detailed descriptions of the 6 SH sites studied. They also indicated the number of current residents in each SH site falling into each of the 16 BoC vignettes. The research group then calculated average MAPLe scores for each of the 16 BoC sub-groups and estimated the distribution of residents by these scores for each SH site and for all SH residents in the NW. Note that because MAPLe scores were not calculated for individuals, but averaged for each BoC sub-group, the range was attenuated, with most scores falling between 2 (mild) and 4 (high).

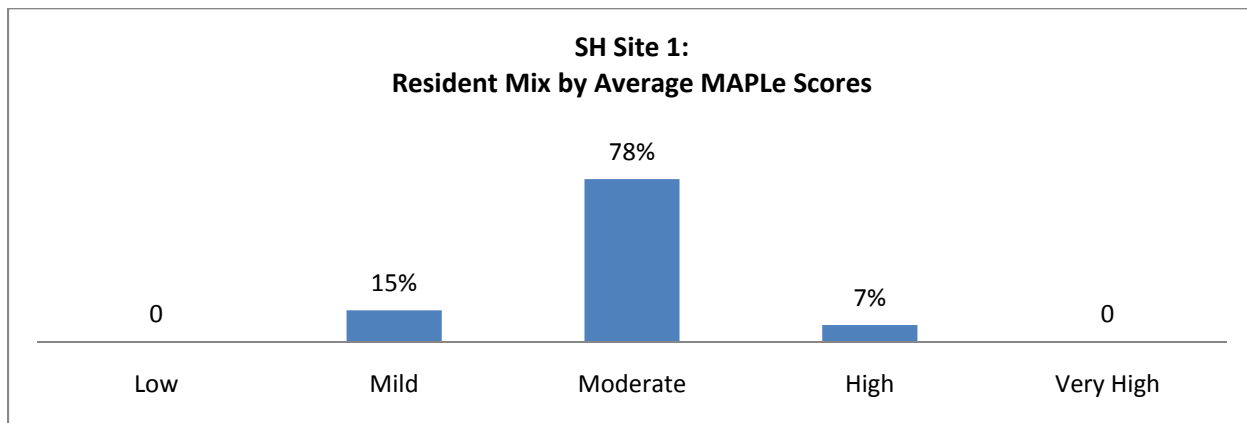
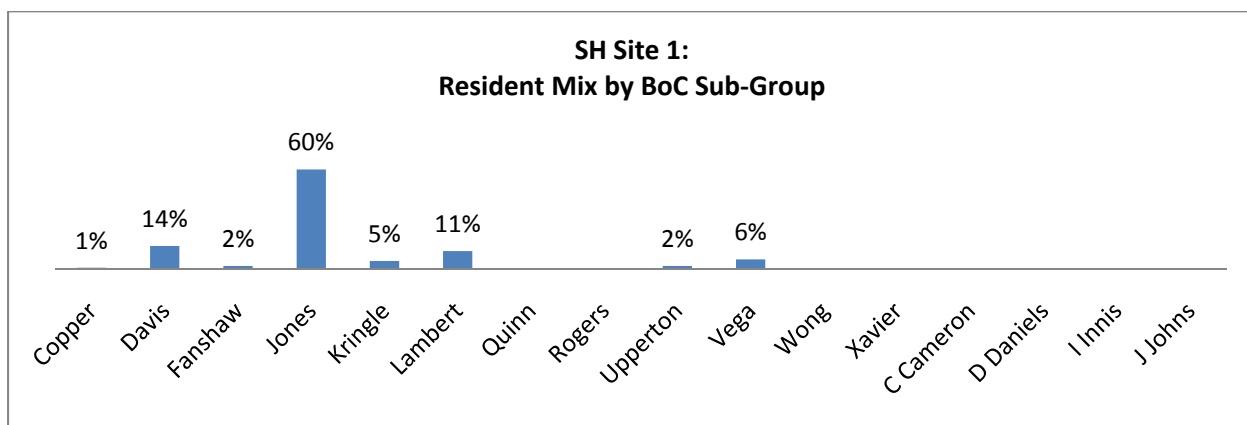
Summary information for each of the 6 SH sites are given below.

SH Site1. Located in Thunder Bay, this site includes 99 units owned by the housing authority, with 24 hour services provided on-site by an adjacent municipal home for the aged. According to the web site, “the Support Services Program is intended for seniors whose physical status and/or lack of adequate social supports threatens their ability to remain living independently in the community.” According to our informants, key characteristics of this site included:

- **Residents:** 107
- **Services:**
 - 24 hour on site staff
 - 24 hour emergency response (hardwired in apartment)
 - Personal support/bath assistance
 - Assistance with meals
 - Light housekeeping

- Congregate dining
- Life enrichment (e.g. recreational activities and programs)
- Access to a social worker/counselor
- Physiotherapy
- Transportation
- Basic foot care.
- Clients can utilize the coffee shop and hairdresser from the attached LTC facility.
- **Admission Criteria:** 60 years of age, meets minimum income threshold, and agrees to accept a support package (at least socialization and meals). Client should be functionally independent (no disruptive or wandering behaviors; single clients must not require a two-person transfer). If an existing resident loses capacity or is judged to become a risk to themselves or others, conversation around transition to LTC may be initiated.

The resident mix in Site 1 is presented below. Using the BoC sub-groups, most (60%) were categorized as “Jones” (cognitively intact, some difficulty with ADLs, some difficulty with IADLs, with no live-in caregiver). Using MAPLe, most (78%) scored 3 (moderate).



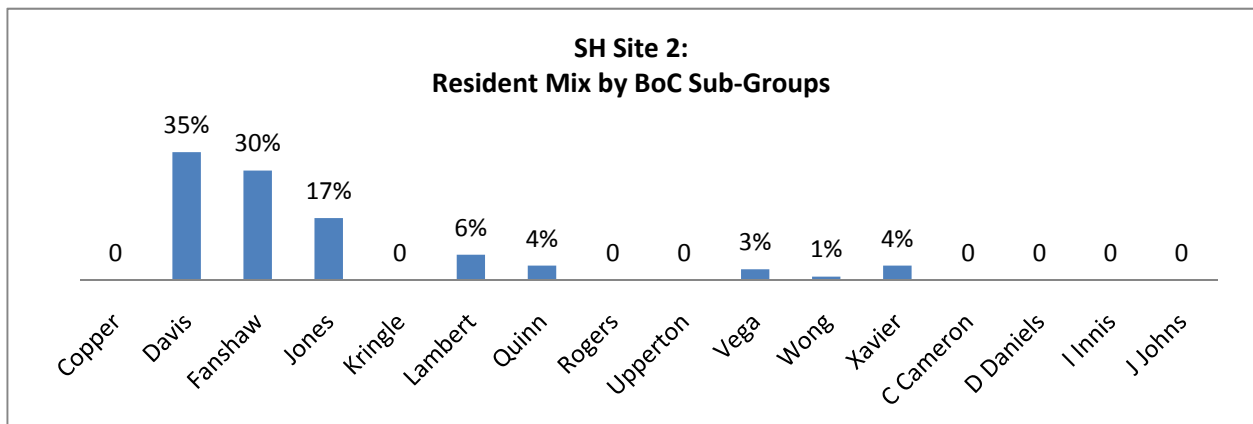
Note that in contrast to the MAPLe, which provides a summary index of need, the BoC sub-groups detail *which* dimensions of need come into play. Most importantly, because of the way in which dimensions are combined, the first 18 of the 36 BoC sub-groups (Appleton to Rogers) include individuals who are cognitively intact; of the 16 vignettes included in the NW BoC II analysis, Upperton is the first including individuals with a cognitive impairment. This is crucial, since the majority of residents in SH Site 1, as in

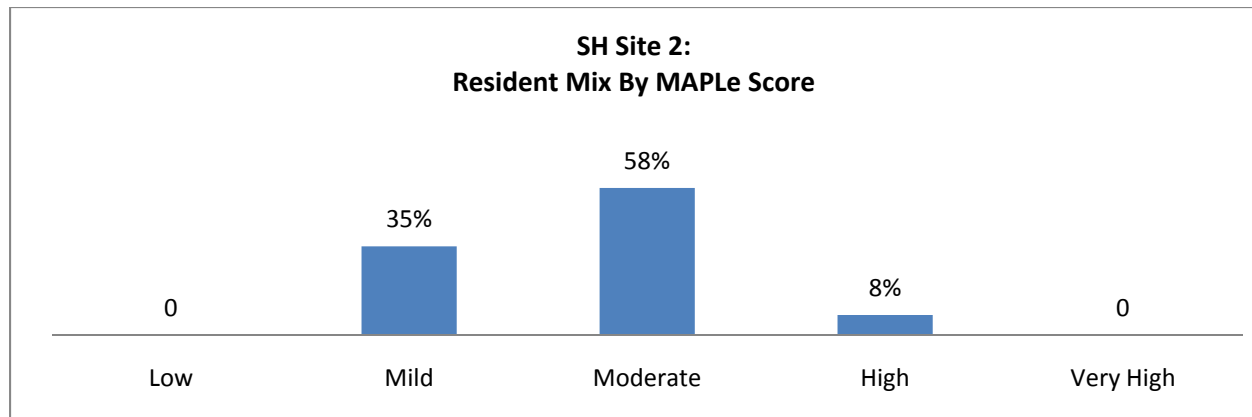
the other NW sites described below, fell into BoC sub-groups *before* Upperton, that is, they were cognitively intact.

SH Site 2. Also located in Thunder Bay, Site 2 is in a building which includes 113 market rental and 68 rent-geared-to-income (RGI) units; it is proximate to a LTC facility. According to the provider web site, the SH units “are for persons over the age of 60 or under the age of 60 with a disability who can live independently with or without support;” about half of current residents were fully independent and received no services. According to our key informants, characteristics of this site include:

- **Residents:** 115
- **Services:** Individuals who wish to receive support services choose one of seven different packages of care (based on preference not need). Available services include:
 - 24 hr. on site staff.
 - Personal support (assistance with bathing and medications)
 - Homemaking (assistance with laundry, meals, and light housekeeping)
 - Congregate dining
 - Daily “how are you” checks
 - Life enrichment (e.g. outings and educational sessions)
 - Transportation
 - Access to a social worker/counselor.
- **Admissions Criteria:** 60 years of age. No minimum level of care required. Individuals must be functionally independent (no disruptive or wandering behaviors, single clients must not require a two-person transfer). If an existing resident loses capacity or is judged to be a risk to themselves or others, conversation around transition to LTC may be initiated.

The tables below show that a majority (82%) of SH Site 2 residents fell into relatively low needs BoC sub-groups (Davis, Fanshaw and Jones); almost all were cognitively intact but experienced some difficulty with ADLs and/or IADLs. This is reflected in MAPLe scores of 2 to 3.

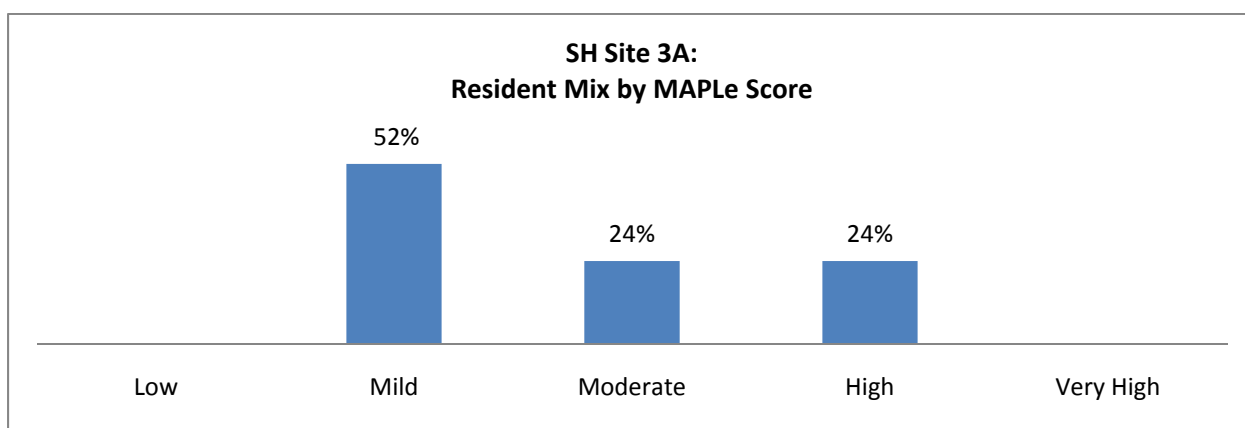
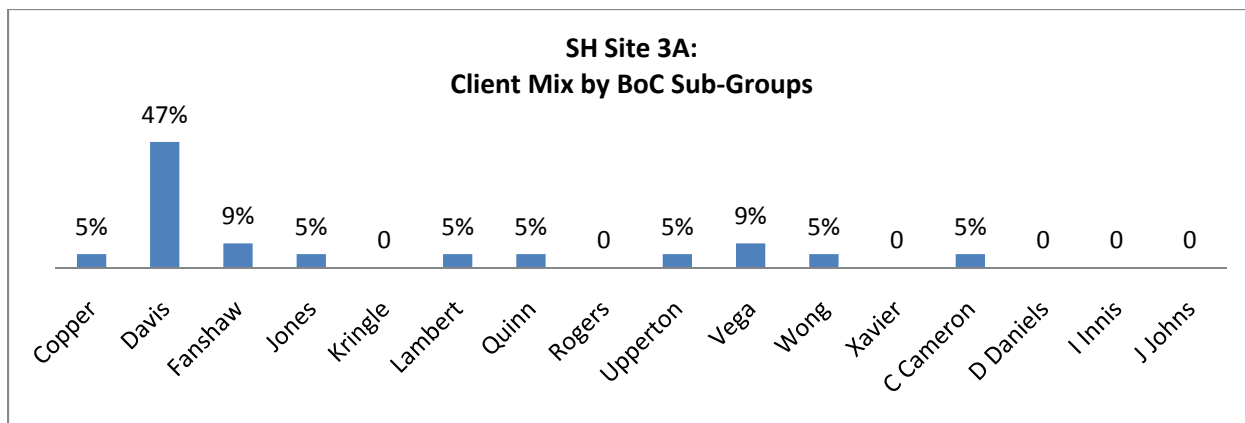




SH Site 3A. Located in a small municipality in the Region, Site 3A was relatively new, funded in 2009 through Aging at Home dollars. It provides community supports to 20 “frail elderly clients” in a building containing 75 senior’s apartments. A community support services agency oversees this program with a part-time coordinator’s office based in the building. According to the website of a local community support organization, “this program is designed to help people live independently in their own apartments. A supportive housing environment promotes mental and physical health along with around the clock personal support. For a low monthly fee, clients enjoy a variety of scheduled activities and outings among other benefits.” According to our key informants, characteristics of this site include:

- **Residents:** 20 in 2009 with expansion to 25 in 2010
- **Services:**
 - 24 hr. on site staff
 - Personal support (medication reminders, bathing, morning and evening dressing assistance)
 - Homemaking (assistance with laundry, light meal preparation, housekeeping and shopping assistance)
 - Congregate dining
 - Emergency response/lifeline
 - Daily “how are you?” checks
 - Access to the program coordinator (to provide additional support and care coordination including CCAC and other support agency referrals).
- **Admissions Criteria:** Singles or couples, 65 years of age or older. Priority tends to be given to individuals with the greatest need; however, consideration is also given to what mix of needs can be handled by staff at a given time. Individuals must be functionally independent (no disruptive or wandering behaviors, single clients must not require a two-person transfer). If an existing resident loses capacity or is judged to be a risk to themselves or to others in the building, conversations around transition to LTC may be initiated.

As shown in the tables below, Site 3A serves individuals with a range of needs, extending up to C. Cameron (not cognitively intact, some difficulty with ADLs, great difficulty with IADLs); however, most residents fell into lower needs BoC sub-groups such as Davis (cognitively intact, no difficulty with ADLs, some difficulty with IADLs). MAPLe scores ranged from 2 (mild) to 4 (high), with about half of this site’s residents (52%) scoring 2.

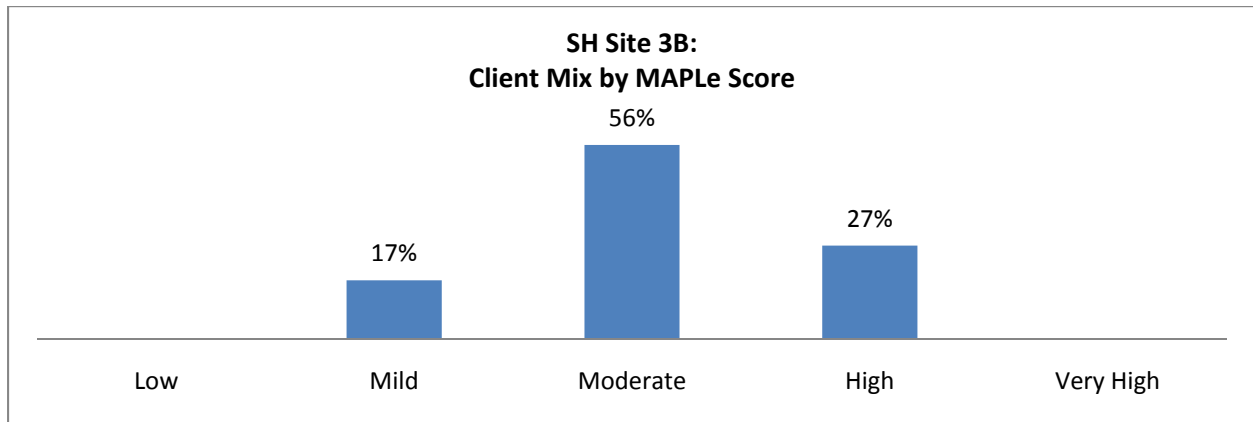
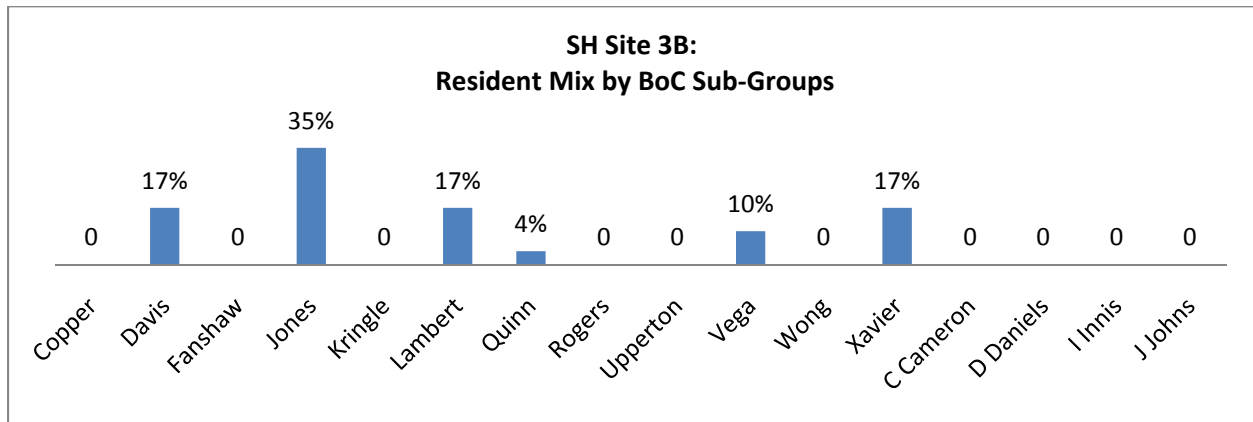


SH Site 3B: This is a “satellite” of Site 3A. Like Site 3A, it was originally an apartment building which attracted older persons who then required community supports. It draws on resources from Site 3A (including administrative support) with services provided by the same organization. According to the key informants, characteristics of this site include:

- **Residents:** 21 in 2009 with expansion to 28 clients in 2010
- **Services:**
 - 24 hour on site staff
 - Personal support (medication reminders, bathing, morning & evening dressing)
 - Homemaking (assistance with laundry, light meal preparation, housekeeping and shopping assistance)
 - Congregate dining
 - Emergency response/lifeline
 - Daily “how are you?” checks
 - Access to program coordinator (to provide additional support and care coordination including CCAC and other support agency referrals)
 - A day program is housed in the building and can be attended by the residents up to twice weekly for a fee.
- **Admissions Criteria:** Singles or couples, 65 years of age or older. Priority tends to be given to individuals with greatest need although staff ability to care for resident needs is also considered. Individuals must be functionally independent (no disruptive or wandering behaviors; single

clients must not require a two-person transfer). If an existing resident loses capacity or is judged to be a risk to themselves or others in the building, conversations around transition to LTC may be initiated.

The following tables show that while many residents of Site 3B fell into relatively low needs BoC sub-groups, almost a fifth (17%) were categorized as Xavier (not cognitively intact, no ADL difficulty, but high IADL difficulty). This is reflected in MAPLe scores ranging from 2 (mild) to 4 (high), with more than a quarter (27%) scoring 4.

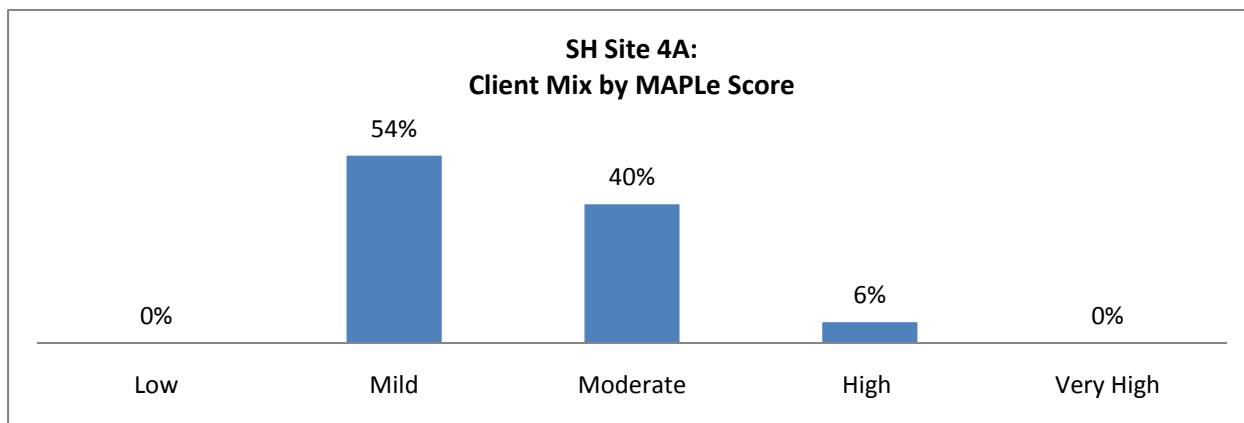
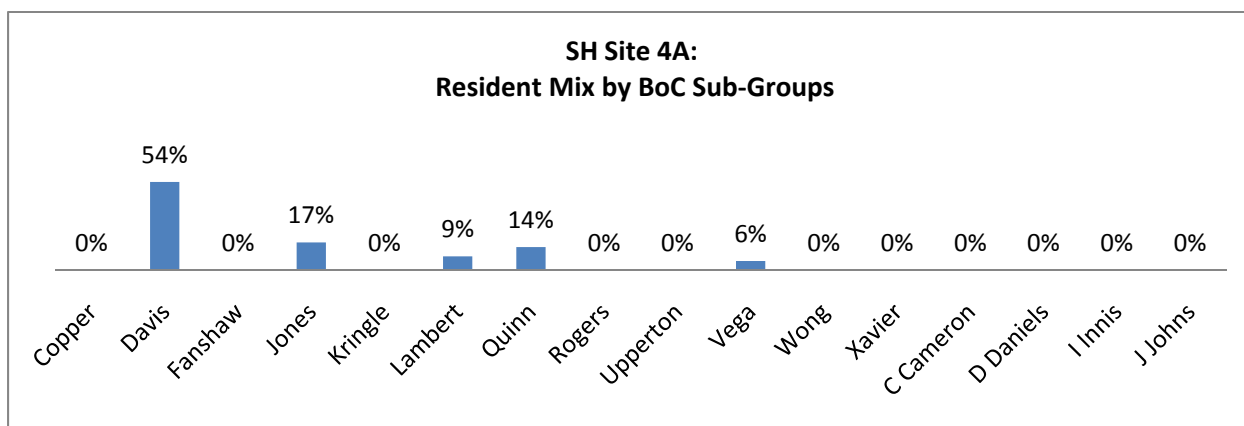


SH Site 4A. Site 4A consists of SH units within a senior’s apartment building. It is adjacent to a LTC facility. A community support outreach agency operates from the building. Residents are classified into one of three “needs groups:” minimum (requiring at least 1 hour of care/week), moderate (5.5 hours of care/week) or maximum (10-15 hours of care/week). While staff are available during the day and evenings, 24/7 coverage is not available.

- **Residents:** 35
- **Services:**
 - Staff available between 7am-9pm on weekdays and for 4 hours on Saturday and Sunday
 - Personal support (assistance with bathing, toileting, dressing, and medication reminders)
 - Homemaking (assistance with laundry, light meal preparation and housekeeping)

- Congregate dining
- Emergency response/lifeline
- Access to a recreation program with ongoing activities provided by visiting volunteers, community groups, and high school students
- **Admissions Criteria:** Singles or couples, 60 years of age or older. Individuals must require some level of care to be accepted to the SH program. However, individuals must be functionally independent (no disruptive or wandering behaviors, and single clients must not require a two-person transfer). If an existing resident loses capacity or judged to be a risk to themselves or others, conversations around transition to LTC may be initiated.

As shown in the tables below, residents of Site 4A tended to have relatively low needs: over half (54%) were categorized as “Davis” (cognitively intact, minimal functional needs, no carer). MAPLe scores confirmed this distribution: more than half (54%) scored 2 (mild) with only 6% scoring 3 (high).

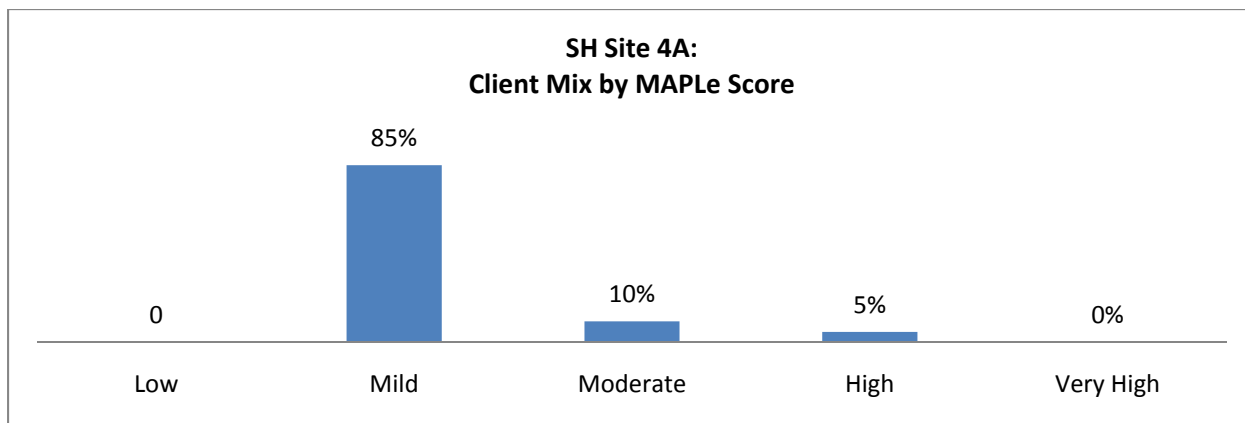
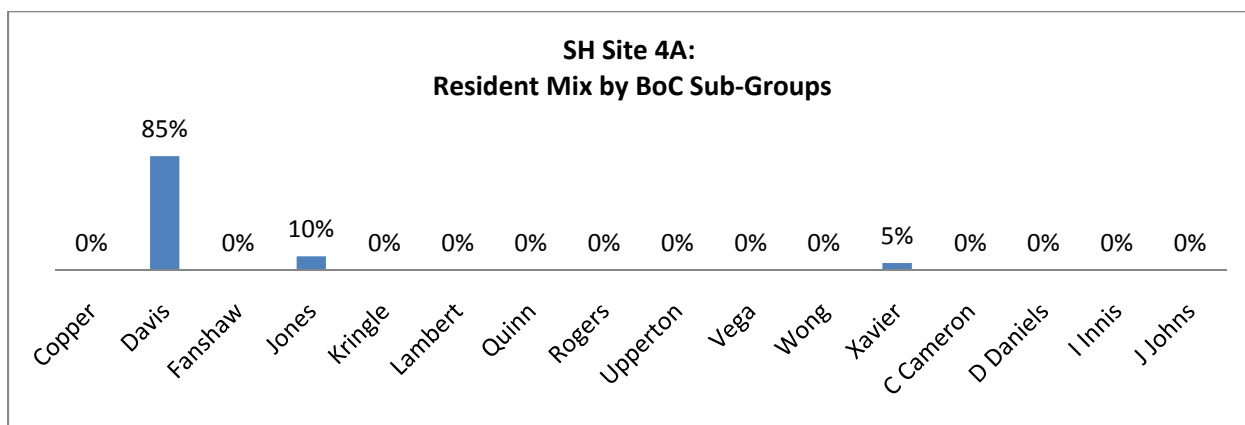


SH Site 4B. This is a satellite of Site 4A; it draws on the resources (including personal care and administrative support) from the main site. All units are RGI. According to our key informants, this site, like others described above, was initially an apartment building that attracted a high concentration of older persons eventually requiring community supports; such services were gradually “built in.” This site does not provide 24/7 staff coverage.

- **Residents:** 26
- **Services:**
 - Staff available between 7am-9pm on weekdays and for 4 hours on Saturday and Sunday

- Personal support (assistance with bathing, toileting, dressing, and medication reminders)
- Homemaking (assistance with housekeeping, laundry, and light meal preparation).
- **Admissions Criteria:** Singles or couples, 60 years of age or older. Individuals must require some level of care to be accepted to the SH program. However, individuals must be functionally independent (no disruptive or wandering behaviors, single clients must not require a two-person transfer). If an existing resident loses capacity or judged a risk to themselves or others in the building, transition to LTC may be initiated.

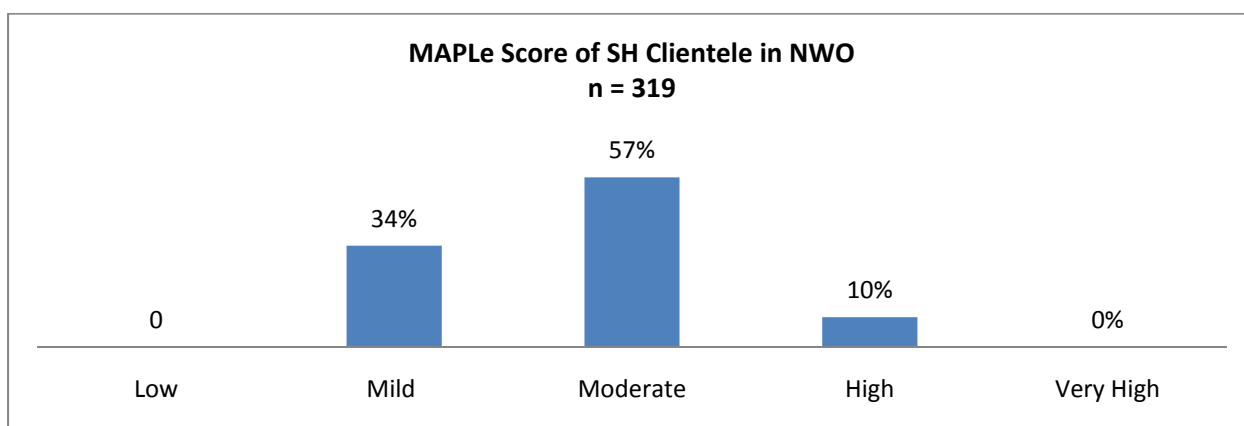
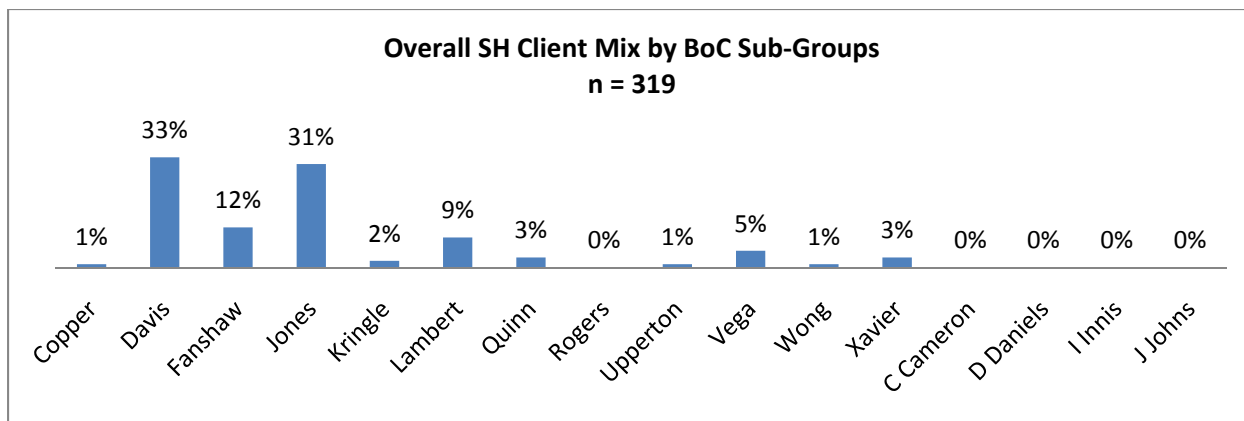
The following tables show that Site 4A residents had relatively low needs; 85% were classified as “Davis.” Using average MAPLe scores, 85% of residents were classified as “mild.”



3.4 Overall Distribution of SH Residents

The following tables present distributions by BoC sub-groups and MAPLe scores for all SH residents in the 6 SH Sites in the NW. They show that:

- 90% of current residents were cognitively intact;
- Most experienced little or no difficulty with ADLs and IADLs;
- While 10% had high (4) MAPLe scores, most scored mild (2) or moderate (3).



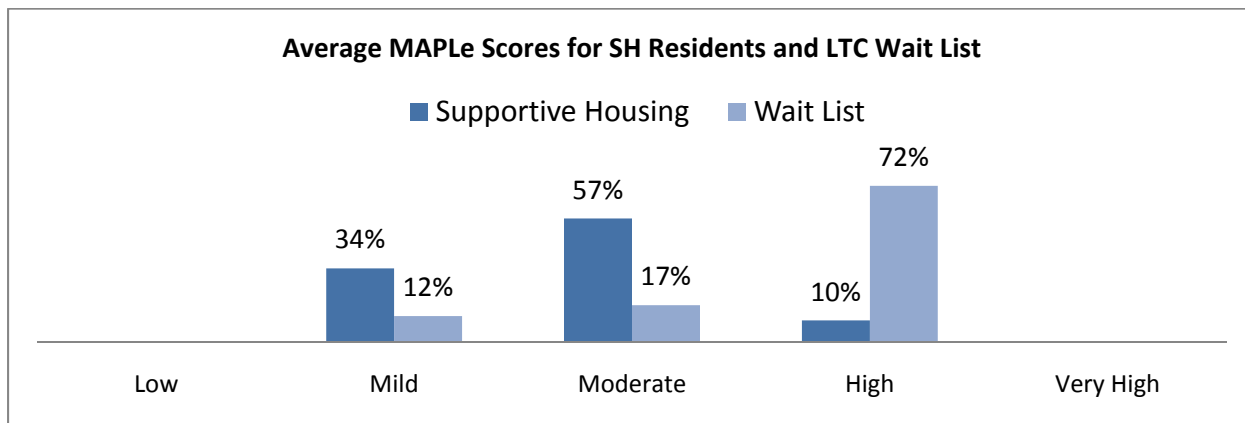
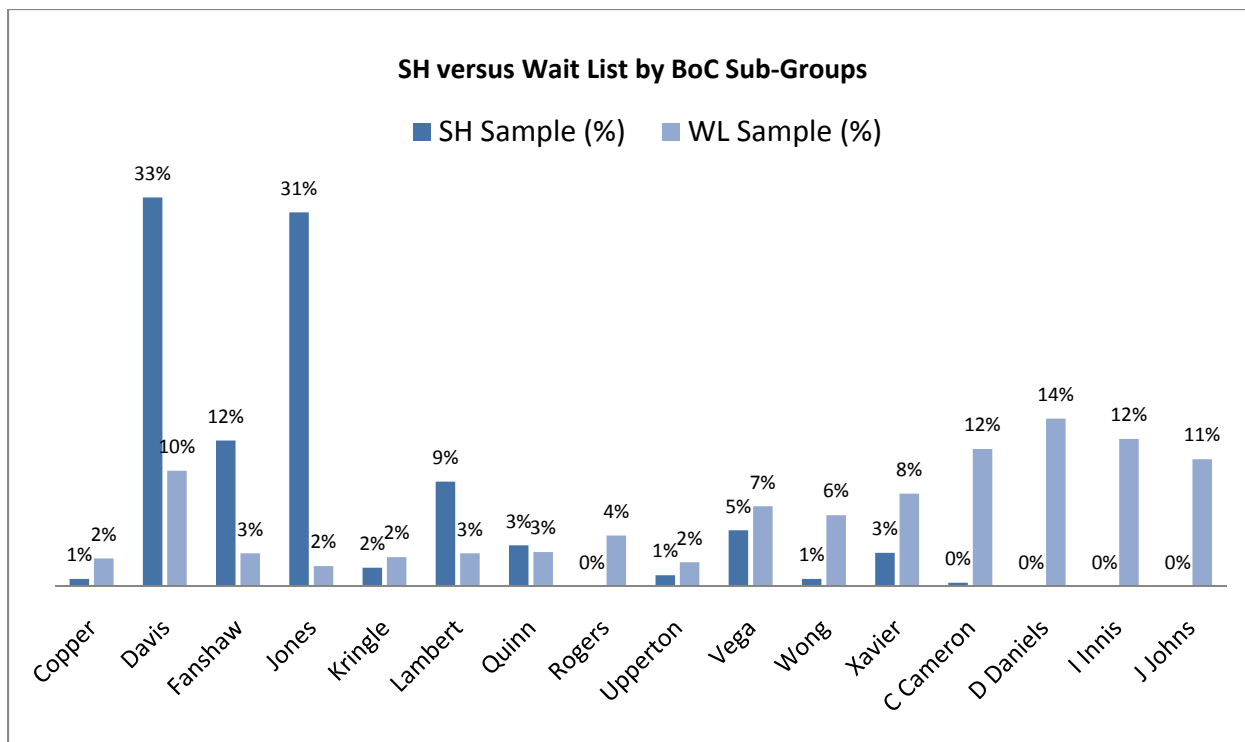
3.5 Comparison of SH Residents to LTC Wait List

We also compared the distribution of SH residents to the distribution of all wait-listed individuals in the NW, using both the BoC sub-groups and MAPLe scores. Results are shown in the tables below.

In summary these results show that SH residents tended to be at the lower end of the needs spectrum, while individuals on the LTC wait list tended to be at the higher end:

- Nine in ten (91%) SH residents fell into BoC sub-groups before Upperton – they were cognitively intact; by contrast, almost three quarters of LTC wait-listed individuals fell into sub-groups after Upperton – they experienced cognitive impairments;
- While 74% of LTC wait-listed individuals had MAPLe scores of 4, most SH residents scored 3 or below.

Nevertheless, there was important overlap in these two populations: a quarter (26%) of LTC wait-listed individuals fell into BoC sub-groups below Upperton, with 15% located in Copper, Davis and Fanshaw; individuals in these sub-groups were cognitively intact, could conduct ADL tasks independently, but experienced some level of difficulty with IADLs. They appeared to be possible candidates for current SH sites.



3.6 Vignettes and Care Packages

As detailed above, we drew upon RAI-HC data to create 16 “vignettes,” one for each of the 16 BoC sub-groups populated with sufficient numbers of individuals to warrant analysis. Vignettes were written to simulate the notes case managers would use when making actual care decisions. For example, the vignette for Davis, at a relatively low level of need, states:

“Davis is cognitively intact and functionally independent in all ADLs with the exception of bathing (limited assistance is required). Davis has no difficulty using the phone; some difficulty with transportation, managing medications and preparing meals; great difficulty housekeeping. Davis does not have a live-in caregiver. Davis’ caregiver is an adult child who lives outside of the home. This caregiver provides advice/emotional support and assistance with IADLs.”

Building on the urban and rural/remote H&CC packages constructed for NW BoC I, in Project II we constructed a single, composite H&CC package for each vignette; these composite packages contained

all services considered necessary by the NW BoC I Expert Panel to maintain individuals and carers safely at home. As an example, the composite H&CC package for Davis is shown below.

NW Composite H&CC Package for Davis (13 weeks)	
Service	Frequency/13 weeks
Day Program – Frail Seniors	39
Meals on Wheels	65
Congregate Dining	26
Transportation	78
Friendly Visiting	13
Caregiver Support –Counseling	13
CCAC Occupational Therapy	2
CCAC Personal Support	26
Emergency Response System	1x installment

Vignettes and care packages for each of the 16 BoC sub-groups in the analysis were presented to each of the SH key informants. Key informants were then asked to specify what mix and volume of services would be required to support individuals with similar needs safely and appropriately in their SH sites. Services could include those from outside agencies (e.g., CCAC) as well as from the SH provider. As an example, the SH package constructed for Davis for Site 4A is given below.

SH Site 4A: SH Package for Davis (13 weeks)	
Service	Frequency/13 weeks
SH Services	26 hours, personal support
External Services	
Transportation	39
CCAC Occupational Therapy	2
Caregiver Support –Counseling	13

While serving individuals with the same characteristics, both the mix and volume of services change as the site of care moves from the family residence to SH. Major differences between the home care and SH package can be summarized as follows:

- In the family residence, all services are provided on a service-by-service basis by external providers; in SH many services are provided in-house expanding opportunities for communication, ongoing assessment, and care planning;
- In the family residence, nutrition needs are addressed through a combination of meals-on-wheels and participation in congregate dining programs offered by adult day programs; in SH, nutritional needs can often be met through on-site meals;
- In the family residence, friendly visiting or visits to day programs ensure social connectedness; in SH, on-site congregate activities provide regular opportunities for social engagement, communication and ongoing assessment;
- In the family residence, transportation is required to bring workers to clients, and clients to services; in SH residents transportation needs are minimized, although transportation may still be required for medical appointments and shopping;
- In the family residence, older persons requiring emergency assistance use 911 or response systems offered by external providers who then contact emergency personnel; in SH, there is immediate access to staff (often, but not always on a 24/7 basis) mitigating the need for call systems and emergency services;
- In the family residence, Occupational Therapy services focus on assessing safety and accessibility; in SH sites designed for safety and accessibility, the focus shifts to providing therapy for individuals;
- In both the family residence and SH, caregiver counseling emphasizes and supports the crucial role and often challenging role played by family, friends, and neighbors.

3.7 SH Costs and Estimated Divert Rates

Using Method A (which averages costs across all residents in a SH site), we produced cost estimates for each of the 16 SH packages for each of the 6 SH sites; we then compared them to the cost of residential LTC. Recall that each of these estimates is for a 13 week period, excluding user fees and co-payments.

Below is an example for Site 4A, for Davis.

SH Site 4A: Costs for Davis Using Cost Method A (Average Cost Per Day)				
Service	Unit	Cost/Unit of Service	Units of Service (13 weeks)	Total Cost (13 weeks)
SH Program	day	\$15.82	91	\$1,439.62
SH Program Sub-Total				\$1,439.62
External Services				
Transportation	round trip	\$38.54	39	\$1,503.06
CCAC OT	visit	\$158.00	2	\$316.00
Caregiver Support	visit	\$17.60	13	\$228.80
External Services Sub-Total				\$2,047.86
Total Cost				\$3,487.48

Our key informants in SH Site 4A were also able to apply Method B, which calculates costs based on the number of hours of care required by individuals represented in each vignette. The results are shown below.

SH Site 4A: Costs for Davis Using Cost Method B (Hours of Care Per Day)				
Service	Unit	Cost/Unit of Service	Units of Service (13 weeks)	Total Cost (13 weeks)
SH Program	hour	\$46.38	26	\$1,205.88
SH Program Sub-Total				\$1,205.88
External Services				
Transportation	round trip	\$38.54	39	\$1,503.06
CCAC OT	visit	\$158.00	2	\$316.00
Caregiver Support	visit	\$17.60	13	\$228.80
External Services Sub-Total				\$2,047.86
Total Cost				\$3,253.74

Note that because individuals in the Davis sub-group have lower than average needs and use fewer than average hours of care, “Total SH Cost” for Davis was slightly lower using Method B (which looks at actual hours of care) as compared to Method A (which averages care across all residents in an SH site). Conversely, for residents with higher than average needs, requiring higher than average hours of care, Method B cost estimates tended to be higher.

Recall that individuals in BoC sub-groups are considered to be “diverts” if the total cost to the LHIN (excluding user fees and co-payments) is equal to, or less than, the total cost to the LHIN of a residential LTC bed (excluding resident co-payments) for the same period.

The “overall divert rate” is calculated by dividing the total number of individuals in divertible sub-groups by the total number of individuals in the 16 sub-groups for which SH packages were constructed. Detailed divert rate calculations are given below for SH Site 4A using both Method A and Method B.

SH Site 4A: Divert Rate Estimate Using Cost Method A (Average Cost Per Day)							
Sub-Group	Number on LTC Wait List in NW Region	Percent of LTC Wait List in NW Region	Number of Residents in SH Site 4A	SH Program Cost (Average Cost/ Day)	External Services Cost	Total Cost	LTC Cost
Copper	19	4.1%	N/A	N/A**	N/A	N/A	\$8,099.00
Davis	82	17.5%	19	\$1,439.62	\$2,047.86	\$3,487.48	\$8,099.00
Fanshaw	13	2.8%	0	\$1,439.62	\$2,205.86	\$3,645.48	\$8,099.00
Jones	7	1.5%	6	\$1,439.62	\$2,615.61	\$4,055.23	\$8,099.00
Kringle	14	3.0%	N/A	N/A	N/A	N/A	\$8,099.00
Lambert	10	2.1%	3	\$1,439.62	\$4,142.68	\$5,582.30	\$8,099.00
Quinn	10	2.1%	5	\$1,439.62	\$6,605.30	\$8,044.92	\$8,099.00
Rogers	8	1.7%	N/A	N/A	N/A	N/A	\$8,099.00
Upperton	13	2.8%	0	\$1,439.62	\$4,204.79	\$5,644.41	\$8,099.00
Vega	42	9.0%	2	\$1,439.62	\$4,354.81	\$5,794.43	\$8,099.00
Wong	33	7.1%	0	\$1,439.62	\$5,351.62	\$6,791.24	\$8,099.00
Xavier	36	7.7%	0	\$1,439.62	\$4,250.96	\$5,690.58	\$8,099.00
C. Cameron	52	11.1%	0	\$1,439.62	\$6,992.21	\$8,431.83	\$8,099.00
D, Daniels	44	9.4%	N/A	N/A	N/A	N/A	\$8,099.00
I. Innis	44	9.4%	N/A	N/A	N/A	N/A	\$8,099.00
J. Johns	41	8.7%	N/A	N/A	N/A	N/A	\$8,099.00
Total	468	100%	35				
Divert Rate						52.6%	

SH Site 4A: Divert Rate Estimate Using Cost Method B (Hours of Care Per Day)							
Vignette	Number on LTC Wait List in NW Region	Percent of LTC Wait List in NW Region	Number of Residents in SH Site 4A	SH Program Cost (Average Cost/Hour)	External Services Cost	Total Cost	LTC Cost
Copper	19	4.06%	N/A	N/A**	N/A	N/A	\$8,099.00
Davis	82	17.52%	19	\$1,205.88	\$2,047.86	\$3,253.74	\$8,099.00
Fanshaw	13	2.78%	0	\$1,205.88	\$2,205.86	\$3,411.74	\$8,099.00
Jones	7	1.50%	6	\$9,044.10	\$2,615.61	\$11,659.71	\$8,099.00
Kringle	14	2.99%	N/A	N/A	N/A	N/A	\$8,099.00
Lambert	10	2.14%	3	\$8,441.16	\$4,142.68	\$12,583.84	\$8,099.00
Quinn	10	2.14%	5	\$12,661.74	\$6,605.30	\$20,215.04	\$8,099.00
Rogers	8	1.71%	N/A	N/A	N/A	N/A	\$8,099.00

Upperton	13	2.78%	0	\$4,823.52	\$4,204.79	\$9,028.31	\$8,099.00
Vega	42	8.97%	2	\$8,441.16	\$4,354.81	\$12,795.97	\$8,099.00
Wong	33	7.05%	0	\$2,441.16	\$5,351.62	\$10,175.14	\$8,099.00
Xavier	36	7.69%	0	\$8,441.16	\$4,250.96	\$12,692.12	\$8,099.00
C. Cameron	52	11.11%	0	\$8,441.16	\$6,992.21	\$15,433.37	\$8,099.00
D. Daniels	44	9.40%	N/A	N/A	N/A	N/A	\$8,099.00
I. Innis	44	9.40%	N/A	N/A	N/A	N/A	\$8,099.00
J. Johns	41	8.76%	N/A	N/A	N/A	N/A	\$8,099.00
Total	468	100.0%	35				
Divert Rate						20.30%	

Note the following about these two examples:

- Divert rates estimate the proportion of individuals on the NW LTC wait list that could potentially be supported safely and cost-effectively in SH sites similar to Site 4A. However, this does not suggest that these individuals could be diverted immediately; additional capacity would likely be required.
- “N/A’s” in these tables identify BoC sub-groups judged not to be appropriate for SH Site 4A:
 - In the case of Copper, the key informant stated that individuals in this sub-group would not be eligible because their needs were too low;
 - In the case of Kringle, the key informant stated that individuals in this sub-group would not be appropriate since they required extensive assistance with toileting. This SH site does not have staff to assist during the night and Kringle’s caregiver does not provide assistance with ADLs.
 - In the case of Rogers, the key informant stated that due to high ADL and IADL needs (individuals in this group were completely dependent on others to perform tasks for them) and lack of a live-in caregiver, individuals in this sub-group would not be appropriate for this SH site. In contrast, individuals in some, but not all, sub-groups above Rogers could be admissible since while they are not cognitively intact, they have lower ADL and IADL needs, and many have live-in caregivers.
 - With respect to I. Innis and J. Johns (both cognitively impaired, with high levels of ADL and IADL difficulties) it was concluded that SH would never be a safe option.

The tables below summarize divert rates for SH sites in Thunder Bay and the Region using both cost methods where possible. Estimates for SH sites in Thunder Bay and the Region are given separately since they were adjusted for differences in the characteristics of LTC wait-listed individuals, as well as for variable CSS costs. Using Method A, divert rates in Thunder Bay SH sites range from 30% to 33%; in the Region they range from 53% to 66% using Method A, and from 20% to 24% using Method B.

Thunder Bay	Method A Divert Rates	Method B Divert Rates
SH Site 1	30%	N/A
SH Site 2	33%	N/A

Region	Method A Divert Rates	Method B Divert Rates
SH Site 3A	59%	N/A
SH Site 3B	66%	N/A
SH Site 4A	53%	20%
SH Site 4B	55%	24%

3.8 Supportive Housing “Wish List”

We also asked SH providers about their “wish list” for the future. They suggested the following:

- **Expand SH capacity.** There was universal agreement that SH currently works for many older persons, informal carers and the health care system, and that it can be made to work on a larger scale. While there is great potential, current capacity is limited and needs to be expanded.
- **Build capacity where older persons have naturally congregated.** While SH can be built to anticipate where older persons will choose to live in the future, SH services can also “follow the seniors” particularly where they are concentrated in municipal housing buildings, in private apartment buildings, or even in hospital wings.
- **Continue to emphasize prevention and maintenance.** While there is some overlap in the characteristics and needs of SH residents and those on LTC wait lists, SH should not be considered an inexpensive substitute for LTC; most SH sites do not have the capacity to care for older persons with cognitive impairments or heavy personal care needs. The key is admitting older persons earlier, and keeping them later, by focusing on prevention and maintenance, developing care routines and coping skills, delaying or avoiding hospitalization or institutionalization, and smoothing transitions when needed.
- **Allow SH sites to manage admissions and resident mix.** SH care managers emphasized that their resources are finite and that to ensure high quality, appropriate care, and avoid risks to residents, informal carers and workers, they need to continuously balance resident mix and

available resources. Many factors impact on this balance. The availability of trained workers varies considerably with most communities experiencing continuing shortages. A net outflow of younger persons continues, leaving many older persons without informal caregivers, or with spouses who themselves need care. Access to crucial services such as transportation also varies across urban, rural and remote areas. Thus, while SH wait lists might be maintained centrally, admissions must be managed locally to ensure the best “fit” between needs and capacity.

- **Promote closer links between SH and LTC.** As described above, some SH sites are located near LTC facilities and share resources; this offers advantages to residents in both SH and LTC who can access programs and services which might otherwise not be available. Familiarity with the LTC facility also offers smoother transitions for residents and families when independent living is no longer possible, and vice versa, since some LTC residents improve sufficiently to return to SH. The ability to transition to a proximate LTC facility can be beneficial for couples -- if one transfers next door, the couple can maintain their relationship without both moving to LTC. While SH and LTC fall under different legislation and funding mechanisms, and while LTC placement is currently managed centrally, stronger linkages between SH and LTC could encourage joint programs and greater scope to transition individuals smoothly in their own communities.
- **Promote closer links between SH and other providers.** Particularly in smaller communities, with limited resources, there is a tradition of interdependence and collaboration between providers. It was observed that partnerships with recreational facilities enhance social opportunities while maintaining functional independence and mobility. Visiting nurses can organize clinics in SH to manage medications, conduct blood tests and diagnose health conditions. Physiotherapy and social work are relatively new but valuable services which maintain the functional capacity of SH residents and enhance family support, care coordination and referral. One SH site has partnered with a family health team to provide access to primary care, including the services of a Nurse Practitioner. Strong linkages between providers result in better triaging of needs and more seamless, timely transitions between home, SH and LTC.
- **Invest in workers.** The availability of health human resources is an ongoing challenge. Some providers commented that adequate compensation is needed to attract and retain workers and improve continuity and quality of care. But even where workers are available, they may not be appropriately trained. Since a growing number of older persons experience Alzheimer’s disease or other dementias, and since this poses particular challenges in SH where independent living is emphasized, training programs for workers and managers in this area could improve care and potentially expand capacity.
- **Make programs equitable.** SH programs and services require user fees which vary by provider. Ideally, funding would be sufficient to make user fees unnecessary since they create barriers to access particularly in smaller, poorer communities. If user fees are required, thought should be given to standardizing them across the NW to ensure equal treatment.
- **Enhance palliative care.** Currently there is little capacity to support end-of-life care in SH. Such capacity is needed so that SH does not become a form of transitional care.

4.0 Conclusions

As noted in our introductory remarks, the North West Balance of Care Project II (NW BoC II) aimed to estimate the potential for supportive housing (SH) to maintain the region's growing population of older persons safely and cost-effectively "closer to home."

To achieve these goals we used the Balance of Care (BoC) approach previously used in the North West Balance of Care Project I, and in other 8 regions of Ontario, to examine the characteristics and needs of individuals on the LTC wait list, and to estimate what proportion could safely and cost-effectively age in place in SH. A particular strength of this approach is the combining of the best available quantitative data with the insights and analysis of the most experienced leaders and care managers who understand needs and capacity to meet needs at the local level. This combination produced a very rich portrait of what SH now does, and what it could potentially do.

Below, we offer a number of conclusions drawn from this analysis and our read of the literature.

4.1 SH Offers Considerable Potential to Support "At Risk" Older Persons in the NW

Our first conclusion is that SH offers considerable potential to support older persons safely and cost-effectively "closer to home" in the NW.

NW BoC I (conducted in 2008) analyzed the potential to "divert" individuals from LTC wait lists. It concluded that 8% of individuals "at risk" of institutionalization in Thunder Bay, and 49% of wait listed individuals in the surrounding Region, could be supported safely and cost-effectively in the family residence if given access to needed home and community care.

By contrast, NW BoC II (conducted in late 2009) estimates higher divert rates for SH even though overall levels of need for LTC wait-listed individuals have increased since 2008 across the NW. In Thunder Bay, SH divert rates approach one third (30% to 33%), while in the Region divert rates range from 20% to 66% depending on site and method of cost calculation. Of course, it is important to emphasize that these divert rates estimate potential, not current capacity.

4.2 SH Generates Value

SH is not a single, uniform entity. Rather it comes in many shapes and sizes, reflecting, to a large degree, differences in needs and resources at the local level. Indeed, most SH sites have grown "from the ground up" in response to the needs of a growing population of older persons who wish to continue to live in their own communities as independently as possible, for as long as possible. While SH is not the family residence, it is home, in the same way that an apartment or condominium would be home.

Advantages of SH (compared to LTC) are seen to include:

- Enhanced independence, quality of life, privacy
- Less intrusive care
- Particularly for individuals in low to middle needs sub-groups, a cost-effective alternative to LTC which can be adapted to existing housing stock to avoid capital costs and construction delays.

Advantages of SH (compared to home care in family residence) are seen to include:

- Ability to concentrate resources in a single location
- Increased flexibility in the use of available resources including staff
- Reduced travel costs for residents and workers

- “Critical mass” for SH congregate activities (e.g., meals, social activities) which can be levered to establish a service hub for the broader community
- Increased peace of mind for older persons and carers
- Improved coordination/navigation, pro-active planning, smoother transitions, and crisis avoidance

4.3 Prevention and Maintenance are Key

The international literature suggests that home and community care (H&CC) can:

- Substitute for acute care in hospitals;
- Substitute for long-term care in facilities;
- Prevent illness and disability, and maintain functional capacity and wellbeing

According to our key informants, while often seen as a less expensive substitute for LTC, SH’s real value lies in maintaining wellbeing and functional capacity, and preventing or delaying hospital and facility care. Thus instead of pegging SH at a particular needs level (e.g., MAPLe 3’s or 4’s), SH aims to admit individuals earlier and keep them later as part of a dynamic and proactive process of continuously monitoring needs and planning care pathways, including transitions to LTC or hospital when required, avoiding crisis placements.

4.4 Risk Management is Crucial

SH key informants emphasized risk management as a means of ensuring high quality care. While there is always some risk associated with caring for older persons with declining mental and physical abilities, risk increases unacceptably as needs outstrip organizational capacity. This means that there has to be ongoing assessment of who to admit, how to care for them, and when to transition to LTC if required.

Most importantly, while a majority of SH sites in the NW offer 24/7 staffing, none has the capacity for 24 hour surveillance. Consistent with the idea of independent living, residents are free to come and go, and to make their own decisions, for good and for bad, which means that SH is likely not an optimal choice for individuals with major cognitive impairments, who wander, pose safety risks, are aggressive, or make poor decisions. Nor do SH sites currently have the capacity to provide heavier personal care such as two-person transfers for bathing and toileting, although presumably, such capacity could be enhanced with additional resources and staff training. Thus ongoing risk management is vital to ensure an optimal balance between resources and needs.

4.5 Realize SH’s Potential

Finally, our key informant interviews and review of the literature suggest a number of strategies for realizing SH’s potential in the NW. These include:

- *“Follow the seniors.”* Begin by identifying concentrations of older persons in existing housing (including public housing) and build SH capacity around them. In larger communities this can happen in apartments buildings with high densities of older persons; in smaller communities, larger houses could be adapted as Abbeyfield-type SH sites where 6 to 10 people have their own private rooms, share congregate services including meals, and have access to 24/7 staff including emergency on-call. Such strategies lever the advantages of “critical mass” while avoiding the prohibitive costs and delays associated with constructing new buildings.
- *Clone satellites.* Two current SH providers in the NW have used this strategy effectively, establishing services at one site, building capacity, and then extending services to a new site. This takes full advantage of an existing base of experience, allows pooling of resources (including

administration and staff) across sites, and achieves improved flexibility and economies of scale.

- *Network SH sites.* Web-based and video technologies offer ever-expanding opportunities for SH providers in different locations to communicate, develop common approaches and protocol, share innovations and best practices, and anticipate and respond proactively to changing population needs. For example, conversations around risk management and admissions, particularly for older persons with cognitive problems, might be particularly valuable. Such technologies can also facilitate virtual team approaches to caring for individuals with complex needs, thus supporting care quality, continuity, and cost-effectiveness.
- *Develop SH sites into regional service integration hubs.* A key challenge, highlighted in NW BoC Projects I and II, particularly outside of Thunder Bay, is access to a coordinated range of community-based supports for older persons “at risk” of institutionalization. Even when services are present, individuals with multiple, chronic needs (and their caregivers) may still find it difficult to access and manage multiple services, often from multiple providers; LTC too often becomes the only viable option. It is in this context that SH could play a particularly valuable role by establishing regional service “hubs.” In addition to offering a range of services to residents, SH sites could radiate out services including scheduled health care clinics (e.g., primary care, pharmacy, nutrition, social work) to the broader community. The addition of standardized assessment and case management/care coordination to the mix could see SH sites emerge as regional service integration hubs able to triage needs, plan care pathways, and navigate older persons to the most appropriate services and sites (including SH) across the care continuum.

There are valuable precedents: in the U.S., rural PACE (Programs of All-inclusive Care for the Elderly) models use interdisciplinary teams (including primary care physicians) to provide a coordinated range of services (preventive, acute and long-term care) to concentrations of older persons (55+ years of age) living in rural areas. Some programs offer services at a central site (such as SH and adult day programs) and others offer services in the family residence. While operated by different provider organizations, PACE sites have access to shared technical resources including rural workgroups on key issues (staffing, financing, infrastructure, technology, network development, risk management strategies, and community needs assessment) and consultation (particularly to support the start-up of new sites). Telehealth, telemedicine and teleconferencing are widely used for electronic medical records, communications, access to web-based resources and services, and digital imaging (e.g., paperless x-rays for radiology); also, clients can access information, refill prescriptions, and review their own medical histories on line. For case studies describing 3 rural PACE models see “Setting the PACE for Rural Elder Care” (2004) at <http://pace.techriver.net/website/download.asp?id=586>.

Closer to home, an ongoing project in North Renfrew, Ontario, has achieved considerable success in providing a range of supportive services to a scattered population of older persons, by building SH and LTC capacity at a central site, and then pushing services out to the broader community. Currently, this project services 40+ clients in supportive care apartments and LTC beds, more than 30 respite clients and 300+ clients in the community, while coordinating over 300 volunteers. For details see “From Denmark to Deep River: Integrating Care in Small and Rural Communities in Ontario” (2010) at <http://www.longwoods.com/content/21223>.

Appendix 1: Balance of Care Sub-Groups

Sub-group	Cognition	ADL Difficulty	IADL Difficulty	Live in Caregiver
1. Appleton	Intact	No	No	Yes
2. Bruni	Intact	No	No	No
3. Copper	Intact	No	Some	Yes
4. Davis	Intact	No	Some	No
5. Eggerton	Intact	No	Great	Yes
6. Fanshaw	Intact	No	Great	No
7. Grimsby	Intact	Some	None	Yes
8. Hamilton	Intact	Some	None	No
9. Islington	Intact	Some	Some	Yes
10. Jones	Intact	Some	Some	No
11. Kringle	Intact	Some	Great	Yes
12. Lambert	Intact	Some	Great	No
13. Moore	Intact	Great	None	Yes
14. Nickerson	Intact	Great	None	No
15. Opus	Intact	Great	Some	Yes
16. Pringle	Intact	Great	Some	No
17. Quinn	Intact	Great	Great	Yes
18. Rogers	Intact	Great	Great	No
19. Smith	Not Intact	None	None	Yes
20. Thompson	Not Intact	None	None	No
21. Upperton	Not Intact	None	Some	Yes
22. Vega	Not Intact	None	Some	No
23. Wong	Not Intact	None	Great	Yes

24. Xavier	Not Intact	None	Great	No
25. Yeung	Not Intact	Some	None	Yes
26. Zeleny	Not Intact	Some	None	No
27. A. Armour	Not Intact	Some	Some	Yes
28. B. Biloski	Not Intact	Some	Some	No
29. C. Cameron	Not Intact	Some	Great	Yes
30. D. Daniels	Not Intact	Some	Great	No
31. E. Edwards	Not Intact	Great	None	Yes
32. F. Fish	Not Intact	Great	None	No
33. G. Gallo	Not Intact	Great	Some	Yes
34. H. Hogan	Not Intact	Great	Some	No
35. I. Innis	Not Intact	Great	Great	Yes
36. J. Johns	Not Intact	Great	Great	No

Notes:

- Vignettes and care packages constructed for 16 highlighted sub-groups in 2008 and 2009.

Appendix 2: Distribution of All Wait-Listed Individuals by Location (Thunder Bay, Region, Entire NW) for 2008 and 2009

BoC Sub-Group	Thunder Bay (%)		NW Region (%)		Entire NW (%)	
	2008	2009	2008	2009	2008	2009
Appleton	0	0	0	0.2	0	0.1
Bruni	0.2	0	2	0.4	0.8	0.2
Copper	1	0.6	6	3.9	3.1	2.3
Davis	7	1.9	25	16.8	14.6	9.3
Eggerton	1	0.8	2	1.4	1.4	1.1
Fanshaw	4	2.7	5	2.7	4.4	2.7
Grimsby	0	0	0	0	0	0
Hamilton	0	0	0	0	0	0
Islington	1	0.2	1	0.2	0.9	0.2
Jones	3	1.9	1	1.4	2	1.6
Kringle	3	1.9	1	2.9	1.9	2.4
Lambert	5	3.1	3	2.0	4.1	2.7
Moore	0	0	0	0	0	0
Nickerson	0	0	0	0	0	0
Opus	0.4	0.2	1	0.2	0.7	0.2
Pringle	1	1	1	0.6	0.9	0.8
Quinn	3	3.5	1	2.0	2.2	2.8
Rogers	5	6.4	2	1.6	3.5	4.1
Smith	0	0	0	0	0	0
Thompson	0.2	0	0.3	0.2	0.2	0.1
Upperton	2	1.2	5	2.7	3	1.9
Vega	3	4.2	9	8.6	5.9	6.5
Wong	3	4.8	5	6.8	4.1	5.7
Xavier	7	7.7	8	36 (7.4)	6.7	7.5
Yeung	0	0	0	0	0	0

Zeleny	0	0	0	0	0	0
A.Armour	1	0	1	0	0.9	0
B.Biloski	2	1.2	1	0.6	1.6	0.9
C.Cameron	8	11.4	6	10.7	6.9	11.1
D.Daniels	14	17.9	5	9	10	13.5
E.Edwards	0	0	0	0	0	0
F.Fish	0	0	0	0	0	0
G.Gallo	0.2	0	0	0	0.1	0
H.Hogan	0	0	0	0	0	0.1
I.Innis	14	15	7	9	10	11.9
J.Johns	12	12.3	6	8.4	9.4	10.3
Total	475	481	383	488	864*	975*

Notes:

- Vignettes and care packages constructed for 16 highlighted sub-groups in 2008 and 2009.
- Totals exclude 6 individuals in 2008 and 7 individuals in 2009 for whom location (Region/Thunder Bay) was not known.