Relocation of the Vegreville Care Centre:
The Impact of Changing Environments on Residents, Family Caregivers, and Staff

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EXECUTIVE SUMMARY

In May 2008, the Vegreville Care Centre was relocated to a new, **purpose-built, cottage-style, 60-bed long-term care facility**, and the existing facility was closed. Working in partnership with the former East Central Health Region, Rockliff Pierzchajlo Architects & Planners Ltd. (the architectural firm responsible for the new facility design), and Alberta Seniors and Community Supports, researchers from the Alberta Centre on Aging at the University of Alberta conducted a case study on the relocation of the Care Centre. The objective of the study was to explore the impact of the new facility on residents, families, and staff, with particular attention given to environmental factors.

This report provides an **overview of the study methods and key findings**. Data were collected over a 15-month period (April 2008 – June 2009). At baseline, 39 residents, 37 family caregivers, 56 staff members, and 4 key informants participated in the study. The first follow-up occurred four months after relocation to the new Care Centre. The second follow-up took place 12 months after the move. Attention here focuses on **views about relocation and the move**, an **assessment of location**, the **physical environment**, the **social/care environment**, and the **impact on the residents', family caregivers', and staff members' situations**.

Changes in both the **physical and social/care environments occurred** prior to and after the move. In terms of the **physical environment**, the Care Centre moved from an institutional, hospital-like environment to a model of five cottages with 12 residents each. Each cottage has its own kitchen, dining and living rooms, tub room, and personal laundry facilities. Residents have private rooms and individual bathrooms with showers. The administrative offices, recreational and rehabilitation areas, and a resource room that is used by the RNs, LPNs, physicians, dietician, and pharmacists are in a centralized location rather than on each cottage. In terms of the **social/care environment**, the Care Centre experienced changes that were being implemented either region- or province-wide such as a change in the philosophy of care to the Eden Alternative, an increased emphasis on 'homelike' environments, changes in the roles/responsibilities of various staff members, and the implementation of new record-keeping systems.

Views about Relocation and the Move

In general, **the move itself was viewed as a success**. The relocation experience of this Care Centre highlights the following:

- **Advance preparation** is critical and needs to take many forms to alleviate concerns and to make different constituencies feel like their perspectives are being taken into account.
- **The allocation of time for family caregivers and staff to spend in the new facility** prior to the move and to make it as familiar for the residents as possible helps to facilitate the move.
- Perceived/real threats related to **changing established patterns/practices** need to be addressed. For example, concerns were expressed about the Care Centre moving from being physically **attached to an acute care hospital** to a central downtown neighbourhood location

approximately two kilometres from the hospital. Despite discussions with family caregivers and staff members, these concerns were evident prior to the move and at 4 months. By 12 months, the concerns about location had generally decreased.

Physical Environment

Overall, the new facility was viewed **much more positively** than the old facility.

- The new facility was more likely than the old facility to be rated as **homelike**. **Private rooms**, **personal decorations**, and **the smell of food** were identified as elements of homelikeness.
- A **cottage size of 12 residents** appears to be an appropriate number of residents per cottage, particularly given the required staffing.
- The **private rooms** and **bathrooms** generally drew very favourable comments. The **amount of space**, **privacy**, **brightness**, and the **availability of overhead tracking** were mentioned as benefits.
- The **kitchen** was rated highly, particularly by family caregivers. Several commented on the **smell of food** and the **opportunity for residents to watch the food being prepared**. At the same time, the need to meet care standards necessitated a **lack of kitchen access for residents and families**.

There were some suggested areas for **improvement**. These included: the **size of dining room and living room** in light of the acuity of residents and the need for equipment; the **size of the medication storage room** and the **location of the computer** in the kitchen/dining room, particularly in relation to issues of safety and confidentiality; and, the **location of the resource room** in the central area of the facility as it resulted in a change in and concern about the visibility of the RNs/LPNs for family caregivers and for the HCAs.

The **lack of a staff room** was a major catalyst for staff discontent. While the decision was in keeping with the Eden Alternative, staff desired allocated space where they could get some relief from their work demands. It would be useful to obtain the view of new staff with regards to the need for a staff room; it may be that individuals who have not had the previous experience of a staff room would not have the same level or type of concern as those who have had access to a staff room in the old facility.

Social/Care Environment

As noted above, several changes in the social/care environment have occurred. Some of these changes were necessitated by the change in the physical environment while others reflected region- or province-wide system changes.

- **HCAs** assumed responsibility for **food preparation, laundry and light housekeeping**.
- The physical layout required an **increase in the number of HCAs** in order to provide the necessary HCA coverage.
- The **RNs/LPNs** faced challenges with the physical layout of the new facility as they had to cover five cottages and were not as visible on the cottages as they had been in the old facility. Perceived/real communication breakdowns were identified. Increased time on the units appears to

be needed to monitor resident care, provide leadership to and teaching opportunities for the HCAs, and increase RN/LPN accessibility to family members.

- Initially it was thought that the HCAs could provide **recreation** as well as perform their other tasks. It was quickly recognized that there was no time in their workload for this. Ensuring the availability of adequate funds for recreational activities was viewed as critical in this setting.

- The initial plans also called for one **housekeeper** for the central area and the HCAs cleaning the cottages. Again this approach was not feasible given other demands on the HCAs and a higher level of housekeeping support than initially anticipated has been in place.

The success of implementing the **Eden Alternative** that emphasizes flexibility and personal choice by the resident clearly requires buy-in from staff members and to a lesser extent residents and family members. This shift in the philosophy of care takes time and the physical design can enhance its implementation. Interestingly, while having the same physical layout and the same philosophy of care, **each cottage was distinct and appears to have its own character.** Residents, family caregivers, and staff members all contribute to that character.

Impact on Residents', Family Caregivers', and Staff Members' Situations

The extent to which changes in the residents', family caregivers' and staff members' situations can be linked to the changes in the physical environment and/or the social care environment is difficult to assess. Given the health needs of the long-term care population, some declines in health and activity participation would be anticipated. Family caregivers may face different challenges with the changing needs of their family member. Staff may require time to adjust to new routines in changing physical and social/care environments.

- In terms of **residents' situations**, some residents experienced changes such as increased independence in bathing or an increase in close relationships with other residents or staff. At the same time, there was an increase in the number of pressure sores and in the number of unsettled relationships. All of these changes may have been influenced by the changed environment.

- There was a pattern of general stability for the **family caregivers**. Little or no change was evident in the frequency of visiting, the activities while visiting, caregiver burden or the impact on employment. Some caregivers rated their caregiving experience higher overall at 12 months after the move which may reflect their family member being in a new purpose-build facility with consistency in staff.

- Changes in the **workload and work demands** as well as the lack of a staff room were areas of concern for **staff**. Over time, however, there were some **improvements**. By 12 months, some staff members had adapted to new work demands, had new routines, and had developed ways to obtain the necessary support for their work.

- **Staff morale** was problematic prior to the move but showed some improvement by 12 months. This improvement was particularly noticeable when assessing morale in the cottage rather than in the facility as a whole. **Suggestions to improve morale** included hiring more staff, rotating staff from cottage to cottage, increasing opportunities to interact with staff from other cottages, receiving recognition/positive reinforcement from administration, and better communication at all levels.

Overall, the **relocation of the Vegreville Care Centre can be considered a success** while recognizing that there are some areas for improvement. This study has highlighted some of the **challenges faced in the relocation** of one care centre and the introduction of a new physical environment and changing social/care environment. At the same time, the **high percentage of family caregivers who would recommend this facility to others** can be interpreted as a vote of confidence for the Care Centre. It must be recognized that the experiences of the relocation of this Care Centre are embedded within its own history and in the community within which it is located. The extent to which some of these experiences would emerge in other settings is open to speculation. As well, the focus of the study was on residents, family caregivers, and staff members who were involved in the Care Centre both prior to and after the move. New residents, family caregivers, and staff members may bring difference expectations and have different experiences than the individuals who participated in the study. Further research is needed to better understand new environmental designs and their impact on the lives of residents, family caregivers, and staff.

ACKNOWLEDGEMENTS

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INTRODUCTION

The provision of long-term care has been, and continues to be, an issue of concern to Albertans. Alberta Seniors and Community Supports, Alberta Health and Wellness, Alberta Health Services, and other stakeholders are committed to working together to improve the standards of care and accommodation in long-term care facilities in this province. The need to upgrade hospital-like long-term care facilities into more homelike environments is well recognized. Throughout the province, consideration is being given to new designs for long-term care facilities to better meet the needs of seniors and persons with disabilities.

Working in partnership with the former East Central Health Region, Rockliff Pierzchajlo Architects & Planners Ltd. (the architectural firm responsible for the new facility design), and Alberta Seniors and Community Supports, researchers from the Alberta Centre on Aging conducted a case study of the relocation of the Vegreville Care Centre. The opening of a new, purpose-built, 60-bed, long-term care facility in May 2008, and the closing of the existing facility provided a unique opportunity to better understand the impact of environmental change on residents, families, staff, and facility operation. According to East Central Health (ECH) (2007):

> *The new long term care complex reflects a new social model for continuing care that focuses on creating a flexible and personal "home-like" atmosphere for residents. The new building is divided into distinct wings to create five home-style "cottages", each with individual rooms and a central kitchen and living area serving 12 residents. (ECH, July 2007)*

The **objective** of the case study was to explore the impact of the new facility on residents, families, staff, and facility operations. Particular attention was given to environmental factors. Following a brief discussion of the methodology, this report provides an overview of the study findings. Topics addressed include:

- Selected characteristics of residents, family caregivers, and staff at baseline;
- Views about relocation and the move;
- An assessment of the location of the new facility;
- The physical environment;
- The social/care environment; and;
- Changes in the residents', family caregivers' and staff members' situations.

METHODS

A multi-method approach was used to address the objective of this case study (Table 1). Data were collected from residents, families, care centre staff, and key informants. Existing research (Borup, 1981; Hodgson et al., 2004) has highlighted the need to consider three time periods relative to relocation to a new long-term care facility: (1) anticipatory stage prior to relocation; (2) impact stage during which the move occurs; and (3) a settling-in or long-term impact stage. Data collection was undertaken prior to relocation, 4 months following the relocation, and 12 months following relocation.

Table 1. Summary of Methods

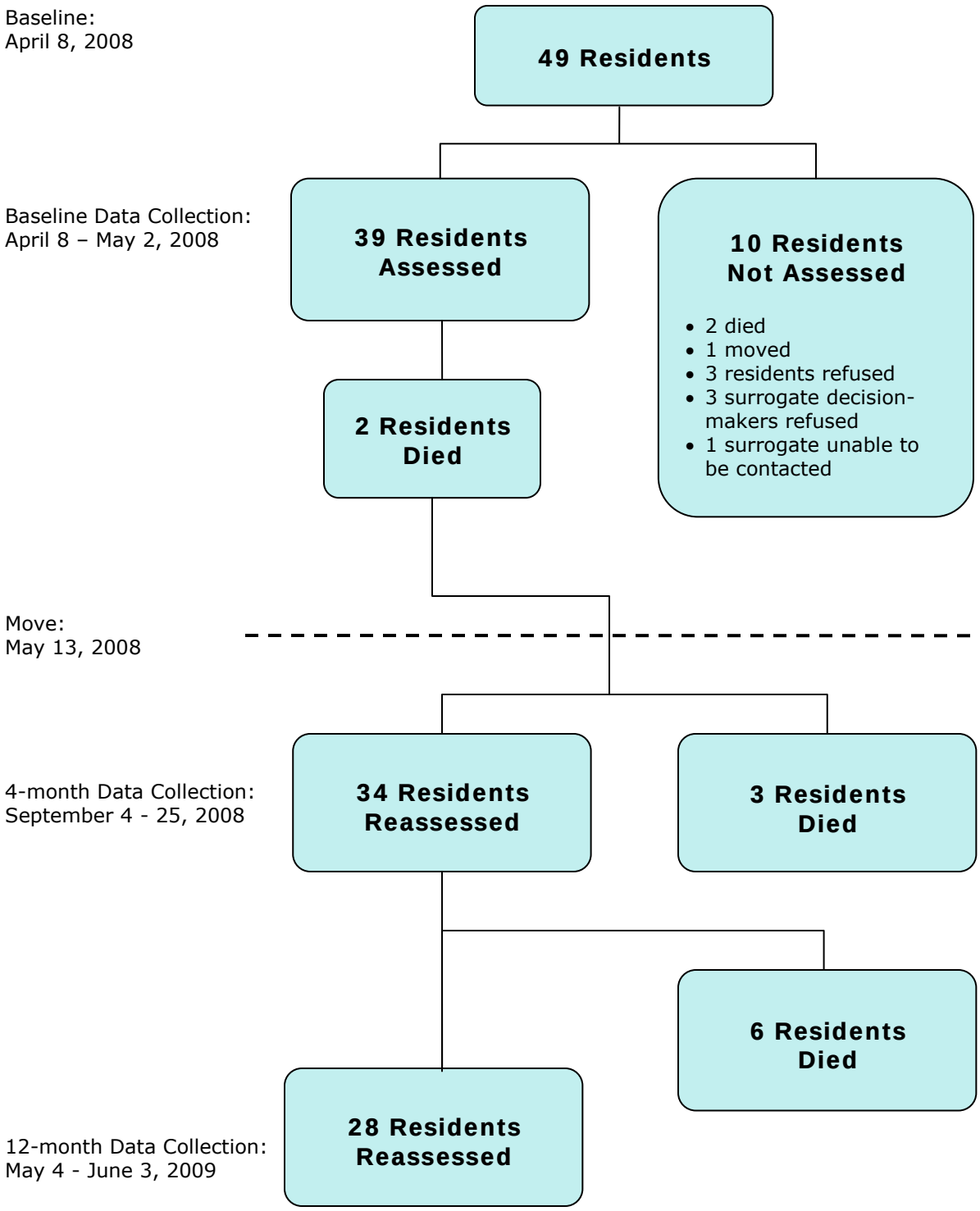
Source	Data Collection Tools	Sample Size at Baseline
Residents	Resident Assessment (*inter*RAI-LTCF) Views of Residents Survey (if cognitively intact)	39 23
Family caregivers	In-person interviews	37
Care staff	In-person interviews	56
Key informants	In-person interviews	4
Environmental Assessment	Therapeutic Environment Screening Survey for Nursing Homes (TESS-NH)	N/A

Residents

Residents were assessed prior to, 4 months after, and 12 months after relocation. The *inter*RAI Long Term Care Facility (*inter*RAI-LTCF) tool was selected as it provided a comprehensive and standardized assessment of residents' socio-demographic characteristics, physical and cognitive statuses, psychological and health conditions, behavioural problems, formal and informal service use and use of prescription and over-the-counter drugs. At 4 and 12 months, the *inter*RAI-LTCF was supplemented with questions specifically on change in key areas since relocation. Information on resident satisfaction was collected using a modified version of the Consumer Assessment of Healthcare Providers and Systems (CAHPS) Survey of Nursing Home Residents (NHCAHPS) (Sangl et al., 2007; Cosenza et al., 2006; Agency for Healthcare Research and Quality, 2007). Both the *inter*RAI-LTCF and the NHCAHPS are being used in a large-scale study of long-term care and designated assisted living in Alberta (Maxwell et al., 2004).

Figure 1 provides a flow chart of the status of the residents eligible for the study from the start of baseline data collection (April 8, 2008) to the completion of the 12 month data collection (June 3, 2009). When data collection began, there were 49 residents. Of these, 39 (80%) were assessed at baseline. At the 4-month point, 34 of these residents were reassessed as five had died. At 12 months, 28 residents were reassessed as six had died between the 4 and 12 month period.

Figure 1. Status of Residents



Family Caregivers

Family caregivers were identified by the residents themselves or by staff. Similar to the resident assessments, in-person interviews with family caregivers were conducted prior to, 4 months after, and 12 months after relocation. A comprehensive in-person interview was developed, with questions related to the old and new facilities, the provision of informal care, perceived quality of care, and indicators of caregiver well-being and burden. It drew on the tool developed, validated and employed in the Canadian and Manitoba Study of Health and Aging (C/MSHA) (Manitoba Study of Aging, 1999a; 1999b) and the instrument developed by Hawes et al. (2000) as part of their U.S. National Assisted Living study. Many of the questions are being used in the large-scale study of long-term care and designated assisted living in Alberta noted above (Maxwell et al., 2004).

Figure 2 provides a flow chart of the status of the family caregivers from the start of baseline data collection with this group (April 17, 2008) to the completion of 12-month interviews (June 24, 2009). At baseline, 37 caregivers were interviewed. In four instances, more than one caregiver was present at the interview; only one individual was considered as the primary caregiver. One caregiver refused to participate and there was no eligible family caregiver for one resident. Prior to the 4-month follow-up, four caregivers of residents who died during this period completed brief telephone interviews while one caregiver could not be reached. At the 4-month point, 31 of the 32 eligible caregivers were re-interviewed.[1] At 12 months, 25 caregivers were re-interviewed and one refused. Brief telephone interviews were conducted with the six caregivers of residents who had died.

Staff

Health care aides/nursing attendants (HCAs), licensed practical nurses (LPNs), registered nurses (RNs), clerks, recreation staff, and rehabilitation staff were interviewed in person. These interviews were taped, if agreed to by the respondent. At baseline, topics discussed included views about the move and the new facility, assessment of the physical environment in the existing (old) facility, work arrangements, and job satisfaction. At the 4-month and 12-month follow-ups, the topics remained virtually the same; the assessment of the physical environment focused on the new facility. Many of the questions were developed specifically for the case study. The exception was the use of Castle's (2007) Nursing Home Nurse Aide Job Satisfaction Questionnaire.

Figure 3 illustrates the status of staff from the start of baseline data collection (April 29, 2008) to completion of the 12-month data collection (June 15, 2009). At baseline, 56 of 65 staff members (86%) were interviewed. There were no refusals; four were on leave and five casual staff members were not scheduled to work during data collection. At the 4-month point, 51 staff members were re-interviewed, five were not interviewed, and three were interviewed for the first time. At 12 months, 44 staff members were re-interviewed, 10 were not, and seven were interviewed for the first time.

[1] Due to work demands, two daughter-in-laws were interviewed at 4 and 12 months after the move rather than the sons (considered as the primary caregiver at baseline). Both had been involved in the interview at baseline.

Figure 2. Status of Family Caregivers

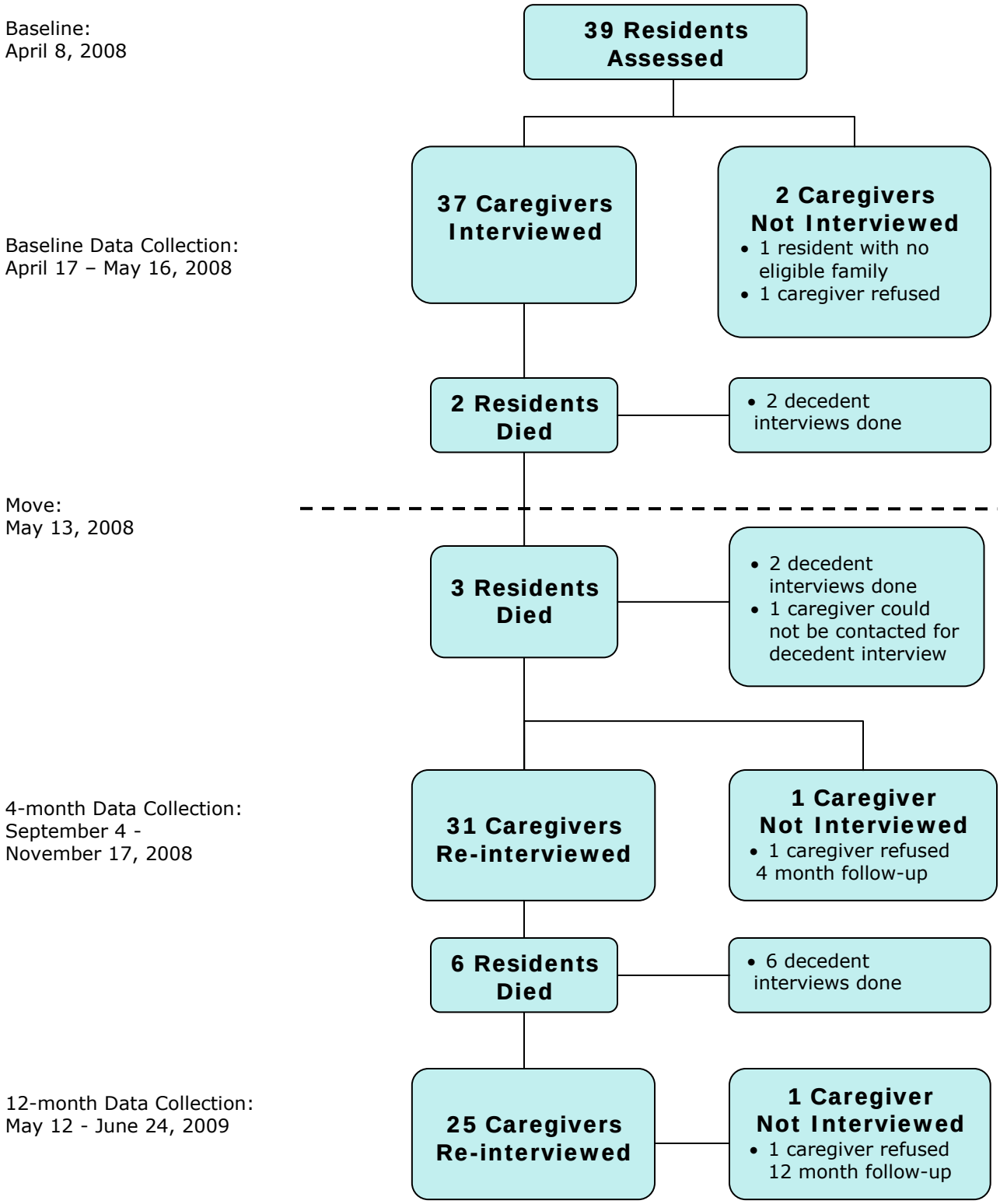
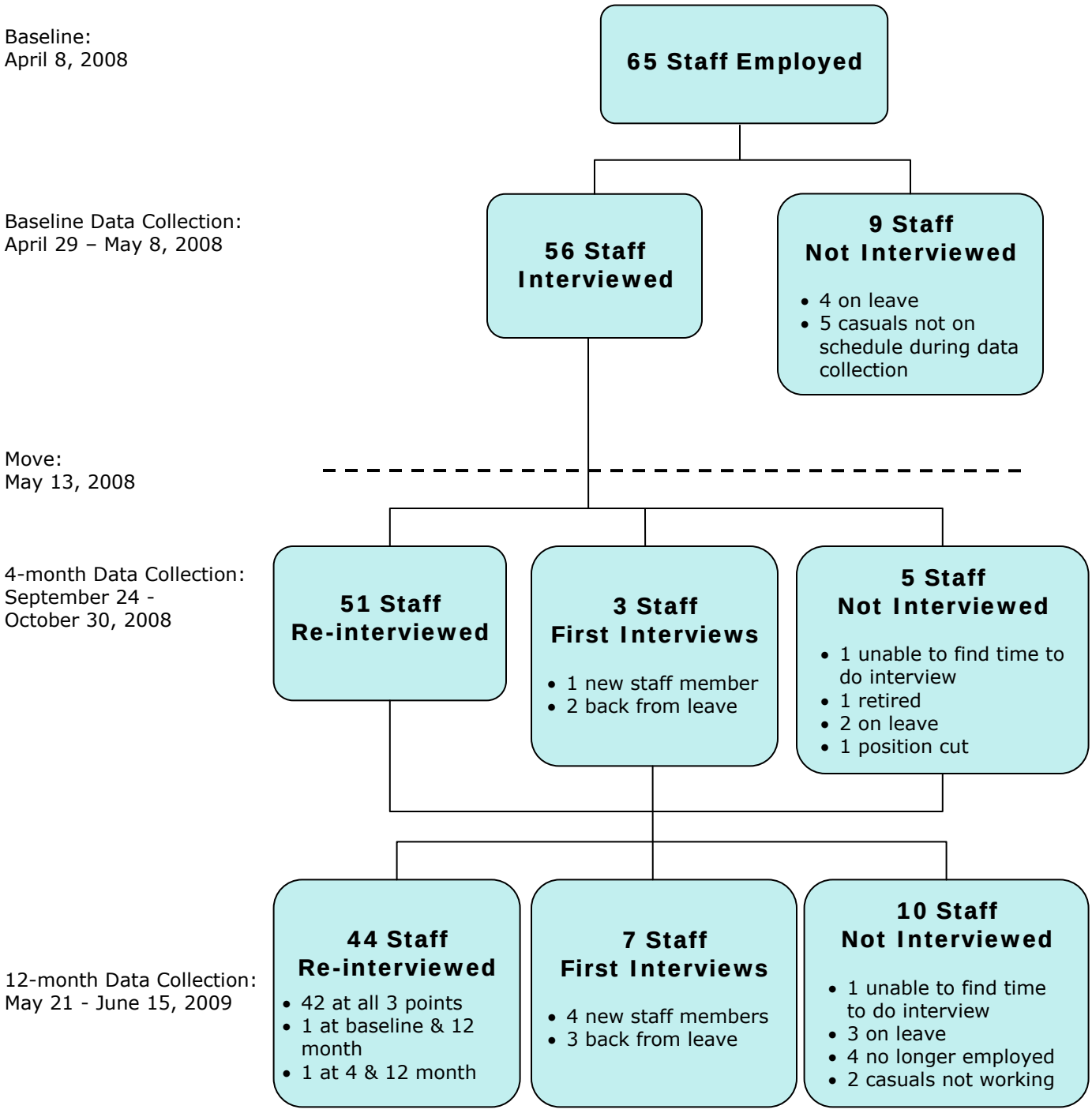


Figure 3. Status of Staff



Key Informants

At baseline, in-person, taped interviews were completed with three East Central Health representatives as well as a representative from the architectural firm. At 4-month and 12-month follow-ups, two East Central Health representatives were re-interviewed. These interviews focused on issues related to both the old and new facilities, and expectations regarding the impact of the new facility. Each interview was tailored specifically to the respondent and included common themes/ questions as appropriate.

Environmental Assessment

In order to assess and compare the physical environment and homelike qualities in each setting, a standardized environmental assessment was conducted in the old (May 1-2, 2008) and new (September 24-29, 2008) facilities. Using the Therapeutic Environment Screening Survey for Nursing Homes (TESS-NH) (Sloane et al., 2002), the residents' rooms and all facility common areas were assessed in detail.[2] This observational instrument was developed to evaluate physical aspects of long-term care settings, with a particular emphasis on dementia spaces. The 32-item checklist covers a range of environmental domains, including maintenance, cleanliness, safety, lighting, stimulation, noise and homelikeness (see Appendix A for additional information). Scores are calculated for these seven domains. In addition, 18 items are combined to form an overall environmental quality score.

In order to allow for comparisons between the old and new facilities, scores were calculated separately for each cottage. In the old facility, certain areas had been designated as Cottages 1-5 (see section on Physical Environment for further information). In the new facility, the cottages were distinct.

Presentation of Results

The remaining sections of this report focus on key questions of interest. The perspectives of residents, family caregivers, staff, and key informants are examined. Where appropriate, issues are illustrated by the words of these individuals. The number of study participants who answered a particular question varies as some individuals did not answer all questions and some did not complete all interviews. When examining change over time, the analyses are limited to the subset of participants who answered the particular question of interest at all relevant time points. Steps have been taken to ensure the reader is aware of the sample size when reviewing the results. It must be recognized that these results are from the experiences of one care centre only, and given the small sample size, caution is needed in their interpretation.

[2] Checklist and manual used in this study are available at http://www.unc.edu/depts/tessnh/pdf_files/tess-nh_8_18_00.pdf

A PROFILE OF RESIDENTS, FAMILY CAREGIVERS AND STAFF PRIOR TO RELOCATION

Residents

The characteristics of the **39 residents** at baseline are briefly summarized below, including socio-demographic characteristics, health status, and use of health services. The complex needs of the residents are clearly apparent.

Socio-demographic Characteristics

- 69% were **female**.
- The average **age** was 85 years, with a range from 23 to 101 years. Only two were under the age of 65.
- 74% were **widowed**.
- The length of **residency** in the Care Centre prior to the move varied.
    - The range was from 18 to 709 weeks.
    - The average was 223 weeks; the median was 168 weeks.
    - 18% had been residents for less than 1 year.
    - 26% had been residents for at least 5 years.

Health Status

- **Most prevalent diagnoses**
    - 74% arthritis
    - 62% coronary heart disease
    - 59% hypertension
    - 44% congestive heart failure
    - 36% stroke
    - 33% dementia other than Alzheimer
    - 33% osteoporosis
    - 31% depression
    - 31% diabetes
    - 21% Alzheimer disease

- **Functional disabilities**
    - Bathing: 92% totally dependent; 8% required maximal/extensive assistance
    - Toilet use: 39% totally dependent; 51% required maximal/extensive assistance
    - Dressing lower body: 36% totally dependent; 59% required maximal/extensive assistance
    - Dressing upper body: 33% totally dependent; 51% required maximal/extensive assistance
    - Transfer to toilet: 33% totally dependent; 51% required maximal/extensive assistance
    - Personal hygiene: 23% totally dependent; 41% required maximal/extensive assistance
    - Bed mobility (getting in/out of bed; turning): 15% totally dependent; 33% required maximal/extensive assistance
    - Eating: 13% totally dependent; 10% required maximal/extensive assistance

- **Mobility**
    - 87% used a **wheelchair or scooter** and one person was bedbound.

- **Continence**
    - 39% were **incontinent of bladder** with no control present; 31% were frequently incontinent (defined as daily incontinence but some control present).
    - 21% were **incontinent of bowel** with no control present; 13% were frequently incontinent.
    - 95% wore pads/briefs.

- **Pressure ulcers/skin problems**
    - 85% had no **pressure ulcers**; 13% had an area of persistent skin redness, and one resident had deep craters.
    - 10% were considered to have **major skin problems**.
    - 21% had received **wound care** in the three days prior to the assessment.

- **Falls**
    - 80% had no **falls** in the previous 90 days; six residents had fallen within the previous 30 days.

- **Pain**
    - 31% were reported to have **daily pain**.

- **Cognitive abilities**
    - Cognitive skills for **daily decision making**:
        - Only two residents were assessed as independent (decisions consistent, reasonable, and safe) and five were independent but had some difficulty in new situations only.
        - The remaining 32 residents had some level of impairment, ranging from minimally impaired (21%) to moderately impaired (33%) to severely impaired (28%).
    - 87% had **short-term** memory problems (did not seem/appear to recall after 5 minutes).
    - 62% had **procedural** memory problems (could not perform all or almost all steps in a multitask sequence without cues).
    - 39% had **situational** memory problems (did not recognize caregivers' names/faces frequently encountered AND did not know location of places regularly visited (e.g., bedroom, dining room)).

- **Diet/nutritional intake**
    - 87% had special dietary needs.
    - 79% required some form of modification to food in order to eat.

Health Service Use

- **Inpatient acute hospital visits** with an **overnight stay**
    - One resident had an overnight stay in the 90 days prior to the assessment.
    - Six residents had an overnight stay in the year prior to the assessment.

- **Emergency room use**
    - Three residents had visited the emergency room in the 90 days prior to the assessment. Ten additional residents had done so at least once in the year prior to the assessment.

Family Caregivers

The characteristics of the **37 family caregivers** at baseline are briefly summarized below, including socio-demographic characteristics and the caregiving situation. The diversity among caregivers is evident.

Socio-demographic Characteristics

- 60% were **female**.
- The average **age** was 65 years, with a range from 45 to 88 years.
- **Sons** (32%) and **daughters** (27%) were most likely to be the primary caregivers, followed by wives (14%), sisters (5%), husbands (3%), brothers (3%), other family members (14%) and friends (3%). The percentage of sons is higher than that reported in several other studies which may reflect the rural, farming community where the Care Centre is located.
- 68% were **married**.
- Ten family caregivers were **employed**; two worked less than 35 hours per week.

Caregiving Situation

- **Frequency of visits**
    - 24% visited less than 1x/week
    - 43% visited 1-2x/week
    - 19% visited 3-5x/week
    - 14% visited at least once a day

- The **distance** from the facility to the caregiver's home ranged from 0.2 to 563 kilometres.
    - 31% of the caregivers lived two kilometres or less from the Care Centre.

- The **length of the average visit** ranged from 13 minutes to 6 hours.
    - 19% visited for 30 minutes or less while 73% reported visits of at least one hour.

- **Activities when visiting** (% of caregivers reporting always or sometimes)
    - 73% cleaned up the resident's room
    - 70% took the resident for walks around the facility
    - 57% ate meals with the resident
    - 51% watched TV with the resident
    - 35% read to the resident
    - 35% took the resident for drives
    - 35% volunteered or helped other residents
    - 16% played games with the resident

- **Caregiving tasks**
    - 100% shopped for the resident
    - 89% paid bills/managed finances
    - 60% telephoned to see how the resident was doing
    - 54% wrote letters or called family/friends for the resident
    - 30% talked to the family physician about the resident
    - 22% made appointments for the resident
    - 16% talked to a specialist about the resident
    - 14% drove the resident to appointments

Staff

The characteristics of the **56 staff members** who were interviewed at baseline are briefly outlined below, including socio-demographic characteristics and their work situation.

Socio-demographic Characteristics

- 95% were **female**.
- There was a range in **ages**.
    - 11% under the age of 30
    - 23% aged 30-39
    - 25% aged 40-49
    - 23% aged 50–59
    - 18% aged 60+

Work Situation

- **Current position**
    - 54% Health care aides
    - 14% Nursing attendants
    - 4% Licensed practical nurses
    - 13% Registered nurses
    - 13% Physical therapy/recreation staff
    - 3% Clerical staff
- **Length of time working at this Care Centre**
    - 9% <1 year
    - 18% 1-5 years
    - 25% 6-10 years
    - 32% 11-20 years
    - 16% 21+ years
- 61% considered themselves as **full-time** staff, 32% as **part-time**, and 7% as **casual.**
- **Hours worked per week** ranged from 3 to approximately 43 hours.
- 55% of these staff members worked **days only**, 25% worked **evenings only**, and 9% worked **nights only**. The remainder worked varying shift combinations.

These characteristics highlight the situation of residents, family caregivers, and staff prior to the move.

VIEWS ABOUT RELOCATION AND THE MOVE

Several questions about relocation and the move were asked at baseline and at the 4-month follow-up. Of interest were overall **concerns about the move**, **preparedness for the move**, and **moving day experiences**.

Concerns about the Move

Prior to the move, residents, family caregivers and staff members were asked "*Would you say that you have none, some, or a great deal of concern about the move?*" Among the 22 **residents** who answered this question, 91% indicated that they had no concern. One expressed some concern and one had a great deal of concern. Almost half (46%) of **family caregivers** expressed some or a great deal of concern and 30% perceived that their **family member** who resided in the Care Centre had some/a great deal of concern. Almost half (48%) of **staff** indicated that they had some or a great deal of concern.

Preparedness for the Move

Several steps were taken to prepare residents and families for the move, including family meetings, the assignment of one staff person per cottage as a source of information about the move, updates in the monthly newsletter, and open houses. A key informant spoke about the open houses:

> *And with the open houses two weeks in advance we had different days and times… and we encouraged families to come in, set up the room…put marks on the wall so we could hang pictures up for them…see the colours, even though they had been posted for a long time…actually see the room, see the layout, bring in your TV, bring in your bedspread, bring in your pictures, bring in your fridge if you wanted a fridge or a microwave or whatever, so that the room was warm and welcoming. Do the memory box. So that it's not like you're walking in and there's like okay, I got four walls…and nothing looks familiar.*

Despite this information sharing, prior to relocation, 22% of **family caregivers** indicated that there was **additional information** they would like to know about the move. Four months after the move, 48% of the family caregivers indicated that there were additional things that they wished the facility had done to inform them about the plans. Examples of families' comments included:

Prior to the Move

- [Information about] *the whole move itself. I'd like a phone call from the cottage rep.*
- *How will it happen? When? Is there a plan for furnishing – how will it look? How will it be staffed? Will there be an RN?*
- *It's not clear as to how her belongings will be moved.*

4 months after the Move

- *We didn't get information soon enough. Things weren't clear. We didn't know when we could get in to the new place. I wish we had more chance to see her room to plan for space. We weren't told that we could move things in advance.*
- *We didn't get enough direct information. They should have met with families more often. I think they should have asked family input about the plans.*
- *Not enough information about the move, not enough on website or written. A lot of hearsay.*
- *[Resident] was getting a lot of negativity from other residents and staff. She needed some facts and reassurance, not gossip.*
- *We knew all that they had planned.*
- *We were well informed.*
- *Could not be done better.*
- *They did well – always available to answer questions.*

Some **staff** also requested additional information about the move (29% when asked prior to the move, 17% when asked after the move). Their **concerns** included knowing ahead of time the room locations of residents, the scheduling of the moving of cottages, and their own roles/routines.

Moving Day Experiences

Moving day was **May 13, 2008** and was organized by the recreation department. Three cottages of residents and staff were moved by van in the morning and two in the afternoon. Overall, the moving experience itself was seen to have gone smoothly.

In total, 43 **residents moved in to the new facility**. All 15 residents who were able to answer a question about the actual day of moving were positive. Examples of their comments included:

- *They brought me in a van. My* [family member] *fixed up my new room with new things. I don't have any of my cards or photos up yet. I have all new bedding which is nice. I was worried how it would be here. They had told me that I would have to make my own meals but the girls do them. I worried a lot for nothing.*
- *They brought me in a van. My room was ready. My family had moved most things before. No problems at all. It was exciting – a big day. I don't remember any problems. I was very nervous to see what it would be like but I'm happy now.*
- *I would say it went smoothly. My* [family member] *looked after getting my room all ready. She did all the work.*
- *They brought me on a bus. My* [family member] *got all my things ready in my room. I just had trouble finding some of things but it was pretty well organized.*

A key informant commented:

> *…and between the recreation department, rehab department, nursing staff - they did all the moves…We did three cottages in the morning and two in the afternoon and it was so efficient…. We could have moved everybody in the morning. We had enough time…. We had that break. We got people settled. We got lunch done. And then it was back for the next batch….It was like a big outing for the day and the weather was lovely… it worked really great. And then families went back in the afternoon if there was anything left over. ….We were very fortunate we didn't have to move beds so the rooms had the furniture, the bedside tables in them, the living rooms, dining – all the furniture was all new so we were very fortunate that way that things were in ahead of time so things looked homey and welcoming…*

Overall, despite some requests for additional information about the plans for the move, the general consensus was that **moving day was a success**. One key informant summed it up, saying "*And it went perfectly – it just – it was just a breeze."*

ASSESSMENT OF LOCATION

Unlike the old facility which was located on the outskirts of town and attached to the acute care hospital, the new facility was in a **central downtown neighbourhood** approximately two kilometres from the acute care hospital. The distance from the new location to the acute care hospital was recognized as a potential **concern for family and staff**. A key informant commented:

> *There was a lot of anguish for a lot of the families, though, that this facility was being built where it was being built, that is, in the center of town, and not near the hospital. So that umbilical cord to the hospital for the – I'd say a good 50, 60 percent of the families, was really hard for them to swallow. They felt that people who are in a care facility should be attached to acute care and that's the way it should be….we had quite a few family meetings where we tried to explain that continuing care is not for sick people. People here are not sick. They have chronic diseases and disabilities. But they're not acutely ill. If they were acutely ill they'd be in acute care.*

Another explained:

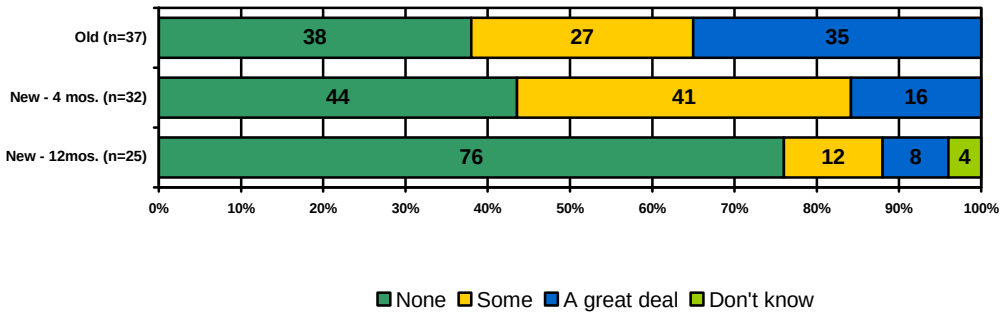
> *So part of it was just shifting people's thinking from the medical model to the social model. We had people say to us, 'well, if mom gets sick, the hospital's right next door to where she is now and they just go down the corridor and now we're in the middle of town, far from the hospital.' And our response would be 'well, it's a residential model. If mom was at home and she got sick what would you do?' 'Well, we'd call an ambulance'. 'Well, that's what we'll do here, too.' So it was part of getting people to move – not so much to the design that we were looking at but to the attitudes and philosophies of the new model.*

To assess the **extent of concern about the location**, family caregivers and staff were asked "*The new facility is not located next to the hospital. Would you say you have none, some, or a great deal of concern about the distance from the new facility to the hospital?"* The question was asked prior to the move as well as at the 4-month and 12-month follow-ups.

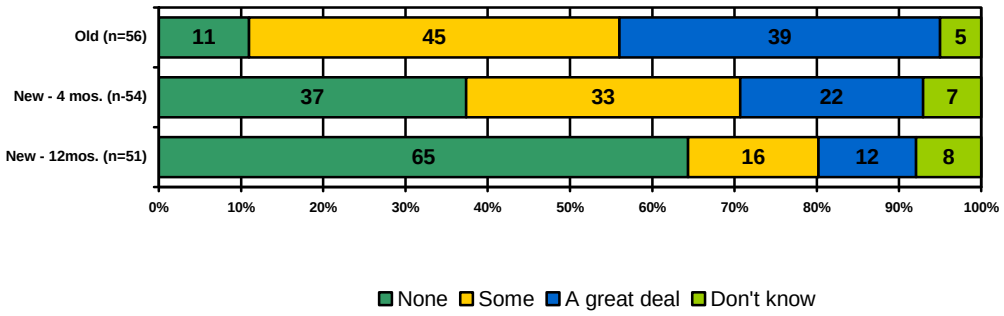
As illustrated in Figure 4, prior to the move, only one-third (38%) of the **family caregivers** and 11% of **staff** had no concerns about the distance to the hospital. At 12 months, 76% of the 25 family caregivers responded none compared to 65% of the 51 staff members.

Figure 4. Concern about the Distance to the Acute Care Hospital: Family Caregivers and Staff

A. Family Caregivers



B. Staff



To understand the change, it is important to examine the responses for only the family caregivers and staff members who answered the question at the three time points. As reported in Table 2, 33% of the 24 family caregivers and 30% of the 37 staff had the same amount of concern at all three time points. Conversely, 58% of family caregivers and 65% of staff had less concern after the move.

The concerns about the location generally **decreased** over time. To some extent, this may reflect the limited number of acute care hospitalizations in the first four months at the facility (see Residents' Situations for further information). One staff member explained:

> *… because we've got used to it and we aren't sending the patients or the residents for tests and stuff now…. Like before, it was easy to whip them over through the hallway and now it's 'oh, well, you know, the doctors come here'.*

Another commented:

> *…when we need to send somebody over* [to the hospital]*, we send them by ambulance or whatever….before we moved, we weren't sending people over that much, that had really tapered off…. we, RNs and LPNs have to, you know, really use our assessment skills. We do call physicians…as needed…it's not been a big issue.*

Table 2. Concern about Distance from Hospital Prior to, 4 and 12 Months after Relocation

Family Caregivers **(N=24)**	**Number of Caregivers**	**%**
Same level of concern	**8**	**33%**
• None -> None -> None	(6)	(25%)
• Great deal -> Great deal -> Great deal	(2)	(8%)
Less concern after relocation	**14**	**58%**
• Some -> None -> None	(2)	(8%)
• Some -> Some -> None	(3)	(13%)
• Great deal -> Some -> None	(5)	(21%)
• Great deal -> Great deal -> None	(1)	(4%)
• Great deal -> Some -> Some	(1)	(4%)
• Great deal -> Great deal -> Some	(2)	(8%)
More concern after relocation, then less	**2**	**8%**
• None -> Some -> None	(2)	(8%)
Staff **(N=37)**	**Number of Staff**	**%**
Same level of concern	**11**	**30%**
• None -> None -> None	(6)	(16%)
• Some -> Some -> Some	(2)	(5%)
• Great deal -> Great deal -> Great deal	(3)	(8%)
Less concern after relocation	**24**	**65%**
• Some -> None -> None	(6)	(16%)
• Some -> Some -> None	(7)	(19%)
• Great deal -> None -> None	(3)	(8%)
• Great deal -> Some -> None	(2)	(5%)
• Great deal -> Great deal -> None	(2)	(5%)
• Great deal -> Some -> Some	(1)	(3%)
• Great deal -> Great deal -> Some	(3)	(8%)
More concern after relocation	**2**	**5%**
• Some -> Some -> Great deal	(1)	(3%)
• Some -> Great deal -> Great deal	(1)	(3%)

Given the longstanding attachment of the long-term care facility to the acute care hospital, it is not surprising that concerns were expressed at the onset. The importance of recognizing **established patterns/practices** as well as the **perceived threats of change** is evident.

THE PHYSICAL ENVIRONMENT

Attention now turns to the physical environment of the old and new facilities. An overview of key features is presented, followed by an examination of the residents', families', and staff's views of the two environments and the study team's observations and measurements of various features. Topics examined include **overall physical layout and cottage size**, **specific spaces**, and **environmental quality** such as attractiveness, homelikeness, cleanliness, noise levels, and odours.

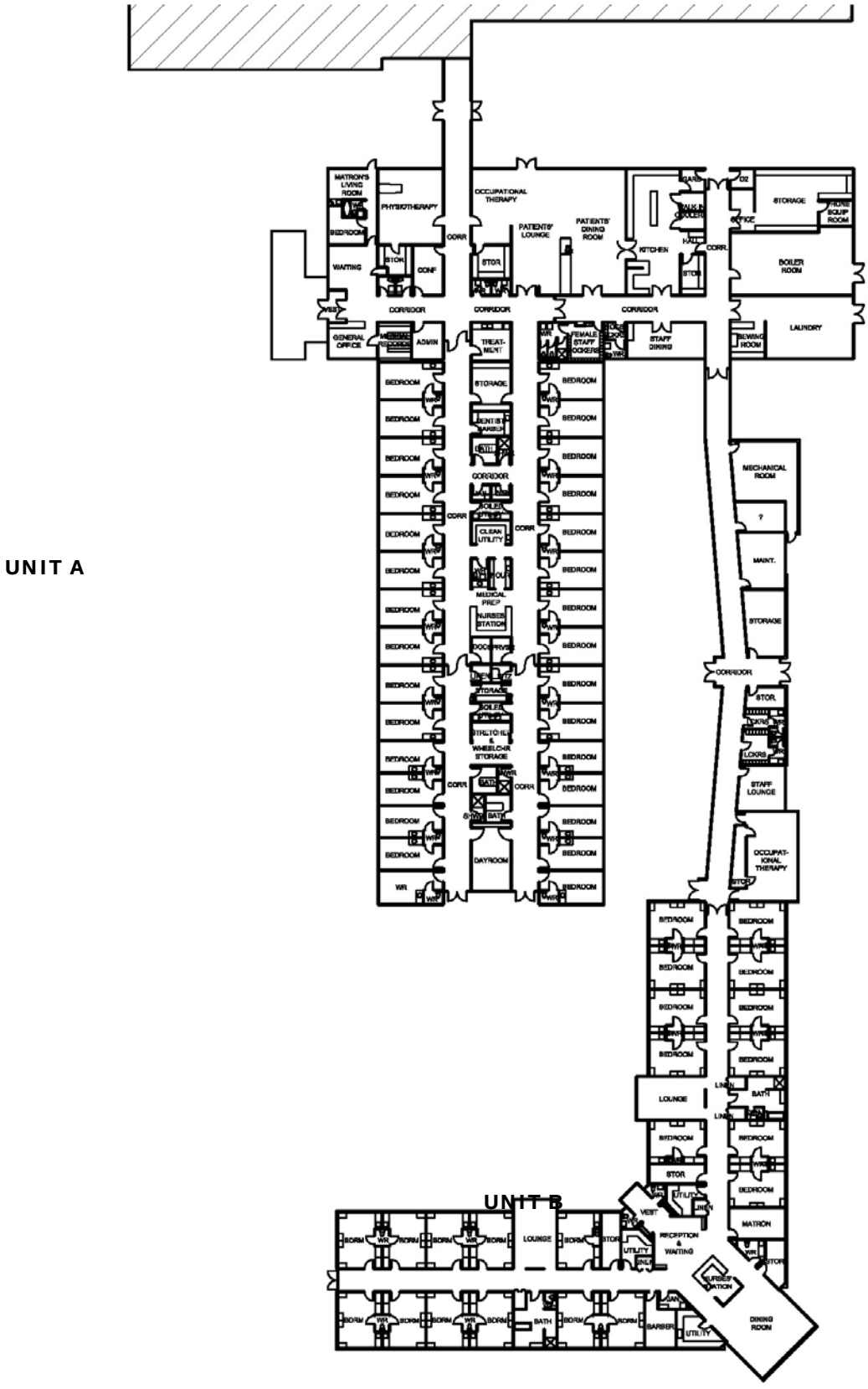
Key Features and Floor Plans

Key features of the physical environment of old and new facilities are outlined in Table 3. The **floor plans** (Figures 5-7) illustrate differences in the design of the two buildings.

Table 3. Description of the Physical Environment of the Old and New Facilities

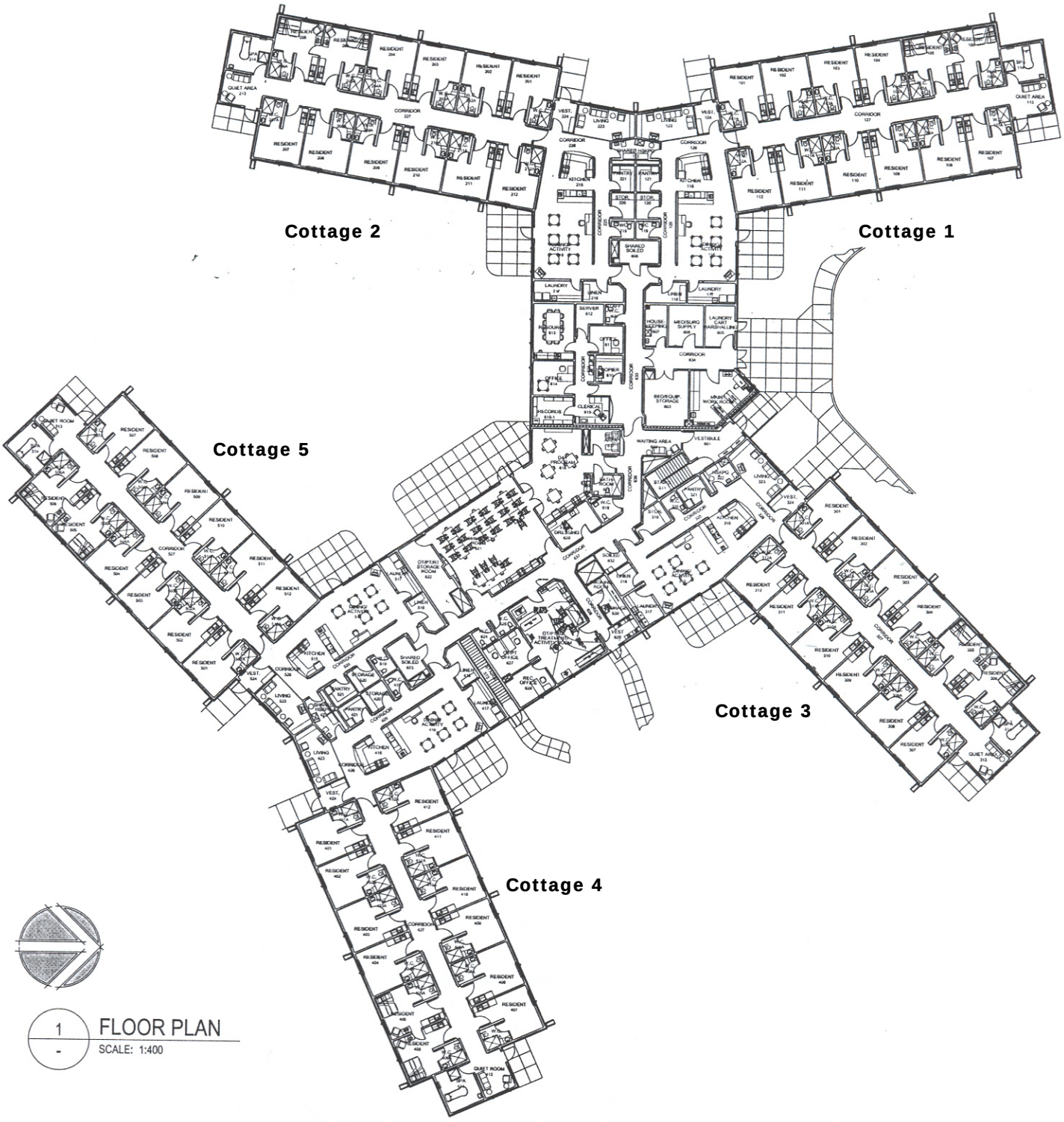
FEATURE	OLD FACILITY	NEW FACILITY
Building	Former auxiliary hospital	Purpose-built long-term care facility
Layout	2 Units (A and B); divided into areas referred to as cottages (3 on Unit A and 2 on Unit B)	5 cottages organized around a central area with administration, nursing and therapy services
Capacity/Cottage size	90 residents; 50 on Unit A and 40 on Unit B	60 residents; 12 residents per cottage
Designated Dementia Unit	1 area of Unit A; max 16 residents	1 cottage; max. 12 residents
Resident's Room	39 shared rooms (2 residents/ room), and 12 private rooms; some single occupancy in shared rooms prior to the move	100% private rooms, 2 adjoining rooms available for couples per cottage
Resident's Bathroom	Sink & toilet with shared access for residents of 2 rooms; not wheelchair accessible	Sink, toilet, shower; wheelchair accessible
Equipment	Mobile equipment for lifts	Ceiling tracks in all residents' rooms, including bathroom; individual lifts for majority of residents; some mobile lifts
Dining Room	1 main dining room for each unit with smaller dining room on dementia unit	In each cottage
Kitchen	In acute care hospital, with tray meal service	In each cottage; cooking in cottage
Laundry	All sent to acute care hospital	Personal laundry done in cottage
Tub Room	Two on each unit	Spa-like tub room in each cottage
Medication Room	On each unit	Cupboard in each cottage
Living Room/Quiet Area	2 small alcoves on Unit B; none on Unit A	In each cottage
Nursing Station	On each unit	Nursing resource room in central building
Staff Room	Staff room on each unit	No designated space; some staff use quiet area
Outdoor Space	Limited access	Access for each cottage (4 areas in total); some space for facility as a whole
Entrance for Visitors	Central entrance on each unit	Separate for each cottage

Figure 5. Floor Plan of Old Facility



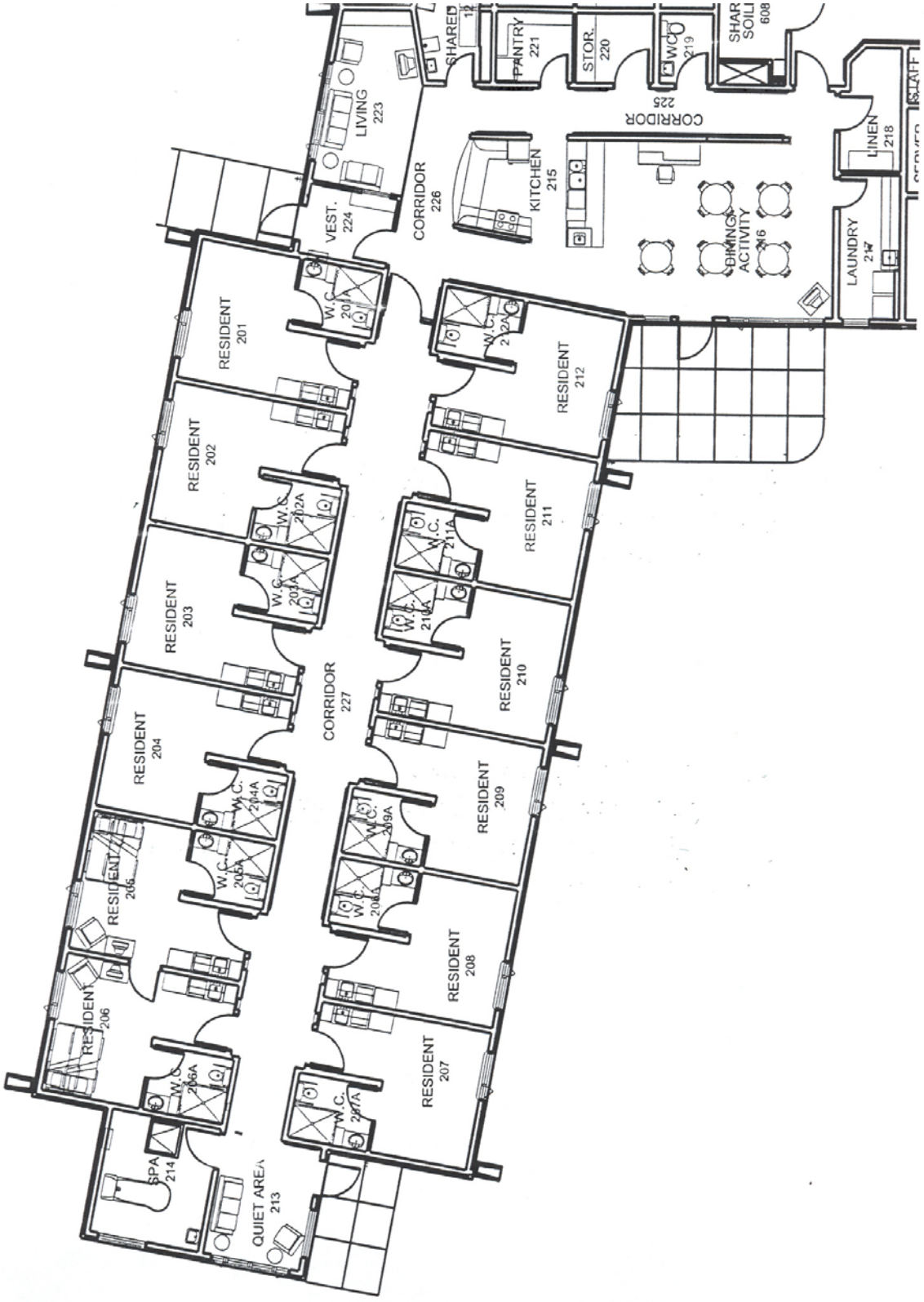
Floor plan provided by: Rockliff Pierzchajlo Architects and Planners Ltd.

Figure 6. Floor Plan of New Facility



Floor plan provided by: Rockliff Pierzchajlo Architects and Planners Ltd.

Figure 7. Floor Plan of New Facility - Cottage



Floor plan provided by: Rockliff Pierzchajlo Architects and Planners Ltd.

Physical Layout and Cottage Size

A key informant described the planning of the cottage layout in the new facility as follows:

> *…we saw the kitchen as the heart of the setting's public space. In planning um when planning anything from cities to private residences there's sort of a zoning of, you move from public to semi-public to semi-private to private. And in the cottage then, uh the private is your room and your washroom, the semi-public or semi-private is the dining room, living room areas, and the public areas is kind of the entranceway. There's not a strong line drawn between the public and semi-public in the cottages but the kitchen is really the heart of that uh the more public area of the house.*

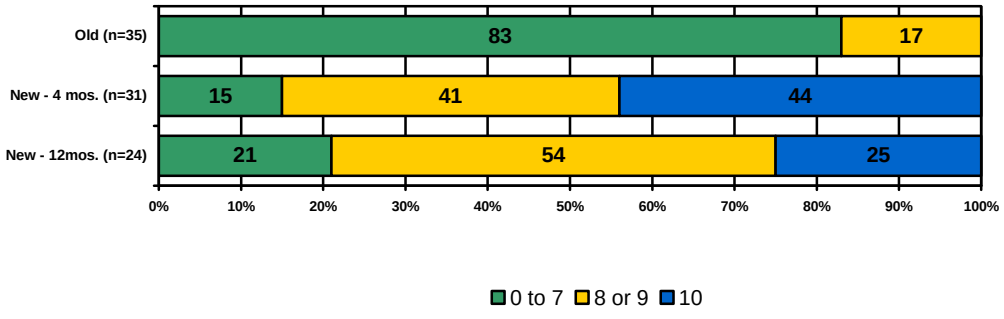
Family caregivers were asked to assess the overall physical layout and cottage size of both the old facility and the new facility. Possible scores ranged from 0 to 10, with 0 being the worst possible and 10 being the best possible. A score of 10 is considered the 'gold standard'. The ratings were obtained for the old facility prior to the move and for the new facility at 4 months and at 12 months after the move.

Physical Layout

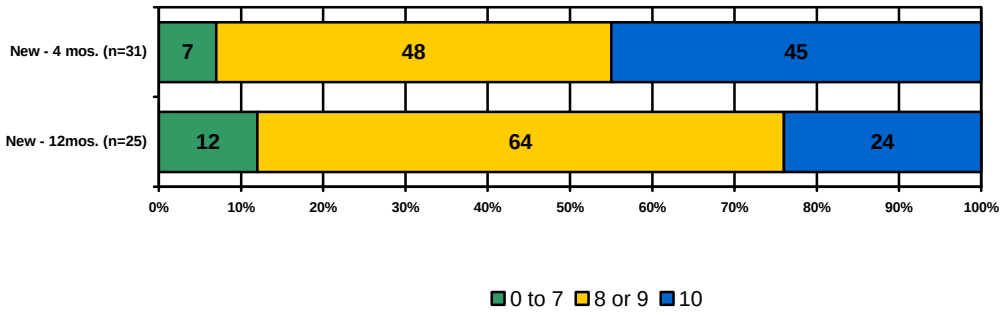
The old facility received relatively low ratings in terms of **overall physical layout for the facility** as a whole. Only 17% of the family caregivers gave it an 8 or 9 and no one rated it as a 10 (Figure 8A). At 12 months in the new facility, 25% rated the overall physical layout a 10 and 54% gave it an 8 or 9. Considering only the 22 caregivers who rated the overall physical environment of both facilities, 82% rated the new facility at 12 months higher than they did the old facility.

Figure 8. Ratings of Overall Physical Layout: Family Caregivers

A. Facility



B. Cottage



The **overall physical layout of the cottages** was rated for the new facility only (Figure 8B). Similar to the ratings for the facility as a whole, the majority of the caregivers rated the cottage layout at 8 or higher. Among the 25 family caregivers who rated the cottage layout at 4 months and 12 months, 14 gave the same rating both times. Nine had lower ratings and two gave a higher rating at 12 months than at 4 months.

At 4 months, family caregivers' comments about the layout included both **likes and dislikes**.

Family Caregivers' Likes about the Layout

- *I really like the cottage concept – small groups and less problems with wanderers.*
- *It's very nice. It seems more homey. They seem to have lots of room.*
- *They knew what they were doing – it's nicely planned.*
- *Very nice set-up – like a big house* [referring to cottage].

Family Caregivers' Dislikes about the Layout

- *Cottage 3 is quite isolated from the others. The old building was better for mixing of residents. It's a confusing layout.*
- *I don't like the long hall. It's still too much like a hospital. It needs some semi-private rooms, more space for residents to wander about.*
- *The residents from the other cottages don't see each other as much. [ ] misses some of her friends from the old place.*
- *Could be a little bigger* [referring to cottage].

Similar comments were made at 12 months. In addition, however, the **location of the nursing offices** was identified by some caregivers as problematic:

- *The nurses' office is quite a ways away and not very central.*
- *Central areas could be bigger such as the activity room and the dining rooms. The nursing offices should be in the centre so all the residents can see it or access it.*
- *I wish there was a way to better connect the cottages so residents could visit. The nurses' room should be visible to families.*
- *I am not convinced that the plan is best for the Eden philosophy. The nursing station is not visible or accessible for the residents and families. The nursing staff tend to isolate themselves.*

Cottage Size

At 4 and 12 months after the move, **family caregivers** were asked "*Overall, would you say that being in a cottage with a maximum of 12 residents has been positive, negative, neither, or both positive and negative for (name of resident)?*" There were **mixed views** in this regard. At 4 months, 59% of the 32 family caregivers were positive while 13% were negative. Some family caregivers (22%) indicated that they were neither positive nor negative while others (6%) stated they were both positive and negative. At 12 months, 72% of the 25 family caregivers who answered this question rated the size as positive while only 8% were negative (12% neither; 8% both).

Seventeen family caregivers gave the same rating at 4 and 12 months. Among the remaining eight caregivers, six had more positive ratings at 12 months than they did at 4 months while two were more negative. When asked to explain their ratings, family caregivers often identified the **extent of social interaction** as a key underlying factor, irrespective of whether the rating was positive or negative. Examples of their comments included the following:

Positive Rating about a Cottage of 12 Residents

- *It's more like a family setting. The families visit more with the other residents now they are in a smaller place.*
- *She gets more attention from the staff and other residents.*

Negative Rating about a Cottage of 12 Residents

- *Isolated, not much stimulation from other residents. [ ] needs to be taken out to visit other cottages.*
- *It's too quiet – [ ]'s alone so much more. I hate that and feel bad.*

continued…

…continued

Both Positive and Negative Rating about a Cottage of 12 Residents

- *For stability, it's better in the smaller setting. For her love of variety and action, a bigger cottage would be better.*
- *Smaller, less people needing help so the residents get more attention during their activities. The staff seem to be so busy and in such a hurry to do it all.*

Neither Positive nor Negative Rating about a Cottage of 12 Residents

- *[ ]'s cottage mates don't talk and [ ] would have liked to being where his friend is.*
- *She misses her old friends on the larger unit and can't see them often.*

Residents also were given an opportunity to provide comments on their house or cottage. Specifically they were asked "*Tell me what, if anything, you like about your house or cottage?"* and *"Tell me what, if anything, you dislike about your house or cottage?"* At 12 months, 14 outlined what they liked while only six mentioned aspects they disliked.

Residents' Likes about House/Cottage

- *It's much better with a small group.*
- *The kitchen is nice.*
- *The big windows. The colours are nice.*
- *It's more homey. I like the cooking being done close by. It smells good.*

Residents' Dislikes about House/Cottage

- *The dining room gets noisy.*
- *Too much noise in the hallways.*
- *I don't get to see my friends in the other houses.*

Specific Spaces

In addition to examining the overall layout and size, it was important to describe and assess specific spaces. Family caregivers and staff were asked to rate a number of features/areas of the facility on a scale of 0 to 10, with 0 being the worst possible and 10 being the best possible. Again a score of 10 is considered the 'gold standard'. As an examination of the ratings of the new facility at 4 and 12 months revealed consistent patterns, attention here focuses on the ratings of the old facility and the new facility at 12 months unless otherwise indicated. The concerns of family and staff with

specific spaces are highlighted. Additional information is provided in Appendix B, including frequencies, means, statistical tests of differences, and change scores.

Residents' Rooms and Bathrooms

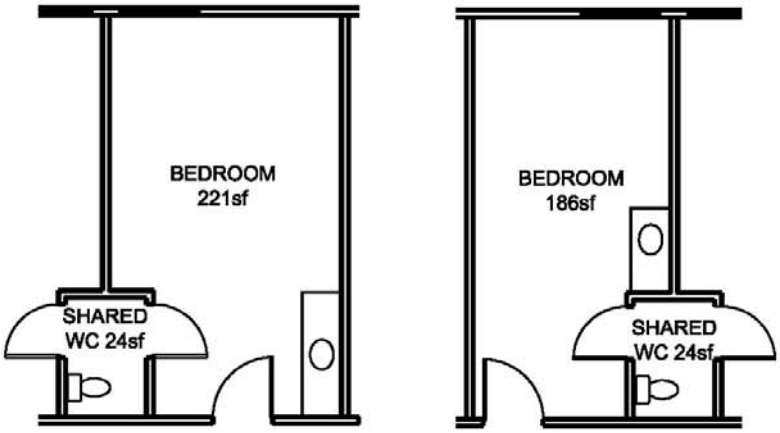
The old facility had 39 semi-private rooms (2 residents per room) and 12 private rooms available (see Figure 9 for all the floor plans). Prior to the move, 13 of the 39 residents in the study shared a room while 26 residents were alone in semi-private or private rooms as the number of residents was reduced in anticipation of the move. The bedroom sizes were 221 sq. ft. for a semi-private and 186 sq. ft for a private on Unit A and 224 sq. ft. for a semi-private on Unit B. In the new facility, all residents had a private room. The bedroom size was 214 sq. ft. Each room had ceiling track lifts, a sink, and space for a microwave and a small refrigerator. At 12 months, five residents had microwaves and seven had small refrigerators in their rooms. In addition, each cottage had two rooms that were adjoining and available for couples although during the study period, no rooms were used for this purpose.

Old Facility: Resident Room (Unit A)

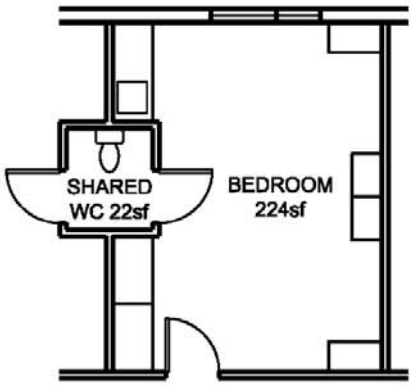
New Facility: Resident Room

Figure 9. Floor Plans of Old and New Facilities – Residents' Rooms

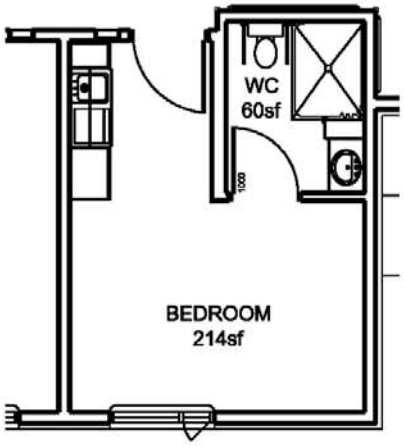
Old Facility: Unit A Shared Room Unit A Private Room



Old Facility: Unit B Shared Room



New Facility: Private Room



Floor plans provided by: Rockliff Pierzchajlo Architects and Planners Ltd.

In the old facility, the bathrooms consisted of a sink and toilet, with shared access for the residents of two rooms. They were not wheelchair accessible and posed a challenge to individuals using walkers. Bathroom sizes were 24 sq. ft. on Unit A and 22 sq. ft. on Unit B. One staff member described the bathrooms in the old facility as follows:

> *Uh you can't turn around, you can't bring a lift in, you can't have hardly two people in the bathroom to help someone actually use the toilet. Uh people are using commodes with just a curtain and then families coming in to visit the person on the other side. Just awful.*

In the new facility, each room had a separate bathroom with a wheelchair accessible sink, toilet, and shower. The bathroom size was 60 sq. ft.

Old Facility: Bathroom (Unit A)

New Facility: Bathroom

At 4 months, **residents** were asked "*Thinking about the old and new building, I'd like to know whether some things are better, worse or the same here as in the old building and why."* All 18 residents who answered this question indicated that their **own room was better in the new facility**. **Space, privacy**, and **brightness** were explanations offered for the rooms being better. One resident explained "*I don't have to share a room. I have privacy."* Another commented "*It's more sunny. The lights are good."*

All but one resident reported that their **bathroom was better**; the exception rated it as the same. **Space** and **privacy** were the residents' most frequent explanations. One resident commented: "*Much, much better. I can go into it whenever I want it."* One resident reported that the toilet was "*too high*" while another felt it was "*too low*".

Residents also were asked to indicate what they **liked and disliked** about their own rooms. At 12 months, 15 residents commented on what they liked and only six identified aspects they disliked. Examples of their comments included:

Residents' Likes about the Rooms

- *I love this room. I have it decorated with my stuff. I can make all my crafts – lots of room.*
- *I'm my own boss. I like privacy. I now have a puzzle table.*
- *My bed is more private. People can't see me from the door if I'm in bed. I have a lot of space to wheel around. I can reach everything.*
- *I like the space in my room. It's pretty. It's quiet – I like that.*

Residents' Dislikes about the Rooms

- *With my eyes, the window is in the wrong place* [too bright].
- *I don't like the air conditioning. It's always cold.*
- *Could be a bit bigger.*
- *Maybe some shelves to put some of my pictures so they are not on the cupboard.*

Family caregivers were much **more positive** about the residents' rooms (excluding the bathroom) in the new than in the old facility. On a scale from 0 (worst possible) to 10 (best possible), several gave a score of 10 for the **size** (48% of the family caregivers), the **layout** (40%), and the **equipment** (50%) (See Appendix B, Figure B-1 and Table B-1 for additional information). Rarely was a 10 given for the old facility (size - 8%, layout - 3%, equipment - 0%). The **furniture** was rated slightly lower overall in the new facility than the other aspects, although 28% did give it a 10.

Family caregivers commented about the **size**, indicating that "*it's adequate*", "*big enough" or "very good".* Some thought rooms could be bigger to *"accommodate the resident's own furniture."* With regards to the layout, the **big windows** and the **location of the bathroom** were mentioned:

- *The window is nice and low so she can look out.*
- *It's bright. The big window is nice. The bathroom is in a good spot.*
- *The big window is nice. I like the bathroom away from the door.*

At the same time, family caregivers identified **areas for improvement** in the residents' rooms, particularly with regards to shelves and closet space. These included:

- *Storage is very poor, very small and there is no room for all her clothes. No room for extra chairs….I see no reason for the arm chairs. We can't bring in her own chair. There's no room for her own stuff. Not enough drawers.*
- *The bed in the centre takes up more room than against the wall.*
- *The closets could be bigger. The spot for the fridge is not good. We had to move it so she could reach it.*
- *The shelves are too high. She can't reach or see them. The shelves are too close to the door.*
- *The closets are not large enough. The shelving and closet are in a dark area close to the door. [ ] can't see them.*

Family caregivers generally were **positive about the resident's bathroom**. Scores of 10 were given for the size (56%), the layout (44%), the fixtures (36%) and the equipment (48%) (see Appendix B, Figure B-1 and Table B-1 for additional information). No one gave a 10 when they assessed the old facility. In their comments, family caregivers discussed the **size** ("*large, bright, able to get the wheelchair in easily", "Very large. Good for the staff to manoeuvre."*). Some family members compared the bathrooms in the new facility to those in the old: "*[ ] can go on the toilet. It's not degrading like the old place"* and "*It's way better than the old building. [ ] would bang his head on the wall in the old little bathroom."*

From the family caregivers' perspective, **areas for improvements** in the bathrooms included:

- *Maybe could have more counter space to set things out for [ ] to reach.*
- *[ ] can't reach the paper towels. It's too high and the cloth towels are under the paper towels so she drips on them.*
- *[ ] can access things that could harm her…. The mirror could be more accessible in the bathroom for people who could use it.*
- *[ ] can't use the roll-out shelving for her toiletries. The staff use that for their supplies [pads]. She needs some shelving so she can reach for her soap, toiletries.*
- *The rails are sometimes left up. She can't pull them down. The toilet paper holder is up on the rail so she can't reach it if the rail is up.*
- *She doesn't like the rails because the staff sometimes leave them up and she can't reach her paper. The toilet is too low. The sink is too high.*
- *No fan noticed.*

Staff also rated the residents' rooms (including the bathroom) in the new facility higher than those in the old facility. They were less likely to give a 10 (16%) than the family caregivers. However, 45% did rate the residents' rooms at an 8 or 9. Their comments largely echoed family caregivers' views. However, some had concerns about the **shower area**:

> *And the bathrooms – the shower area, the drainage is terrible. They need – they should have sloped it more, because we need like a squeegee or something after we shower someone to drain, yeah. … they don't drain very well.*

There were also comments about the **wheelchair accessibility** of the bathroom:

> *The bathrooms are not designed very well for somebody in a wheelchair to get into 'cause you go into the bathroom and the door will close behind you, and then you're in a wheelchair, how do you get out? We've had some residents lock themselves in the bathroom…If you want to close the door then you can't – when you're in a wheelchair…can't get out of the way of the door and open it at the same time. Mind you, if the residents were smart enough they'd know the door would open both ways but they don't think about that, eh? They just lock themselves in there.*

The **overhead tracking and its placement** was also commented on by some staff members:

- *I like the size of them* [the resident's room]*. The only thing I don't care for is the tracking for the lifts. They're not really situated really well. So if you're getting somebody up, you have to take the brakes off, move the bed to line up with the tracking, and pick them up, move the bed out of the way, and move the chair in order to make it all work. We have this big room but very small space to put somebody into a chair. And it doesn't make a lot of sense to me….. this wonderful tool…that's supposed to take up less space, which it does, but then you end up having to move so many more things to make it work.*
- *I do like the overhead lifts. A big positive – much easier on us. And the individual showers in each room – yeah, I think that's good.*
- *I love the lift. I just don't like that I have to always move and reposition the bed to use it. That's the only complaint I have…I have certain residents that because we only have those half rails, I have to have them against one wall or a crash mat. – yeah, for their safety. Families like them positioned this way and that way so you're always flipping back and forth.*

Hallways/Quiet Room

The old facility had long institutional-style hallways where supplies and equipment were frequently stored. There were handrails in all hallways that served as pathways to other units such that a resident could walk/wheel from Unit A to Unit B. There was a relatively high amount of traffic on the units, given the number of residents and staff in each unit. In the new facility, cottage hallways were short and served to connect the residents' rooms to the dining room/kitchen and to the living room. These hallways had relatively low traffic as they were not a pathway to other units and led to only 12 residents' rooms. The doorways to residents' rooms were recessed back to provide a break in the hallway. Short handrails were in place between the residents' rooms. These rails were not located in the recessed areas, which resulted in gaps in the handrails. At the end of the hallway was a quiet room; in some cottages, this had become the staff's space.

Old Facility: Hallways

New Facility: Hallways/Quiet Room

Almost one-half (44%) of the **family caregivers** rated the hallways in the new facility as a '10', the best possible. This compares to 3% for the old facility. Staff, on the other hand, were less positive about the hallways/quiet room in the new facility; only 10% gave it a 10 while 45% scored it an 8 or 9.

Family caregivers often mentioned **the width of the hallway** and that it was "*wide enough for two wheelchairs to pass*". Two **areas identified for improvement** were the carts in the hallways and the railings. Family caregivers commented:

- *The carts take up room. It's not good for the residents who try to walk in the hall.*
- *The only thing is that they still have their carts. Today there were three carts in the hall.*
- *The railings are not continuous – there are some missing stretches.*
- *Maybe still too long like a hospital. Couldn't they have made shorter halls?*

Staff members were also asked to comment on the hallways/quiet room. While some staff perceived the **width of the hallways** as adequate, others commented that the hallways were not wide enough for two wheelchairs.

> *The hallway, like the big problem now we have, 'cause you know like if there is two residents with big chairs, they're having hard time and then later on they're fighting already. You know, they cannot get through, the two of them like it's just so narrow for two wheelchairs at least.*

> *The hallways are okay. They're – I guess they're wide enough, you know, 'cause two people can go by. But that quiet room, like I said, instead of it being - you see that – you see it jogs in that little bit. Why did they jog it in? Why didn't they just keep it – you know, and use that space, you know what I mean? They could have put it out another four feet or whatever.*

The **quiet room** was being used by some staff as a staff room (see discussion of staff room below).

> *Quiet room is nice down there. But at the moment basically staff use it. That's where we got told we can have our lunch and our breaks, which some days works well for us and some days it doesn't work worth a pinch, you know, because you've always got a resident coming to ask if you can do something for them, or they need something, or – or family members or- whoever happens to see you sitting there.*

Two staff members who worked nights commented on the **hallway lighting at night** and suggested that a switch that dimmed the lights at night would be advantageous "*because it's a little too bright*". Another staff member echoed the family caregivers' comments about the **carts in the hallways**:

> *I don't like to see the laundry cart or their – the carts that have their diapers and supplies. To me that should never be left out in the hallway. Nor should the dirty laundry buckets. But they are lovely hallways. They're wide. Two people can pass… – if they were thinking they could have built a little room to put it* [the cart] *into.*

Living Room / Dining Room

In the old facility, there were two small alcoves on Unit B that could be considered living room spaces although they also served as storage space for equipment. Unit A had no such spaces. In the new facility, each cottage had a small living room (161 sq. ft.).

Old Facility: Living Room (Unit B)

New Facility: Living Room

The old facility had one main dining room for each unit (Unit A - approx. 1846 sq. ft., Unit B - approx. 966 sq. ft.) and a smaller separate dining room for the dementia unit (approx. 269 sq. ft.). The kitchen was located in the acute hospital and tray meal service was used (see below under Kitchen and also the section on Social/Care Environment for further discussion). In the new facility, each cottage had a dining room (253 sq. ft.) and a kitchen (161 sq. ft.). Cooking was done in the kitchen, with some shared cooking between Cottages 1 and 2 and between Cottages 4 and 5.

Old Facility: Dining Room

Unit A

New Facility: Dining Room / Kitchen

Unit B

At 4 months, when asked "*Thinking about the old and new building, I'd like to know whether some things are better, worse or the same here as in the old building and why"*, 14 of the 18 **residents** who answered the question (78%) indicated that the dining room was better, one (6%) rated it as worse, and three (17%) felt it was the same. Their explanations included: "*Much better, quieter, not as many people – we can visit" and "It's cozy – it's pretty."* One resident commented that "*It's too small"* while another responded that "*It's smaller but the same."*

From the **family caregivers'** perspectives, there were **mixed views** on the living room in the new facility. Among the 25 family caregivers at 12 months, 20% rated the living room as a '10' while 36% gave it an 8 or 9. The dining room in the new facility received higher ratings than did the one in the old facility. About one-quarter (24%) of the family caregivers rated this a 10 in the new facility while only 3% did so for the old facility. However, the dining room received one of the lowest ratings of any space in the new facility.

When asked to comment on the living and dining rooms, both **likes and dislikes** were discussed by the family caregivers. The **small size** was identified by many caregivers as a concern.

Family Caregivers' Likes about the Living Room

- *It's bright and sunny.*
- *It's nice the way it is by the entrance. Residents can watch people come and go.*
- *Bright – it's small but [ ] likes it cause he can sit beside the TV to see better.*
- *It's first class – it's cozy to sit and visit with visitors.*

Family Caregivers' Dislikes about the Living Room

- *Small. If more than 2, it is crowded.*
- *Too small. The layout is not conducive to groups of residents or family sitting. It's close to the door – question whether it will be cold in the winter.*
- *[ ] doesn't use it. It's small for the family to visit in and not private for visits.*

Family Caregivers' Likes about the Dining Room

- *It's cozy and homelike.*
- *It's bright, open space. It's nice to see the kitchen and smell the food. Nice décor.*
- *The big windows are nice. The kitchen is handy – they can smell the food.*

Family Caregivers' Dislikes about the Dining Room

- *It's small when the wheelchairs or big chairs are in place. There's a huge TV in the dining room, blaring while eating meals.*
- *A bit too crowded with all the wheelchairs in there. It gets really difficult to get the chair in if he's the last to get there.*
- *It's a little bare – could use some decoration and shelves or something.*
- *Very cold, not homey. It needs some personal touches. It looks institutional.*

Staff were more **critical of living room / dining room space**. At 4 months after the move, only 2% gave the living room a rating of 10 while 19% scored it an 8 or 9. For the dining room, 9% gave a score of 10 and 36% gave a score of 8 or 9. When examining the scores from the 39 staff members who assessed the dining room in both the old and new facility, the average score of the new facility (6.5) is slightly lower than the average score for the old facility (6.7).

Similar to the views expressed by family caregivers, **size** was the major concern for staff, particularly with the increasing number of Geri chairs being used in the facility. Staff commented:

The living room is a little bit small for everybody. They want everybody to get in there. There's just no way it's going to happen. It's a little too small for us. Our dining room is a good size except we're finding now we have a lot more Geri chairs lately so the chairs are bigger and to get them in you have to pretty much –you have to think out the plan before you start putting people… who's going in first and wherever they sit then you have to kind of manoeuvre everybody in. 'Cause if you think, oh, I'll just put [ ] in and [ ], you have [ ] left to go and then you can't get him in without having to move two more people out of the way to get them in there. So it's not quite big enough for the Geri chairs… it doesn't work very well.

I wish the living room was a little bit bigger. We used to take the residents down and watch movies. We can't – I can't possibly get all my residents in there because I have four Geri chairs… Yes, I could move the television in here but then with my Geri chairs there's not enough room for meals. When we were coming here we only had one Geri chair. Or two. Now I have four, sometimes five up in this room. So it's a little tight.

> *I think the living room is – the dining room is okay, again, it's tight and you've got all wheelchairs it's very tight in there. But – the living room is too small. It needs to be bigger….You could hardly move in that living room. And there were - how many residents were in there? Maybe 5 or 6? So it's small….They're not adequate but they will do. They're better than what we had.*

The challenge of trying to provide **recreation programs** in this space was also mentioned (see section on Social/Care Environment for further discussion). A staff member explained her rating of the dining room/living room as follows:

> *Because there's only three tables yes because there's only 12 residents but people are in wheelchairs and it's very – you crowd the chairs around the table. There's not room to move around. There was more room in the old place, in the dining room than there is here. Yeah it's too crowded, and then recreation does their thing there. And they push everything back and you're trying to get the meds and you're tripping over the tables and stuff. Too small. Too small. It's very small. They weren't thinking of wheelchairs, you know…[the living room] is kind of small. Yeah, it is, it's – they got a couple of chairs there but if you wanted to put 10 people to watch the movie there is no room. Not that all can do. Each one have their own TV. But it's very small.*

The cool air coming through the **air vents** in the dining room and in the living room was identified as problematic. A key informant commented:

> *One thing I don't like are these air vents, and I've heard some of the residents say the same thing, that the air vents in the dining room, they either sit right underneath them, and it – they feel cold all the time, and that's their spot at the dining room table and they're getting all this cold air blown at them.*

Kitchen and Pantry

As noted above, the kitchen in the old facility was located in the acute hospital and tray meal service was used. In the new facility, each cottage had its own kitchen, with cooking done in the kitchen. There was some shared cooking between Cottages 1 and 2 and between Cottages 4 and 5.

Family caregivers rated the kitchen in the new facility **very favourably**, with 42% scoring it a 10 and 46% giving it an 8 or 9. Several commented on the **smell of food** and the **opportunity for residents to watch the food being prepared**. Examples of their comments included:

- *It looks really good. Excellent location, with good visibility to the dining area and living area.*
- *It's a nice working kitchen. It's nice for residents to see and smell. The food is fresh.*
- *I like it being open and central. The residents can watch the food being cooked.*

At 4 months after the move, two family caregivers mentioned **the lack of access for families**; one stated: "*Families are not allowed to go in but that's ok. I can see that.*" At 12 months, six family caregivers identified this as an issue. One caregiver explained: "*I wish family could use it to make a cup of tea when I'm here. The staff is too busy to ask them.*" Another stated: "*Visitors are not allowed to help the resident to get coffee.*"

Staff was less enthusiastic about the kitchen than the family caregivers. Only 13% gave the kitchen in the new facility a 10 while 47% rated it as an 8 or 9. When asked about the old facility, all rated it as 7 or less.

The overall view from staff was that the kitchen was **functional**. One staff member explained:

> *Yeah, I like the kitchen areas too, everything is, you know, right there for you, and you don't have to run away from the residents if you're doing something with them. You can say, "Oh, one minute," and they can see.*

The challenge of **limiting access** to the kitchen for residents who wander was commented on.

> *It's really convenient….I need to find a solution for my wanderers in the evening. Yeah. We've tried the chain so it pulled out of the wall. We've tried putting wheelchairs there.*

> *It's functional. I think especially this cottage we've learned that maybe they should put half doors on the sides…They could put a half door or something. It wouldn't have been obtrusive looking but it would have – sometimes it's kind of difficult with residents that wander…We had one of the confused residents put a cookbook in the oven and the oven was on…You could put a sliding door into the wall there…a pocket door. It wouldn't be – when you don't need it you don't have to put it on.*

Another limitation had to do with the **placement of the computer**.

> *The kitchen is okay. Because everything is right around you. Have access to everything. What's no good is where the computer stuff is. There's no storage for books or papers. They put – they like attached it to the other side of the kitchen there.... there's just no room for – they should have had more like shelving and stuff like that in that area. Because we have to find a place to cram the stuff. And the sink is right over that counter where the paperwork is and it gets splashed. And we finally found – we moved the cabinets to put stuff in because everything was getting wet and splashed.*

There was also some discussion regarding the **need for a door** linking Cottages 1 and 2 and Cottages 4 and 5 via **shared pantries**. Staff shared cooking responsibilities between these cottages and found it cumbersome to move between the cottages. As well, this change would facilitate the sharing of supplies and avoid an infection control issue with passage through the housekeeping room. At the same time, a key informant commented:

> *The pantries are adjacent to each other…but that's where all your storage space is, all along that one wall, so if you knock that out and put a door, there goes all your storage!*

Lastly, there was some suggestion that the **laundry and housekeeping rooms** located off the kitchen would be better located near the tub room. A key informant stated:

> *…the Ninjo bedpan washer is in a terrible place… that is not the place for a bedpan washer at all…If it's mealtime, or if you've got company visiting or whatever, you don't want to walk across there with that, with a full bedpan! At mealtime, it's just not right! Like you could keep …your housekeeping room there…but find a different place, find another spot for the bedpan washer. You know, down at the far end of the hall, maybe beside the tub or the spa room, or something… kind of how it's out of the way…that would definitely be something* [to change].

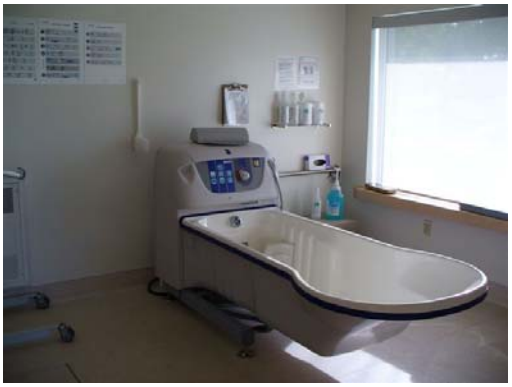
Tub Room

In the old facility, there were two tub rooms per unit while each cottage in the new facility had its own tub room. As well, in the new facility, each resident had his/her own shower. The tub rooms in the old facility were small rooms with older equipment (Unit A approx. 107 & 148 sq. ft., Unit B approx. 155 sq. ft.). The tub room on Unit A had curtains but no door which caused issues with privacy and cold drafts. Tub rooms in the new facility were large open rooms with state of the art equipment (ARJO Tubs). When the facility opened, there was a problem with the window coverings. While these coverings were designed to allow those inside to see out without allowing those outside to

see in, the opposite occurred in the evenings. This issue was corrected with the application of a frosting to the windows.

Old Facility: Tub Room

New Facility: Tub Room



At 4 months, when asked if the spa/bathing area was "*better, worse or the same here as in the old building and why*", nine of the 14 **residents** (64%) rated it as better, three (21%) thought it was the same, and two (14%) indicated it was worse. Two residents commented on the smaller size of the tub: *"I can't use the tub. It's too small and hurts my back. So now I'm getting a shower"* and *"The bathtub is smaller – I have less room for my hips to move in the bath chair."* At the same time, three residents reported that it was a "*bigger*" tub and one felt it was "*too big*".

Several **family caregivers** indicated that they were unable to assess the tub room. Among the 14 who did so for the old facility, only 7% gave the tub room a 10. Among the 13 who rated the tub room in the new facility, 31% gave it a 10. One caregiver commented: "*It is great. It is good to see out. There is more privacy instead of just a curtain that was in the old building."*

The tub room in the new facility was the space with the highest percentage of **staff** rating it as a 10 (16%). Considering the scores of only the 33 staff who rated this area in both facilities, the overall mean scores increased from 4.7 for the old facility to 7.9 for the new facility. One staff member commented:

> *I love my tub room….The residents can relax in it. I just wish I had more time to put them all in there.*

Two staff members commented on the **flooring** and how it created some difficulty moving the residents. One commented:

> *There's lots of room in there. But just moving the resident in the chair is very difficult because of the flooring. But I guess they have to have that kind of flooring in there for the water and stuff like that, for it to absorb it.*

Two other staff members noted that **grab bars** had been moved or added. One explained:

> *…we had to move the grab bars…Where they are is by the window and then of course, I said there's a shelf so they'll crack their head on it, so they weren't using it there. And you don't have enough room back there. So they were getting people to hang on to the bathtub. I said you can't do that, you're going to rip the bathtub up eventually so the guys did the grab bars.*

Personal Laundry

Personal laundry in the old facility was sent to the acute care hospital. In the new facility, each cottage had its own laundry area with a washer, dryer, and sink for personal laundry. **Staff** generally was positive about the laundry in the new facility, with 14% giving it a 10 and 61% at an 8 or 9. Most were satisfied with the **size of the laundry room**. One staff member commented about a rack that "*we forever are banging our backs to it."* A staff member discussed the need for "*more shelving space, for storage for our laundry facilities and stuff"* although another one reported "*we've got the storage issues figured out in there."*

Medication Storage Room

Each unit in the old facility had a separate room for medication storage. In the new facility, medications generally were kept in a cupboard in the kitchen/dining room area to be dispersed by the HCAs. The exception was the storage of medications that had to be distributed by the RNs/LPNs (e.g., injections, narcotics, etc.); these were kept in the nursing resource room. **Staff** had several **concerns** about the medication cupboard in the new facility. As a result, only 5% gave it a 10. This area received **the lowest overall average score** (5.9 out of the possible 10) from the 32 staff members who provided ratings.

New Facility: Medication Storage Room and Work Station

The **small size of the cupboard** was an issue for several staff members.

> *Oh, it's just a tiny little cabinet. It's kind of cluttered. It's too small. It should have been bigger…. It should be larger. I know they'll never have more than 12 residents but they keep everything out there and it's very small. They weren't thinking when they built those things.*

> *It's too cramped, too small, too inconvenient, it's just a bad, I don't like it. I don't care for it…. you've got your boxes and then you got all this stuff and you've got to dig and dig and pull and put back and pull back out and put up and… it's just, it would be nice if it was like in a drawer that you pull out and everything was just where you, you know? Instead of having to pull them out and put it back and rearrange. A whole lot of digging around in there. I don't care for it, personally.*

The **location of the cupboard** was a concern for some staff members as it related to issues of safety and confidentiality. The cupboard height was identified by some staff as problematic as there were "*lots of shorter staff"*; this problem was resolved by the use of a step-stool.

Nursing Resource Room

In the old facility, there was a nursing station in the middle of each unit. In the new facility, there were no such designated spaces in the cottages. Instead, a work station/cupboard containing items such as a computer, charts and medications (except those that had to be in the nursing resource room) was in the dining room of each cottage (see picture above). The professional nursing staff shared an office in the central building with the physicians, dietician, and pharmacy staff.

The **limited size** of the resource room was described by some **staff members** as follows:

> *Too small, too many disciplines in there, yeah. Not – there's no privacy in there if you want to discuss something and you have other departments… in there.*

> *Doctors, dietician, pharmacy, sometimes it's three or four pharmacy people in there, nurses, like sometimes that place is packed…Too many people.*

> *Yeah, it's really hard. I mean, our lady that does all the staffing is in here, and then when the girls…So on rounds we can have the dietician, we can have the pharmacist, and the doctors and it's just… and so our poor clerk can't get her job done either. So, just not a good space.*

Additional office space, including a separate office for the scheduling/unit clerk, was identified as an area requiring improvement. A key informant explained:

> *…there is no other space for them* [RNs/LPNs]*, so they do use that room [resource room]…on days when we do rounds, Wednesdays and Thursdays are very busy, because we have the dietician in there then, we have pharmacists in there, we have the unit clerk in there, we have the nurses in there, we have the doctors in there, so it is… another office in this area would have been greatly needed, greatly beneficial. As it is, we use…where we keep all their files…we use that as an extra office when we don't have space. So yes some more space around there would be helpful… we could have done with at least an extra office, maybe even 2 offices would have been good for transient usage.*

Staff Room

In the old facility, there were designated staff rooms on both units; these areas typically had a table, refrigerator, microwave, and comfortable chairs. The new facility had no such space. Instead, in all cottages, the alcove at the end of the hallway (the quiet room) was being used by some staff during their breaks.

Old Facility: Staff Room

The **decision not to have a staff room** in the new facility was based on the Eden Alternative, a philosophy of care embraced by the Care Centre (see section on the Social/Care Environment). When asked about the rationale for not having a staff room, a key informant explained:

> *Because it's not Eden… residents and staff are supposed to be together, eat together, commune together….which is nice… (long pause) But I do have to say, they* [staff] *work their butts off. They work hard…But a lot of staff really need to get away. They don't want to hear their beeper go off or whatever. They need that half hour break.*

The lack of staff-only space was a **major drawback from a staff perspective**. This concern was discussed by the staff prior to the move as a disadvantage of the new facility. Several staff members expressed the view that the **staff's needs were not taken into account** in the design of the new facility. Some felt **undervalued or unappreciated** as a result.

> *I should point out there's nothing there for the staff. We have no staff room, we have no lockers, we have no bathroom. We were not worked into the equation, we feel.*

> *There's no place for the staff…I don't feel that the staff was really considered when they decided to plan the layout of the building. There's no staff room. We're not allowed to use the fridge or the microwave for lunches. We've got nowhere to keep our personal stuff, like our coats and that.*

> *There's a lot of negative energy also because we don't have a staff room. We don't have lockers. We don't have a fridge. We cannot use a microwave….They're expecting us to hang our coats up in front of our main entrance way. They're saying that our keys and personal items like that we could possibly lock up in our med cupboard but we can't store our lunches in the fridge or use their microwave. That's for the residents only. But yet it's okay for the residents right now to use our microwave to warm up their lunches….like that does not make a great deal of sense.*

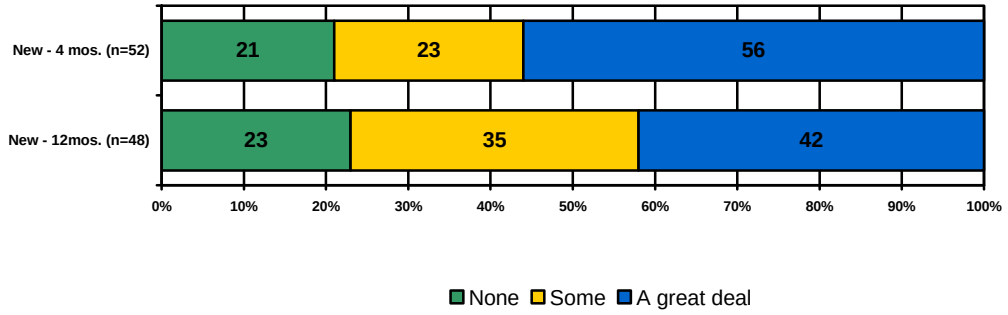
> *…we don't have a kitchen or a dining room to stay, to eat, you know, place to eat, nothing to warm the food or put the food in, that's thing, that is a bad – yeah, so they never consider us…if the staff is important to you, you have to consider, eh, things that are important to us, too.*

One staff member explicitly spoke of the Eden philosophy and commented:

> *…there is no real place designed like a staff room. But that's because with the Eden philosophy, you are supposed to uh be with the residents in every way, like your meals, you're supposed to share everything with them….If that was me making a lot of plans for the building, I would have made sure that there was a staff room….I think you do need to take a break sometimes…to go to a room and sit there - no answer bells, no nothing, and just enjoy your meal….if you had a bad day at home, you're going to work and you just need to be on your own for five minutes even. So that's something like the* [new] *building's lacking of.*

At 4 and 12 months, staff were asked specifically if the lack of dedicated staff room gave them "*none, some or a great deal of concern*". Over half (56%) responded a great deal of concern at 4 months after the move (Figure 10). At 12 months, 42% expressed this level of concern.

Figure 10. Concerns about the Lack of a Staff Room: Staff



Among the 43 staff members who answered this question at both 4 months and 12 months, 42% still had a great deal of concern about the lack of a staff room at 12 months. Less concern by 12 months was evident for 21% of the staff while 7% had more concern at 12 months (Table 4).

Table 4. Concern About the Lack of a Staff Room at 4 and 12 Months After Relocation

***Staff* (N=43)**	**Number of Staff**	**%**
Same level of concern • None -> None • Some -> Some • Great deal -> Great deal	**31** (6) (7) (18)	**72%** (14%) (16%) (42%)
Less concern after relocation • Some -> None • Great deal -> None • Great deal -> Some	**9** (3) (1) (5)	**21%** (7%) (2%) (12%)
More concern after relocation • None -> Some • Some -> Great deal	**3** (2) (1)	**7%** (5%) (2%)

The **concerns** were discussed in terms of **having a place** where staff could be away from residents for a break, interact with other staff members, store their personal belongings/food in a safe and secure location, and not be seen by residents or visitors as "*sitting, doing nothing.*" For example, at 4 months after the move, staff commented:

> *It's a big concern. Because you don't have no place to go for that – as far as I'm concerned, if I'm taking my break and I'm on the floor, it's not a break. I'm still on duty. But if I can go someplace to relax and not worry if Joe Smith is ringing his bell for five minutes, five, ten minutes, I mean, it's a big stress reliever. It's a big concern.*

For some staff members, these issues persisted 12 months after the move. For example, staff commented:

> *Well, I think it's a big concern….so you come see your mom… and you think like, 'oh, these nurses, you know, sitting around there'…But we are in our coffee break… sometimes we get up, I don't know how many times, to go help the bells….We get up and we don't have no room to hide, like hide for our break…Somebody comes in, the resident sits in, because it's his house… you got 15 minutes just for yourself, just sit and have your break.*

> *…it is because that's the only communication we have with the other staff that we get to know what's going on in other cottages as well…You just feel like you're in your own little world. Like this is our cottage and that's all we see. Is it – because you have to eat here with the residents. Not that I have a problem with – we could come down here and eat and they're over there. But these buzzers are ringing constantly. Constantly. And they're ringing from all the other cottages and they're ringing from the loading dock and everywhere else.*

> *… even just being able to take a break. You have no place to go take that break. So do you? No. And when we're short a person that's really time consuming so we just don't take a break because to get all we need to do – and when there is no place…Staff have no place to put their lunches so they use our community room refrigerator but if we're doing a big program they're not supposed to come in.*

Other staff members had adapted to or accepted not having a staff room.

I don't think it's a concern anymore. No. We have our little area down here. Yeah, we've adjusted, absolutely.

…I guess you have to learn to adjust… because we'd get interrupted and how can you sit there and then they [residents] *see you sitting and then they think, oh, yeah, they're just sitting there, right. And now I think the families know that okay, well, if we're down there that's because we're on our break, you know. But not everyone chooses to sit down there. They could sit in the front room and some people think that okay, well, she's just sitting….you need sometimes some time away. It's like a sanity – a little 15 minute sanity break.*

One of the "lessons learned" from this experience is the fine **balance** between embracing a philosophy of care and the day-to-day realities of care staff. A key informant commented at 12 months:

Participant: I still hear about the staff room issue, or lack of a staff room, I think it is important… I think it is kind of important for all the staff to be able to meet someplace, you know, whereas here, you know, you can work, you know, somebody that you used to see all the time, now you don't see them ever! Because you don't leave your cottage, they don't leave their cottage, you know? And a year ago, we saw each other all the time! Now, now we see each other downtown getting groceries and that's the only place we see each other. So… that's… kinda too bad.

Interviewer: So ideally would a staff room be in a common area, where staff from all the different cottages --

Participant: Ideally, yes.

Interviewer: Not a staff room per cottage?

Participant: No, no… Uh, a common, a common area, yep. And I think if we had one, they would use it. You know if they had the choice, whether you stay on your cottage, or use the staff room, I think you'd see more staff…use that staff room.

It is important to recognize that only staff who worked at the old facility and moved to the new facility were interviewed for this study. It would be useful to obtain the views of new staff members with regard to the need for a staff room. Individuals who have not had previous experience of a staff room may not have the same level or type of concern as those who have had access to dedicated staff space.

Outdoor Space and Parking

The old facility had limited access to outdoor space and ample parking. There was an inside courtyard, with raised flower beds, accessible from the service area between units. In addition, there were lawn areas with flower beds and a metal gazebo outside of Unit B. In the new facility, there was access to a main courtyard (also used by Cottages 2 and 4) and separate outdoor space for Cottages 1, 3 and 5. These courtyards were all landscaped with a cement walking path (except for Cottage 1) and a cement pad with metal gazebo. The main courtyard and some cottage courtyards had raised flower beds. Parking was limited to a staff parking lot with 8 spaces, a central parking lot for visitors (particularly for Cottage 3) with 11 spaces, and street parking for staff and visitors for Cottages 1, 2, 4 and 5.

Old Facility: Outdoor Space

New Facility: Outdoor Space

Main courtyard

Given that the move occurred in May and landscaping occurred during the summer, limited use had been made of these spaces at the 4-month follow-up. At the time of the 12-month follow-up, **family caregivers** and **staff** had not yet had a full summer to take advantage of this space. Regardless, at 12 months, 22% of the family caregivers and 16% of the staff gave the outdoor space a score of 10. This compares to 7% and 10%, respectively, for the old facility.

Cottage courtyard

Although family caregivers and staff were not explicitly asked about parking, the issue was raised by some individuals, most often in relation to a question about advantages and disadvantages regarding the new facility. Concerns were expressed about the limited number of spaces, the lack of plug-ins, and complaints from neighbours about visitors parking on the street.

Storage Areas

Some staff members and key informants commented on the limited storage areas on the cottages and the central area. A staff member summarized the situation as "*Storage is horrible*" while a key informant explained:

> *Storage… uh, we don't have nearly enough storage space… Not nearly enough storage space, especially when you're looking at wheelchairs and geri-chairs and some of the rehab stuff. Recreation, they've got piles of stuff and had to go out and purchase their own storage shed! Um, cottage space, or storage space on the cottages is very limited, you know, because they have to hold their own decorations…for all the different seasons… Cottage 3 has our main storage cart for our dressing trays, or our dressing supplies, and that takes up a big chunk of their storage room. So… it's just like the storage is a real issue.*

Suggestions for Improvement

Overall, there were several **positive aspects** of various spaces in the new facility. At the same time, there were **areas for improvement** and lessons that have been learned in relation to the design of specific spaces. Drawing on the feedback from family caregivers, staff members, and key informants as well as a walk-thru with the architect and the observations of the study team, suggestions for improvement include:

<u>Residents' Rooms and Bathrooms</u>

- More storage space.
- Easier access to fridge as some residents had difficulty reaching bottom shelves when the fridge was placed on the floor.
- Extension of the placement of the overhead lift tracking to allow for 2 or 3 options in bed placement. Currently only one option is possible and staff are required to move the bed if it is placed in another area of the room.
- A fan in the bathroom.
- A toilet paper holder as in some instances, the toilet handrails were moved up by staff when assisting residents off the toilet and then the toilet paper was out of reach when the residents used the toilet without assistance.

<u>Hallways/Quiet Room</u>

- Storage space for medical carts that were still left in hallways.
- Handrails in recessed areas between residents' rooms to decrease safety risk.
- Dimmer lights/options for night lighting.

<u>Living Room</u>

- Space configuration/size as few residents were able to use this space at one time, particularly those in wheelchairs.
- Placement of TVs in cottages. Currently the TVs are not placed above the fireplace in any of the cottages as initially intended and are taking up floor space in the living rooms and/or dining rooms.

Dining Room
- Space configuration/size to allow for the large number of wheelchairs and geri-chairs used in long-term care (current design allows for 12 residents around 3 tables; cannot get 4 wheelchairs around one table and geri-chairs don't fit at tables, taking up space in the traffic flow).
- Location of computer area in less central area to allow for more confidentiality and privacy.

Kitchen and Pantry
- A shared pantry between adjoining cottages with adequate storage to allow staff to travel back and forth without going through the housekeeping room (an infection control issue), for sharing of supplies, etc.
- Location of laundry and housekeeping away from kitchen area, possibly at the end of the hallway near the tub room.

Tub Room
- Placement of grab bars.

Medication Storage Area
- Larger and lower medication cupboard.

Nursing Resource Room
- Additional office(s) for nursing, professional staff and clerks to work in a private and confidential space. A conference room can then be used for doctors rounds, meetings, care conferences, etc.

Staff Room
- A centrally located staff room with access to kitchen facilities.
- Locked spaces (on the cottage and/or centrally located) for staff to store personal belongings.

Outdoor Space and Parking
- Adequate parking with appropriate number of plug-ins for staff and family.

Storage
- Increased storage space for equipment centrally and on cottages.

Environmental Quality

Attention now turns to environmental quality, including attractiveness, homelikeness, privacy, safety and security, temperature, cleanliness, lighting, and unpleasant odours. Views of residents, family caregivers and staff are discussed as well as the study team's observational assessment.

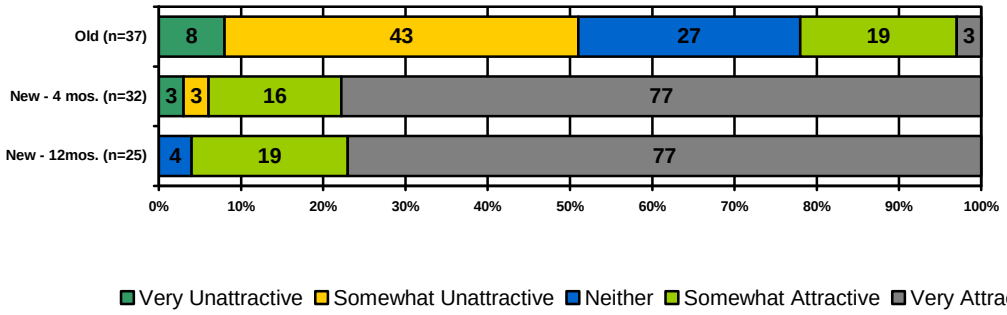
Attractiveness

Both **family caregivers** and **staff** were asked to assess the attractiveness of the old facility at baseline and the new facility at the 4-month and 12-month follow-ups: "*Overall, how attractive or appealing is the environment in this facility? Would you say it is very unattractive, somewhat unattractive, neither unattractive nor attractive, somewhat attractive, or very attractive?*"

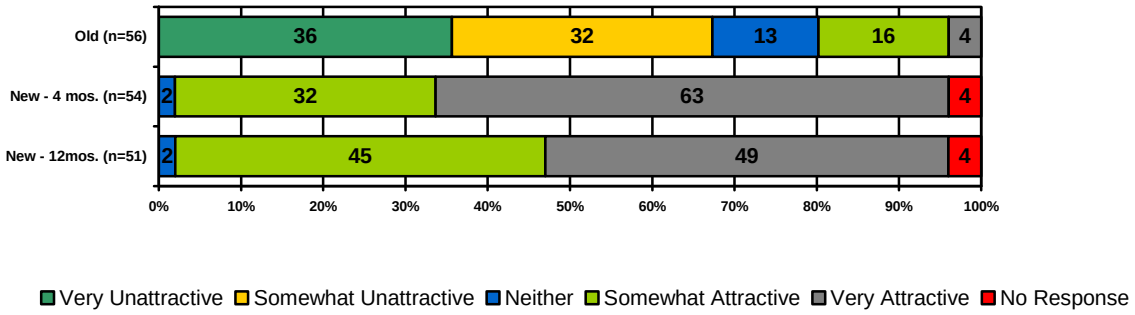
As shown in Figure 11, both family caregivers and staff rated the **attractiveness of the new facility higher than they did the old facility**.

Figure 11. Attractiveness: Family Caregivers and Staff

A. Family Caregivers



B. Staff



Among the 26 family caregivers who answered this question for the old facility and the new facility at 12 months, all but one rated the new facility higher in terms of attractiveness than the old facility. Among staff, 38 of the 42 staff who answered the question at both time periods rated the new facility higher than the old one.

Homelikeness

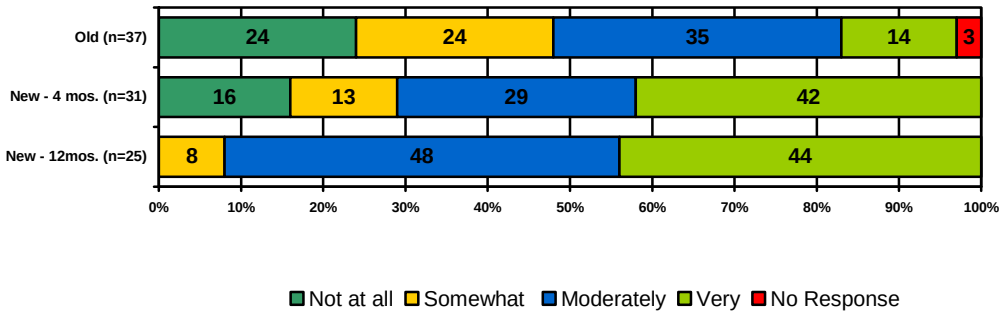
The issue of the facility being homelike was explored with the **family caregivers** and **staff**. At baseline, 4-month and 12-month follow-ups, both groups were asked "*Overall, how homelike is the*

environment in this facility. Would you say it is not at all homelike, somewhat homelike, moderately homelike, or very homelike?"

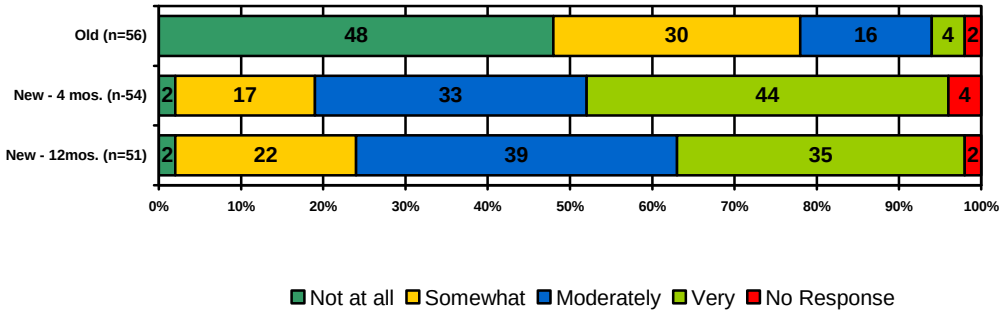
As shown in Figure 12, both family caregivers and staff were more likely to assess the new facility as homelike than they were the old facility.

Figure 12. Homelikeness: Family Caregivers and Staff

A. Family Caregivers



B. Staff



Among the 24 family caregivers who rated the homelikeness of the facility at baseline and at 12 months, 16 gave higher ratings for the new facility while six assessed homelikeness as the same. Only two family caregivers had lower ratings for the new facility (moderately -> somewhat; very -> moderately). Among the 41 staff who answered this question at both time periods, 35 rated the new facility more homelike than the old facility. Four gave the same rating at both times. One individual rated the old facility as moderately homelike and the new facility as somewhat homelike while another gave ratings of very homelike and moderately homelike, respectively.

Both family caregivers and staff were asked to provide an explanation of their rating and what elements are homelike or not homelike to them. Based on their responses, it was evident that it was not only the physical environment that was taken into account. The **social/care environment** (e.g., nature of and opportunities for interaction with other residents, family, and staff) was an important component for many in their assessment of homelikeness. **Private rooms**, **personal decorations**, and the **smell of the food** were common elements of homelikeness for both family caregivers and staff members. **Rules/routines**, the **time schedules**, and the **institutional-style beds** were elements that made it less homelike. The **staff** was mentioned by some family members as contributing to homelikeness, particularly with regards to the old facility.

Examples of **family members' explanations** of homelikeness included:

Old Facility

- *Quite institutional – almost like a hospital. Annoying buzzer/bell. Noisy residents distract [ ] and are very annoying to her. It's very bare and cold.*
- *The whole atmosphere is not good. The staff are too busy to help. They can't do as much as they should…it all comes down to no staff.*
- *It's not set up like a home. The dining room is the most homelike. The rest is like a hospital.*
- *There is a certain amount of coldness in this facility. They haven't been fixing things up. It depends on which staff is on as to the warmth of the environment.*
- *It all goes back to a lack of staff. If they had staff to take [ ] out or to read to him, etc., it would be better.*

New Facility (4 months)

- *[ ] would socialize more at home. The staff don't have time to socialize – just put to bed after supper unless a musical event.*
- *Every day something is going on. It's much more homelike – it's closer like a family.*
- *It's as close as you can get to home given that these are sick old people. They keep it like a home with the cooking, etc.*
- *I dislike the incontinent pads on the shelf at the entrance to the room. It's not how you would have your own entrance.*
- *It's getting better. The cooking and food is a plus. They need to do some more decorating in her cottage to make it more homelike.*
- *It's more homier than the old building. There's less residents but they mingle more in the dining room and have coffee and the gathering of the clan.*

New Facility (12 months)

- *Definitely better. You can smell the cooking. It makes it more like a home.*
- *The kitchen is more homelike so is the dining room. The cooking makes it more homey. You can smell the food.*
- *Her room is very pretty. The cottage is nice. It's more like a family atmosphere.*
- *The dining room/kitchen makes a pleasant gathering place. It makes it a happy place.*
- *The rooms are nice, the colours are nice. The small dining room is more homelike.*
- *It's still an institution. Some things still are like a hospital. The kitchen is homelike.*

The following excerpts illustrate **staff's views** for both the old and new facility on homelikeness:

Staff #1

Rating of the Old Facility: Not at all homelike

Mmm what makes it unhomelike are the long hallways. The nurses' station right smack dab in the middle that everybody sits at. And families can walk by and see it. And it is always when you're sitting there, that's when a family member walks by. You can be crazy busy all day and then boom, they're there.…um just the whole feel of it. It feels very institutional. It feels very institutional, I don't know how else to say it. Like when you come here, you feel like you should be sick and tired and old because it feels sick and tired and old….even like the views from the windows…here, you don't really see much of anything… And not having – and I guess we do have the group area but like to me, a home is like you have this centre and like this hubbub…And here we can't have that because the kitchen and dining room is way down there…So it'd be nice if it was in the center so everything kind of revolves around it.

Rating of the New Facility (4 months): Very homelike

The colours of it, the floor plan of it, the fireplace…outside, like there's always – doesn't matter which window you look out of, there's always people moving and something to see. So that's nice, it's nice to see that.

Rating of the New Facility (12 months): Very homelike

I think the colours make it homelike, the – just, just the general feeling of it, the smell of the foods. When you come in, you can smell the breakfast cooking or the lunch or the supper. And just the, like the way the staff are. You come in…you're being welcome in like you're coming into someone's house to have supper. Like, you're just like, "Come on in, sit down, have a drink with us." We're all happy, right? Like that's kind of the feeling we want to promote.

Staff #2

Rating of the Old Facility: Not at all homelike

[Homelike would be:] *Their individual rooms, being able to decorate them like they like, and of course, you know, like the kitchen like they have, having the home cooked meals um not having all this alarm, bell system, you know, ringers going off, phones, you know, all night long. Just those kind of things. Not looking like a hospital. Like an institution.*

Rating of the New Facility (4 months): Moderately homelike

It's still, you know, it's not home home. I think the homelike deal is the kitchen, that – the kitchen – the cooking in there, the smells that, you know, not being just brought on a tray and put in front of you. That's a huge home thing. You know, just the little extras. The plants and like the rooms still to me look – they look homelike but they're still like – even the beds are like hospital beds…definitely the kitchen part, for sure.

Rating of the New Facility (12 months): Moderately homelike

… the beds are kind of institutionalized, right? And you know, the lifts in the room. Although they have, you know, they can bring in everything that they want to be homelike. The kitchen is homelike…. the food, like home cooked food, the smells in here, it doesn't smell as much as the other place, um, I think more so just, you know, the beds make it look like institutional.

Staff #3

Rating of the Old Facility: Somewhat homelike

It doesn't make it homelike because it is a standard routine that's followed…you have to share a room. Like not all rooms are doubles. We have some private. And the private rooms you can make homelike. Semi-private you can't because you're limited to space. Very limited to space….we're so institutionalized, you know. This is the way it has to be done and it's the way we've been doing it for years.

Rating of the New Facility (4 months): Moderately homelike

Homelike is they have their own private rooms. They're not sharing a room with anybody. They're allowed to have whatever they want on the walls… they can bring whatever they want in. Plus they get home cooked meals. It's not served on trays. It's actually served and you see them taking the food out of pots and putting it onto plates and like you would at home. They have their own private washroom in their room, and that makes a big difference, too. You're not sharing a bathroom with somebody else.

Rating of the New Facility (12 months): Moderately homelike

Because there is still some of that routine, you gotta follow it…Like, I'm going to get 'em up when I want to, not when you want me to! [Homelike because:]*… the fact that food's not served out on trays. Everything is home cooked. They all have their individual rooms, like their own private bedrooms, instead of sharing their rooms. And all their own personal belongings.*

Staff #4

Rating of the Old Facility: Not at all homelike

[Homelike]*…I think probably um the staff, the staff getting the residents like in our dining rooms or getting them together where they eat and stuff, trying to make it as friendly and uh – so I would say the staff have a big part of that, making it homelike for them.* [Not homelike] *I think because it's so institutional. Like we have corridors, long, long corridors with rooms off of a central nursing station, it's very – it's very institutional. I mean, even the colours are institutional colours.*

Rating of the New Facility (4 months): Moderately homelike

I think because of the kitchen, and the little eating area, the dining room, they have a small TV room, you know, their rooms are set-up that they have their things in them. It's hard to get away from institutions.

Rating of the New Facility (12 months): Somewhat homelike

I think what makes it homelike is they all have their individual rooms, there's a kitchen area, there's a little TV room. And um I think that's what helps to make it – and families can come and go out of their door there to see them… before in the old place we used to get a lot of…visiting residents, residents in other residents' rooms and now if they get to know the 12, that's good, but if you get quite a few dementia you don't get a lot of visiting unless they don't want them in the room, you know. So to me, we miss on that, I think. Building some friendships with other residents, you know.

One staff member simply stated: "*It's still an institution.*"

Privacy

In the new facility, all residents had **private rooms**. For 13 residents, this was a new experience as they shared a room in the old facility. The remaining 26 residents were alone in semi-private or private rooms in the old facility as the number of residents was reduced in anticipation of the move.

Residents were asked two questions related to privacy. One question was "*If you have a visitor, can you find a place to visit in private?"* The second one was "*Do the staff make sure you have enough personal privacy when you dress, take a shower, or bathe?"* In the old facility, 15 of 20 residents indicated that they could find a place to visit in private, four replied no, and one responded sometimes. All 21 residents who answered the question perceived that they had personal privacy when showering, dressing or bathing. In the new facility, all 15 felt there was a private place for visiting while 13 of the 14 residents answered yes for personal privacy and one resident replied sometimes.

At 4 and 12 months, **family caregivers** were asked "*Overall, would you say that being in a private room has been positive, negative, neither, or both positive and negative for (name of resident)*?" At 4 months, 78% of the family caregivers rated the experience of having a private room as positive and only two caregivers were negative. At 12 months, 88% of the 25 caregivers were positive, with only one giving a negative rating and two indicating it was neither positive nor negative. A comparison of the ratings by the same caregivers at 4 and 12 months revealed that all but three were consistent in their assessment of the private rooms. These three shifted their assessment from neither positive nor negative at 4 months to positive at 12 months.

When asked to explain their assessments, family caregivers often talked about the **privacy**, **companionship**, and the **opportunity to have their "own space"**. They commented:

Positive

- *She can have her things out where she wants them. She used to have disagreements when she shared a room.*
- *She likes her privacy. She doesn't like other people touching her things.*
- *She has her own space. She can do things when she wants, on her own schedule.*
- *It's good for her and for us. We have a private area to visit.*

Negative

- *He needs company. He needs that stimulation. He's so isolated being alone in a room most of the day.*
- *He was in a semi-private. He used to be able to watch the other residents at least and not feel quite so lonely. He misses the company.*

continued…

…continued

Neither Positive nor Negative

- *She was in a private room before and she spends a lot of time in the dining room or out.*
- *She misses someone else in the room – more traffic.*

Safety and Security

In order to assess residents' perceptions of their safety, **residents** were asked "*What number would you use to describe how safe and secure you feel here?*" Ratings were obtained from 20 residents for the old facility and 14 for the new facility (Table 5). The average score for the old facility was 8.3 out of the possible 10 compared to an average of 9.1 for the new facility. Seven of the 14 residents gave a score of 10, the best possible.

Table 5. Assessment of Environmental Quality: Residents

Feature	Range		Mean Score[4]	
	Old	New	Old (n=)	New (n=)
Safety and Security[1]	6 – 10	7 – 10	8.3 (20)	9.1 (14)
Temperature[2]				
Facility	4 – 9	6 – 10	7.2 (18)	8.2 (13)
Resident's Room	Not asked	5 – 10	Not asked	8.0 (14)
Cleanliness[3]	5 – 10	7 – 10	8.3 (18)	8.9 (11)

[1] Residents were asked "*What number would you use to describe how safe and secure you feel here?*" They were told that "*when you answer, you can use any number from 0 to 10, where 0 is the worst possible and 10 is the best possible.*" Possible scores ranged from 0 – 10.
[2] Residents were asked "*What number would you use to rate how comfortable the temperature is in the facility?*" At 12 months, they were also asked to rate the temperature in their room. Possible scores ranged from 0 (worst possible) to 10 (best possible).
[3] Residents were asked "*Now, think about all the different areas of this facility. What number would you use to rate how clean the facility is?*" Possible scores ranged from 0 (worst possible) to 10 (best possible).
[4] Given the relatively small number of residents who were able to answer these questions (n=), mean scores for each element are presented for all residents rather than being restricted to the scores of residents who answered with regards to both the old and new facility (12 months). No statistical tests of differences were conducted.

There were some safety concerns with regard to **exterior doors not locking properly** due to air pressure. A key informant explained:

> *… because you can leave, or a family member can leave, and it will close, but it won't engage, like it won't click closed. And then…you don't have the mag lock or anything so if a resident with a wander guard comes up, well, away they go! And that's happened…an ambulatory resident, um… was found down the street walking home. So it has happened. Another resident, who wasn't wearing a wander guard, made her way from Cottage 4 all the way down here to the maintenance, to the service entry, got through that double door, and was on her way out the service door. And it should have been locked but you know, thank goodness the doorbell or the doors did ring on the girls' pagers because the girl from Cottage 3 came down and found her halfway out that door.*

Temperature

Residents were asked to rate how comfortable the temperature was in the facility overall for both the old and new facilities and in their own room in the new facility, on a scale of 0 to 10 with 10 being the best possible. The 21 residents who rated the temperature in the old facility gave it an average rating of 7.2 (Table 5). At 12 months after the move, 13 residents rated the temperature as 8.2 on average. Ratings of the temperature in their own rooms by 14 residents were similar, with an average of 8.0.

Family caregivers' average scores on the temperature in the new facility was 7.9 for the cottage and 8.0 for the resident's room (Table 6). This contrasts with ratings of 6.6 and 6.7 respectively for the old facility.

Table 6. Ratings of Environmental Quality: Family Caregivers

	Range[1]		Mean Score[2]		
Feature	**Old**	**New**	**Old**	**New**	**n**
Temperature					
Facility/Cottage	0 – 10	0 – 10	6.6	7.9**	24
Resident's Room	2 – 10	0 – 10	6.7	8.0**	24
Cleanliness					
Facility	4 – 10	7 – 10	7.5	9.0***	25
Dining Room	4 – 10	7 – 10	8.0	9.2***	25
Common Area/Hallway	1 – 10	7 – 10	7.9	9.2***	25
Resident's Room	1 – 10	6 – 10	7.2	8.9***	25
Noise during the Day					
Facility/Cottage	0 – 10	5 – 10	7.0	8.7***	24
Dining Room	3 – 10	5 – 10	7.6	8.6**	22
Common Area/Hallway	3 – 4	5 – 10	7.0	8.6***	24
Resident's Room	3 – 10	5 – 10	6.8	8.7***	23
Lighting					
Facility Cottage	0 – 10	6 – 10	7.2	9.1***	24
Dining Room	0 – 10	6 – 10	7.6	9.1***	24
Common Area/Hallway	0 – 10	6 – 10	7.4	9.0***	24
Resident's Room	0 – 10	5 – 10	6.4	8.4***	24
Odour[1]					
Facility	1 – 4	2 – 4	2.4	3.7***	25
Dining Room	1 – 4	2 – 4	3.1	3.8***	23
Common Area/Hallway	1 – 4	2 – 4	2.6	3.6***	25
Resident's Room	1 – 4	1 – 4	2.5	3.3***	25

[1] Family caregivers were asked to rate these elements using "*any number between 0 and 10, where 0 is the worst possible and 10 is the best possible."* Possible scores ranged from 0 – 10. The exception was odour where possible responses were always (1), sometimes (2), rarely (3), or never (4).

[2] Possible scores ranged from 0 – 10. Only the scores of family caregivers who answered the question for the old facility and the new facility (12 months) were included; differences between the scores were analysed using paired t-tests. * denote statistically significant differences (* p<.05; ** p<.01, *** p<.001); n indicates the number of family caregivers whose scores were examined.

The new facility experienced problems with **temperature control** and **air flow**. As noted earlier, cold air was blowing down on residents in the dining room and in the living room. The **air conditioning** was not functioning properly in the summer. A key informant explained:

> *A few little quirks there, half the system wasn't working… we had some really hot days here. It gets very hot on this side because we get all the afternoon sun, coming in here, so the resource room and the Administrator's room gets really hot, and the Nursing Care Coordinator's office is always cold. So we're still working on some heating stuff…looking at possibly putting some tint on the resource room, on the window…to keep it cool, yeah… 'cause it gets really hot in there.*

A staff member commented:

> *Well, we had problems…apparently some of the air conditioners were down so it affected the recreation/rehab areas. So the community room - so the church services were really hot, this room was really hot. But we figured that out, so the only problem is Day Support controls it so they end up being cool which is too bad, because they want it to be warmer. But it gets really hot in here, so that's a bit of a challenge. But we're trying to work on that.*

The hallways and spaces with inside walls were **cold** in the **winter**. A staff member explained:

> *They've* [the hallways] *been very cold this winter…anywhere that didn't have those heating systems. In the clerical staff's office area it was freezing. The Nursing Care Coordinator's office was freezing, we need to get heaters in them. So it's a design flaw…anything on the outside wall has the heating…nothing on the interior. The hallways don't have. So, it's a problem we ran into.*

Cleanliness

Eighteen **residents** assessed the cleanliness of the old facility and gave it an average rating of 8.3 (range 5-10) (Table 5). The cleanliness of the new facility at 12 months was only slightly higher, with an average score of 8.9 (range 7 – 10) for the 11 residents.

Cleanliness ratings for the facility, the dining room, the common area, and the resident's room were obtained from **family caregivers**. The average scores for the old facility ranged from 7.2 for the resident's room to 8.0 for the dining room (Table 6). In comparison, in the new facility, average scores ranged from 8.9 for the resident's room to 9.2 for both the dining room and the common area.

Noise Levels

Residents who were able to be interviewed were asked "*Is the area around your room quiet at night*?" Among the 22 residents who answered this question with regard to the old facility, 14 indicated that the area around their room was quiet at night, seven stated sometimes, and one replied no. In the new facility, nine of 15 residents assessed the area around their room as quiet at night and six replied sometimes.

Residents were also asked "*Are you bothered by noise in the facility during the day?"* At the old facility, 15 of the 22 residents indicated that they were not bothered, while two replied yes and five felt they were sometimes bothered. At the new facility, 10 of 15 reported that they were not bothered and five replied sometimes.

The **family caregivers**' ratings of the noise levels during the day were more favourable in the new facility than in the old facility, irrespective of whether the focus was on the facility/cottage overall, the dining room, the common area/hallway, or the resident's room. All average scores in the new facility were above 8.5 out of the possible 10 while in the old facility, the range was from 6.8 for the resident's room to 7.6 in the dining room (Table 6).

At the same time, staff and key informants identified problems with the **alarm** and **pagers** in the new facility. Key informants commented:

> *Our fire tech call bell system is still a pain…we still have pressure issues in the building, which we will probably always have, that don't allow some of our outside doors to close properly. And if they don't close properly, the girls get an alarm on the call bell system, so it becomes a real pain…. it was 'Bing, bing, bing, bing!' It was crazy, absolutely crazy! So we still have a few more quirks with that one to work out.*

> *…there're still problems…it seems like when there's an electrical storm, or there's something going on with the weather, it affects the whole system…And the girls are getting really tired of those pagers, because they're constantly ringing, like CONSTANTLY ringing… very few of the bells or whatever were staff bells…It was the doors! So every time a door is being opened or closed or whatever, it's ringing! And then even if you go back and reset the door, it doesn't clear off the pager! So it's constantly ringing and vibrating and ringing, and maybe 5 or 10 percent of those bells might be an actual resident bell! And the girls are getting really frustrated, because they've got their hands full working with a resident, they've got this thing in their pocket and it starts buzzing. Well, they're not going to stick their dirty hands into a pocket to silence their pager, so it sits there and it buzzes and buzzes and buzzes and you're trying to work with your resident and the resident's looking at them like 'What? What is that, what is that?' You know? And we talked about changing them to just vibrate only so they don't have that buzz all the time, so we're considering that….it's kind of frustrating. And this has been kind of our biggest problem since we got here and it's still not perfected.*

Lighting

The lighting in the new facility was highly rated by **family caregivers**, with the lighting in the facility/cottage overall, the dining room and the common area having average scores of 9.0 or higher (Table 6). The exception was the resident's room which was slightly lower with an average of 8.4. In the old facility, the resident's room also obtained the lowest average score at 6.4 but the other areas were rated between 7.2 and 7.6. As noted earlier, some staff requested changes so that hallway lights could be easily dimmed at night.

Unpleasant Odours

Family caregivers were asked "Do you always (1), sometimes (2), rarely (3) or never (4) encounter unpleasant odours in (___)'s cottage? the dining room/kitchen/living room area? the hallways/quiet room? (___)'s room?" Scores for the new facility were significantly higher for the new facility than for the old facility. The only average rating under a 3.5 out of the possible 4 was the resident's room which scored 3.3 (Table 6). In contrast, the average scores for the old facility ranged from 2.4 for the facility/cottage overall to 3.1 for the dining room.

External Assessment of the Environment

In addition to obtaining information from residents, family caregivers, and staff, the study team conducted an assessment of the environment, using the **Therapeutic Environment Screening Scale for Nursing Homes (TESS-NH)**. This observational instrument was developed to evaluate physical aspects of long-term care settings, with a particular emphasis on dementia spaces. The 32-item checklist covers a range of environmental domains, including maintenance, cleanliness, safety, lighting, stimulation, noise and homelikeness (see Appendix A). In the old facility, scores were calculated for the areas that were designated as cottages (Cottages 1, 2, and 3 on Unit A and Cottages 4 and 5 on Unit B). In the new facility, scores were calculated for each cottage.

The **overall environmental quality score** (SCUEQS) was much higher in the new facility (30.6 out of a possible 38 (81%)) than in the old facility (19.1 out of 38 (50%)) (Table 7). However, in some domains, the new facility was assessed higher than the old facility while in others, there was relatively little change. More specifically, the domains related to **maintenance**, **lighting**, and **homelikeness** showed improvement in all five cottages when comparing the old and new facility. The score on **stimulation** doubled for two cottages but remained the same for the other three cottages; at the same time, no cottage scored higher than 6 out of 12 on this domain. There was little change in terms of **cleanliness**, **safety**, or **noise**. The lack of change in noise reflects to some extent the aspects considered when scoring noise (see below).

Table 7. Scores on TESS-NH

Cottage		Domain (Range)[1]							
		Mainten-ance (0-8)	Clean-liness (0-12)	Safety (0-12)	Lighting (0-18)	Stimu-lation (0-12)[2]	Noise (0-18)[3]	Home-likeness (0-13)[4]	SCUEQS (0-38)
1	**Old**	4	10.8	9	3	3	7	3	16.8
	New	8	11	11	18	6	7	10	30
2	**Old**	4	10	9	4.9	3	7	5	18.9
	New	8	12	11	18	6	7	10	32
3	**Old**	4	12	11	3	6	7	4	20
	New	7	11	11	18	6	8	10	29
4	**Old**	4	11	12	6	6	10	4	20
	New	8	12	11	18	6	7	10	32
5	**Old**	4.4	10	12	6.3	6	9	4	19.4
	New	6	12	11	18	6	10	10	30
All	**Old**	4.1	10.8	10.6	4.6	4.8	8	4	19.1
	New	7.4	11.6	11	18	6	7.8	10	30.6

[1] A higher score indicates a more therapeutic environment.
[2] Included views of courtyard/lawn, tactile stimulation (able to pick up and carry things around that may diminish desire to borrow from other residents, art on walls that invites touch) and visual stimulation (pictures, wall hangings, display cases, patterned wallpaper; must be hung at eye level). Must explicitly have therapeutic value.
[3] Included television/radio noise, resident/staff screaming/calling out, loud speaker/intercom noise, alarm/call bell noise, and other machine noise.
[4] Assessments were done less than 2 weeks before the move; many personal decorations and furniture may have been removed in preparation.

A brief explanation of these scores is provided below. The wording in quotation marks is the same as the wording on the TESS-NH.

Maintenance

Old Facility: "In need of some repairs."

New Facility: Largely "well maintained", except for three instances where there was a need for "some repairs".

Cleanliness

Old Facility: "Very clean", except for three instances where the social areas were "moderately clean". Body odours were mainly "rare or not at all", except where "noticeable in some areas" (the hallways on Cottages 1, 2 and 5 and a resident's room on Cottage 1).

New Facility: "Very clean" throughout. Body odours were mainly "rare or not at all", except where "noticeable in some areas" (the hallways on Cottage 1 and 3).

Safety

Old Facility: "No slippery/uneven surfaces", except the social areas and halls of Cottages 1 and 2, which were "mostly free of slippery/uneven surfaces". Hand rails were "extensive" in all hallways and the bathrooms of Cottages 4 and 5, but were somewhat available in the bathrooms of Cottages 1, 2 and 3.

New Facility: "No slippery/uneven surfaces". Hand rails were "extensive" in all bathrooms and were "somewhat" available in the hallways.

Lighting

Old Facility: Some areas with "good" or "barely adequate" light intensity. In terms of glare, some areas had glare in "many areas", a "few areas" and in "little or no" areas. Light was uneven throughout the old facility.

New Facility: "Ample" light intensity in all areas and "little or no" glare in all areas. Light was even throughout the new facility.

Stimulation

Old Facility: Views from all bedrooms and the public area on Cottages 3, 4 and 5, while the public area on Cottages 1 and 2 did not have a view. There were no visual or tactile stimulation opportunities in any areas.

New Facility: Views from all bedrooms and public areas. There were no visual or tactile stimulation opportunities in any areas.

Noise

Old Facility: TV on at all times on four cottages; Cottage 3 did not have a TV in the public area. Residents were "sometimes" screaming or calling out on four cottages, on Cottage 3 residents were calling out "constantly". Staff were screaming or calling out "sometimes" on all cottages. TV/radio noise was observed "sometimes" on Cottages 1, 2 and 5, and "not at all" on Cottages 3 and 4. Loud speaker noise was observed "sometimes" on Cottages 1, 2 and 3 and "not at all" on Cottages 4 and 5. Alarm/call bell noise were heard "sometimes" on Cottages 1, 2 and 3 and "not at all" on Cottages 4 and 5. Other machine noises were not heard on any cottages.

New Facility: TV on at all times on four cottages; Cottage 5 had the TV on some of the time. Residents were "sometimes" screaming or calling out on Cottages 1 and 2 and "never" on Cottages 3, 4 and 5. Staff were screaming or calling out "sometimes" on all cottages, except Cottage 5, which was "not at all". TV/radio noise was observed "sometimes" on Cottages 1, 2, 3 and 5 and "constantly" on Cottage 4. Loud speaker noise was observed "not at all" on all cottages. Alarm/call bell noise and other machine noises (dishwashers) were heard "sometimes" on all cottages.

Homelikeness

Old Facility: "Not at all" homelike throughout.[3] None of the cottages had family/resident access to a kitchen. On Cottages 2 and 3, 50-74% of residents had at least 3 personal pictures/mementos while it was 25-49% on Cottages 1, 4 and 5. Less than 25% of residents on Cottages 1 and 2 and 25-49% of residents on Cottages 3, 4 and 5 had non-institutional furniture. 75% or more of residents were well groomed.

New Facility: "Moderately" homelike throughout. None of the cottages had family/resident access to a kitchen. On all cottages, 75% or more of residents had at least 3 personal pictures/mementos, 75% or more of residents had non-institutional furniture, and 75% or more of residents were well groomed.

Scores in stimulation and noise suggest **areas for improvement**. The stimulation scores in the new facility were relatively low, largely due to the lack of visual and tactile stimulation for therapeutic purposes. While this assessment done 4 months after the move may reflect early stages of cottage decorating, informal observations at 12 months suggested no improvement. In terms of noise, the overall score was 8 out of 18. Attempts need to be made to reduce the operation of the TV and staff calling out to each other. The other machine noise appears inevitable in the cottage setting.

[3] Assessments were done less than 2 weeks before the move; some personal decorations/furniture may have been removed in preparation.

Summary

This discussion of the physical environment highlights key aspects of the new facility in comparison to the old facility where possible. Overall, the new facility was viewed **much more positively** than the old facility. At the same time, some areas for improvement were identified.

A **cottage size of 12 residents** may be the minimum number of residents per cottage given concerns/issues such as the limited opportunity to see other people, potential resident/family caregiver – staff conflicts that are more difficult to resolve in the cottage environment, and the required amount of staffing. **Private rooms** and **bathrooms** generally drew favourable comments. The **kitchen** was rated highly, particularly by family caregivers. Several commented on the **smell of food** and the **opportunity for residents to watch the food being prepared**. At the same time, the need to meet care standards necessitated a **lack of kitchen access for residents and families**.

The **size of dining room and living room** needs to be reconsidered in light of the acuity of residents and need for chairs such as Geri chairs that require more room. The **size of the medication storage room** and the **location of the computer** in the kitchen/dining room were concerns, particularly in relation to issues of safety and confidentiality. In terms of environmental quality, **noise** and **stimulation** were two areas for improvement.

The **location of the resource room** in the central area of the facility resulted in a major change in and concern about in the visibility of the RNs/LPNs. This had implications for the ways in which RNs/LPNs provided support to residents, family caregivers, and staff. The **lack of a staff room** was a major catalyst for staff discontent. While the decision was in keeping with the Eden Alternative, staff desired allocated space where they could get some relief from their work demands. It would be useful to obtain the view of new staff with regards to the need for a staff room; it may be that individuals who have not had the previous experience of a staff room would not have the same level or type of concern as those who have had access to a staff room in the old facility.

The new facility was more likely to be rated as **homelike** than the old facility. **Private rooms**, **personal decorations**, and **the smell of food** were identified as elements of homelikeness. **Rules/routines**, the **time schedules**, and the **institutional-style beds** were elements that made it less homelike. Some family members mentioned the **staff** as contributing to homelikeness.

Attention now turns to the social/care environment and the ways in which this physical environment is used. The interplay between the physical and the social/care environment is important to understand. It is possible that certain design features facilitate certain aspects of the social/care environment and impedes others. At the same time, the demands of the social/care environment may influence the ways in which the physical environment can be used.

THE SOCIAL/CARE ENVIRONMENT

The social/care environment focuses on the care that is provided within the physical environment. Particular attention is given to the **province-wide care system changes**, the **philosophy of care**, the **role of different staff members**, residents' and family caregivers' **assessments of the care provided**, **choices** available to the residents, **family involvement**, **costs**, and overall **assessments of the facility**.

Province-wide Care System Changes

Several province-wide care system changes occurred in the 1-year period prior to and after the move and potentially impacted the social/care environment of the Care Centre. These changes included but were not limited to:

- The implementation of new Continuing Care standards for care and accommodation;
- Inspections based on the new Continuing Care standards;
- The introduction of regular computerized assessments (MDS 2.0) which requires the input of various staff, including RNs/LPNs, HCAs, recreation/rehabilitation staff, doctors, and pharmacists;
- The introduction of computerized daily charting (Patient Care System (PCS));
- Increased emphasis on a social model of care rather than a medical model of care;
- Substantial negotiated pay increases for HCAs;
- The amalgamation of East Central Health Region with other Health Regions to form Alberta Health Services; and,
- An increase in accommodation fees as of November 1, 2008.

As a result, residents, family caregivers, and staff members were dealing with changes in the social/care environment at the same time as the change in the physical environment was occurring.

Philosophy of Care: The Eden Alternative

One change that occurred at the health region level was the implementation of the a new philosophy of care, the **Eden Alternative**, which views "long-term care facilities as habitats for human beings rather than institutions for the frail and elderly" (Thomas & Stermer, 1999, p. 14). Founded by Dr. William Thomas and Dr. Judy Myer Thomas in 1991, this approach is built on the following **10 principles**.

Eden Alternative Ten Principles

1. The three plagues of loneliness, helplessness, and boredom account for the bulk of suffering among our Elders.

2. An Elder-centered community commits to creating a human habitat where life revolves around close and continuing contact with plants, animals, and children. It is these relationships that provide the young and old alike with a pathway to a life worth living.

3. Loving companionship is the antidote to loneliness. Elders deserve easy access to human and animal companionship.

4. An Elder-centered community creates opportunity to give as well as receive care. This is the antidote to helplessness.

5. An Elder-centered community imbues daily life with variety and spontaneity by creating an environment in which unexpected and unpredictable interactions and happenings can take place. This is the antidote to boredom.

6. Meaningless activity corrodes the human spirit. The opportunity to do things that we find meaningful is essential to human health.

7. Medical treatment should be the servant of genuine human caring, never its master.

8. An Elder-centered community honors its Elders by de-emphasizing top-down bureaucratic authority, seeking instead to place the maximum possible decision-making authority into the hands of the Elders or into the hands of those closest to them.

9. Creating an Elder-centered community is a never-ending process. Human growth must never be separated from human life.

10. Wise leadership is the lifeblood of any struggle against the three plagues. For it, there can be no substitute.

Source: http://www.edenalt.org/our-10-principles

The Eden Alternative emphasizes **flexibility** and **personal choices** by residents. As one key informant explained:

> *Eden is not the building. Eden is the philosophy, and it's the way you give your care and how you present it to your residents, and that's what Eden is all about. How we do meal prep, how do you involve your residents in activities, and making, making them feel useful…. it's the little things… the smell of the food cooking, that makes your appetites increase. That's what it's all about…The care's the same… but it's how we present it. And how we implement it…Eden doesn't just stop at nursing. It's housekeeping, it's maintenance, it's rehab, it's recreation, it's everybody's attitude. It's not just one. And the families and the residents!*

Another stated:

> *… the Eden philosophy is not about a building, it's not about staffing, it's not – it's about how we treat people….it's that part of the Eden philosophy is to look at them as a person and just because they're alone doesn't mean they're lonely.*

Elements of the Eden Alternative were **introduced in the old facility** to residents, families, and staff (for a discussion of the process, see Ricciotti (2009) who interviewed the centre's manager and the nursing care coordinator). Changes were made with regard to **food and meal schedules**, increased **privacy**, a separate unit for **residents with dementia**, and **staff roles**. The **cottage idea** was incorporated into the old facility. One key informant discussed this in relation to introducing the staff to the Eden Alternative:

> *...trying to get them* [staff] *into that – into that way of thinking, asking them, "okay, what can you do, what strategies can you think of that we could work with in our existing like institution facility um that we can try to incorporate some of these ideas." We did break down the cottages. Well, we had two units at the other place. We did break them down into the…12 people, 5 cottages idea, while we were there. We had the designated staff for each cottage… we said where at all possible we'll try to maintain your group as your little family…that was a huge way to prepare them because then they only had their 12 people to look after.*

The **implementation** of the Eden Alternative prior to the move suggests that it is possible to embrace the philosophy to some extent in an existing more institutional-like setting. A key informant explained:

> *They* [staff] *said,"well, we can't do the Eden philosophy…because it's not set up that way." And it's not the set up – I mean, the set up adds to it, don't get me wrong. Having the cottages* [in the new facility] *is a bonus…but – it's what you do with it, it's how you approach things. And I think we proved that and the staff proved it to themselves that there's a lot you can do even if you're restricted by a building… How they were already in their cottages and their groups… doing this and that. So yes, we were still in the same building. But we did it – we had a different approach and we approached things – you know, in a completely different way. And it's – that to me is – is the fundamental part of the Eden philosophy. Having the physical layout like this* [new facility] *is like sort of the icing on the cake.*

Overall, the philosophy of care sets out the principles or the framework for the social/care environment for residents, family and staff. Attention now turns to the roles of different staff members in the facility.

Roles and Responsibilities of Staff

The implementation of the Eden Alternative, the cottage model, and region- and province-wide system changes required changes in some staff members' roles and responsibilities. Many of these changes were implemented in the old facility in preparation for the move. The intent here is to briefly highlight the **roles and responsibilities** of various staff members as well as the **changes** that have occurred. Staff members' assessments of their roles are discussed later (see section of Staff Members' Situations).

Health Care Aides / Nursing Attendants

The **health care aides / nursing attendants** (HCAs) are assigned to specific cottages, with some working between cottages on certain shifts. At capacity with 12 residents per cottage, the typical HCA complement is as follows: during the day, 2 per cottage, 1 float between Cottages 1 and 2, and 1 float between Cottages 4 and 5; in the evenings, 1 full shift and 1 short shift (6 hours) per cottage, plus 1 float between Cottages 1 and 2, and 1 float between Cottages 4 and 5; and at night, 1 HCA per cottage.

The **physical layout** required an **increase in the number of HCAs**, at a time when provincially there was a staff shortage. A key informant explained the situation as follows:

> *…because of the physical layout we've really had to increase our numbers. Like in the old facility, even for 90 residents on a night shift we had three aides plus the nurse. Now with 50 residents…we've got five staff plus the nurse….So just we've cut our number* [of residents] *in half basically but we need twice as many people* [staff]*. And likewise with evening shift on the two units at the other place…I think we had eight aides plus the nurse. Now we need 12 plus the nurse...Our days are okay. But it was the evenings and nights that we really had to up the number of staff and now we're struggling.*

The HCAs are **responsible for** direct care, medication administration, food preparation, personal laundry, and light housekeeping for their cottage. While the HCAs were doing direct care and, during the year prior to the move, had been administering medications (with the exception of narcotics, injections, etc.) in the old facility, the food preparation, laundry, and light housekeeping were new tasks in the new facility. The emphasis on multitasking represented a major change and challenge for staff. A key informant described this change as "*huge*" and indicated that "*they've had a huge learning curve".* Another commented:

> *…that* [food preparation] *was their biggest fear. 'How are we going to do food prep, serving food, making food, and look after residents, and do the laundry?'….'how can we do care, be changing somebody's incontinence briefing and coming to the kitchen?'…. 'how can I make a meal for 12 people and like there's only two of us and we have to give care and – and – and – and, and they don't realize that the way the dietician and the food supervisor had set up the whole program…every shift has something to do in preparation for that day and for the next day's food.*

Decisions about the **division of labour on each cottage** is the responsibility of the HCAs themselves. For example, the day float shift between Cottages 4 and 5 does all the food preparation and kitchen work, including the serving and cleaning up while the two other HCAs in each cottage primarily do patient care. A key informant explained:

> *…that wasn't how it was intended. But that's kind of how it's evolved and uh so the girls that are doing the care…they don't even walk into the kitchen. They don't help with the serving, they don't help with the clean-up, they don't help with the feeding.*

Cottages 1 and 2 were not full at the time of the move and did not have the float shift so the HCAs initially were sharing the food preparation. On Cottage 3, the one cottage that is not connected to another cottage, duties also were shared across all staff.

Communication between the HCAs and other staff was noted by some individuals as an area requiring improvement. In response to a question on disadvantages of the new facility for staff, one staff member commented:

> *The biggest disadvantage is…a difficulty with communication. That is such a problem…one of the girls is giving analgesics. And she's worked a long time. She knows when they need them. However, she didn't realize that this other person is already on Tylenol at bedtime, at eight o'clock at night, and so she gave two Tylenol for it… then I came about five minutes later and I gave two Tylenol 3's but I didn't know until the next – when I'm working nights the next day and I'm thinking what? You know like, but she didn't phone me. I didn't know. So that has happened.*

This staff member continued and linked some of these communications problems to the **philosophy of care**.

> *Sometimes I find that HCAs take on way, way, way beyond what they are capable of doing because um they are – they're told that this is the Eden philosophy, that they will get to know the person best and they will do all these things, and that to some extent is really good. But there's still the medical aspect of it that they don't have and then I'm sort of, like catch it lots of times and find out. So like I don't find out about people or we find out that, how long has this been going on? Like she hasn't been drinking and she's falling out of bed…like two days, okay, let's maybe think there's maybe UTI going on here…We need to know these things.*

The HCAs were asked, at 4 and 12 months after the move, "*Thinking about the old and new facility, does the physical environment of the new facility make your day-to-day tasks easier, harder, or about the same to perform?"* At 4 months, 67% of the 34 HCAs who answered this question reported that it was easier, 21% replied about the same, and 12% perceived it to be harder. At 12

months, 84% of 31 HCAs reported that the layout made their tasks easier, 13% indicated it was about the same, 4% perceived it to be both easier and harder, and no one stated it was harder.

Registered Nurses and Licensed Practical Nurses

Nursing care is provided by **registered nurses (RNs)** and **licensed practical nurses (LPNs)**. At full capacity of 60 residents, the RN/LPN staff complement is as follows: during the day, 1 RN and 1 to 2 LPNs; in the evenings, 1 RN and 1 to 2 LPNs until 7pm; and at night, 1 RN. The RNs/LPNs work across all five cottages in the new facility. As mentioned earlier, there was a nursing station on each unit in the old facility whereas in the new facility, RNs/LPNs share an office in the central area.

About a year prior to the move to the new facility, the RNs/LPNs saw a change in their involvement with **medications** due to the implementation of an HCA medication administration program. This change allowed the RNs/LPNs to focus more on assessments, care plans, involvement with families, working with other health care professionals, and training the HCAs. A key informant explained the role and the reaction to the changes as follows:

> *…the LPNs at that time felt very threatened* [when the medication assistance program was implemented]….*And the same thing with the RNs… they were too busy doing pills and rounds…*[they had to] *refocus…doing care plans on the computers and having better family conferences, better documentation….working much closer with the pharmacist, the doctors, uh, the care conferences I think are far more in depth now….more teaching role.*

Given staff shortages, the LPNs sometimes are called upon to provide **direct care**. A key informant explained:

> *…we've been asking them now to help out on the floor. Not in the LPN capacity but kind of in the care aide capacity and doing the actual care. Helping with transfers, getting people up, washing and dressing, feeding…they're doing it, not by choice, though…the LPNs have had more of a up and down kind of 'okay, today we want you to do this. Tomorrow we want you to do this.'…we don't have a choice…We don't have enough staff.*

Challenges with the physical layout of the new facility for RNs/LPNs were identified as **having to cover five cottages** and **not being as visible** on the cottages as they had been in the old facility. A staff member commented:

> *Then there's so much spread out all over the place. Like we've got some really sick people but they're here and there and everywhere….I used to see far more people so I knew how they were and see their deterioration or just notice things. Now I don't see as many people. Which is um, more problematic, I think, for the days and evenings nurses.*

At 4 months, staff members were asked "*Thinking about the old and new facility, does the physical environment of the new facility make your day-to-day tasks easier, harder, or about the same to perform?"* Among the 8 RNs/LPNs who answered this question, 5 indicated that it made it harder, 1 perceived it to be about the same, and 2 replied easier. At 12 months, 6 out of 9 RNs/LPNs reported that it was harder while 3 replied easier. Considering only those RNs/LPNs who answered at both times, only two had a change in their response from 4 months to 12 months; one individual went from harder to easier while the other judged it to be about the same at 4 months and harder at 12 months. These challenges are discussed in more detail in the section on staff satisfaction.

Recreation Staff

The **recreation staff** consisted of a .8 FTE Recreation Therapist, two full-time and one part-time recreation assistants in the old facility. One of the recreation assistant positions was cut in the new facility, leaving two full-time recreation assistants. At the same time, recreation is one area that is over-budget for the Care Centre.

The initial thinking was that the **HCAs** would provide some of the recreational activities. One key informant argued:

> *They just don't have time for it. The time they do all the hands-on things, they do the laundry, they do the dishes, clean-up the living room, the dining rooms, they have to clean the fridge, the stove, all their monthly cleaning schedules and everything, then they do the medications and they do the PCS, everything's on the computer now, so by the time they get everything done, there's very little time for sitting down and having a game of this, or a game of that. It's not to say that they don't interact while they're feeding – they do – but to do actual recreational activities, they don't have time….And that's become very obvious here.*

The **physical layout** of the new facility combined with the Eden Alternative and the residents' functioning challenged the recreation staff to redesign their programs. A staff member explained:

> *It's a bit more challenging with the cottages and having to plan cottage programming, which we've done really well with. But it can be challenging. Especially if we don't have two staff available to do programming for five cottages in one day. So it's hard in that sense. But we've been managing really well…* [staff] *have been able to focus on the goals of the clients and actually targeting those goals versus just programming… It is busy for staff…but it's nicer to have those small interventions, as well. And it's more beneficial to the clients.*

A key informant commented:

> *…they had to change the way they give their recreation, because a lot of it is one-on-one in the cottages, it's not about bringing people to recreation, it's about bringing recreation to the people….we still have, as I said, our church services, and they have a thing for Halloween, for a fundraiser, so there are gatherings in our large room, but then again, there are a lot of things done on the cottages, in small groups in the cottages.*

Rehabilitation Staff

The **rehabilitation staff** went through considerable staffing changes due to an inability to staff positions. Just prior to the move, there was one therapy assistant but no occupational or physical therapists on staff. The new facility had a part-time occupational therapist and an additional part-time therapy assistant hired (for a total of two). A part-time physical therapist was filling in on a temporary basis. Their responsibilities include assessing and providing therapy to residents as well as training staff.

Prior to the move, attempts were made to **change** from a "*you come to me"* philosophy to "*a different philosophy where the therapist came to you"*. A key informant explained:

> *…we were short-staffed two summers ago…And the rehab team was on the units for eight o'clock every morning…they were the second person to help with all the transfers. Because we had a lot of work injuries at our facility um staff were doing improper techniques..so we brought the rehab team onto the units when the units were busy doing their work. And the rehab team worked closely with the staff….doing it the proper way rather than chronically doing it the wrong way. And it helped the girls in the morning…it brought rehab to the bedside…now they're used to it …doing rehab on the cottages.*

Since the move, the rehabilitation staff was no longer providing this type of assistance. One key informant described the situation as follows:

> *…they have reverted back to a very medical-type model of care. They will go to cottages to do walking, but it's back to that '10 o'clock walking program, let's go down to the cottage and walk people'…Whereas at the old facility, we had stopped all that. And we had the rehab teams on the cottages, walking people to breakfast…And when rehab is working with the staff on the cottages at 8 o'clock in the morning, to walk people to breakfast, to do spot-training and teaching with lifts and transfers, um… the staff have much more appreciation for them, it helps them immensely in the mornings to get people up, because if the rehab person was second for lifting…. once we moved, I was hoping the team would continue here just like before – they just reverted right back.*

Physicians

The Care Centre has two **physicians** who participate in the weekly resident care conferences and do rounds as necessary. In the old facility, the doctors were on the units at the nursing stations and more visible than in the new facility where care conferences occur in the nursing resource room. A key informant commented:

> *They spend a great deal of their time in the conference room, um, where they do their quote 'rounds', the girls bring the charts down for residents that are a concern, but then they do go to the cottages to see the residents, when they have to do an assessment. I would like to see more of that done on the cottage, but… They do take full activity in the residents' care conferences, they're good about that, they always sit in on the conferences and have their input.*

Another one commented on a perceived change from the old facility to the new facility:

> *So I think if anything it's removed the doctor more so from* [the residents]*….one of our ladies who's… cognitively well, and we'd been here for over a month. And she made a comment to her family, to her daughter, that she hasn't seen the doctor yet. And she hadn't. She hadn't because he hadn't actually been to her cottage and made rounds and actually said, how are you, how are you feeling today or whatever. It removes them even further from the resident…And at least before when they were – it was two cottages they might see the doctor walk past once in awhile…. they might see him but now – now – so that's coming across from the residents and the families that um mom's been here a month already and she hasn't seen the doctor.*

Pharmacist

A **pharmacist** is available to the facility onsite two days per week and on call one day per week. The duties include attending weekly care conferences, doing medication reviews, and reviewing medication errors for discussion at the Medication Safety Meetings. As well, the pharmacist provides reading material and reports for the staff to further their knowledge.

Dietary Staff

The new facility has a **dietician** 1 ½ days per week and a **food supervisor** 2 days per week. The food supervisor is responsible for overseeing the kitchens, ensuring procedures such as menus, temperature controls, and proper hygiene standards are followed, and ordering the food. A clerk works with the food supervisor to decant the food as it comes in.

The challenges of developing a **training program** for the HCAs and of **ordering appropriate quantities** of food were discussed by a key informant:

> *…so the training program they had to set up…she worked actually with the food supervisor in Vermilion…to set up the training program…they had to come up with a whole new teaching scheme to teach – not to cooks – but to multiskilled workers. So it was a big uh educational curve for them, as well, and a challenge… ordering food is one thing but ordering it in quantities to be broken down…you have economies of scale when you're buying for a big facility. But now you're not. You're actually buying for a cottage of 12 so it's a different way of ordering, getting your stocks in, this type of thing. So it's been – it's been a learning curve for everybody.*

Communication with the dietary staff was important to avoid food waste. At four months, staff members commented:

> *A lot of my frustration comes, too, from cooking. It's getting better. I didn't have the supplies that I needed. The recipes were too big. They made too much food. I had so much left over. And trying to use up the next day without wasting too much or you know, the day after the next. So I just talked to the dietician and she said 'just start writing right in the book, saying this recipe is too big. Make one between two cottages and if you have leftovers put it into the deep freeze, write it right in the book when that recipe comes – flip it open tonight, that recipe's four weeks down the road, it'll say, there's enough in the freezer. Just pull it out.' So that made it a little simpler.*

> *… we haven't had a meeting with Dietary. Even we leave notes, but we see no changes. And we had a lot of wastage of food, like lots, because our residents didn't like the homemade soups, and we never got any direction to what we should do. So then I finally went to the administration and said, look, we're wasting at least a thousand dollars or more a month in food going into the garbage.*

At 12 months, some issues persisted as evident by the following comments from a staff member:

> *Like I've got a lot of dietary concerns but I never see* [name of dietary staff]*. Um like the other day we found, girls said there's way too much bread, and I said,' well, what are you talking about? How much is there? 'Cause it had just come'. So the girl come back, said I have 55 frozen loaves and 6 fresh.' Sixty-one loaves of bread on a unit where two people have tube feeds? This is not good…. another unit had 36 frozen and 7 out… one person said I'm not going to count but I've got two full shelves in my fridge of frozen bread and I've got 6 out. How many do you think is like how close are they packed, and they said, 'they're packed, they are really, really packed'. Way too much bread, then….every unit had at least 30 some loaves of bread that were frozen. So there was a lot of bread.*

Housekeeping Staff

The **housekeeping staff** is responsible for all cleaning in the facility, with the exception of some light housekeeping in the cottages that is done by the HCAs. In the initial plans, there was to be one housekeeper in the building for the central area as the HCAs would clean the cottages. It was determined early on that this approach was not feasible given the other demands on the HCAs. A commitment was made to keep the housekeeping staff for a one year period. A key informant explained:

> *…and that's the way it was planned…. we really wanted to keep our housekeepers 'cause you think of outbreak situations, infection control issues…housekeepers are well trained in their level of care and their level of cleanliness and disinfecting…it would be detrimental to the residents' care if we didn't have them here…we have them for the next year.*

While maintaining the housekeeping staff, it represents another area where the Care Centre is over-budget.

Managerial/Clerical

At the time of the move, the Care Centre had a **Health Centre Coordinator** and a full-time **Nursing Care Coordinator**. The Health Centre Coordinator was responsible for the overall operation of this facility and another one. The Nursing Care Coordinator oversaw all care-related activities, including hiring, training, and supervision of care staff. There was a clerical staff member who provided administrative support while another clerical staff member had responsibility for the work schedule.

Overall, the **complex nature of staffing** a care centre is evident from this discussion. The new building brought its own challenges. At the same time, attempts were made to prepare staff for the new environment and new roles by implementing changes within the physical structure of the old facility. It is with this understanding of the staffing dimension that attention now turns to the residents', family caregivers' and staff's perspectives on the care in both the old and new facilities.

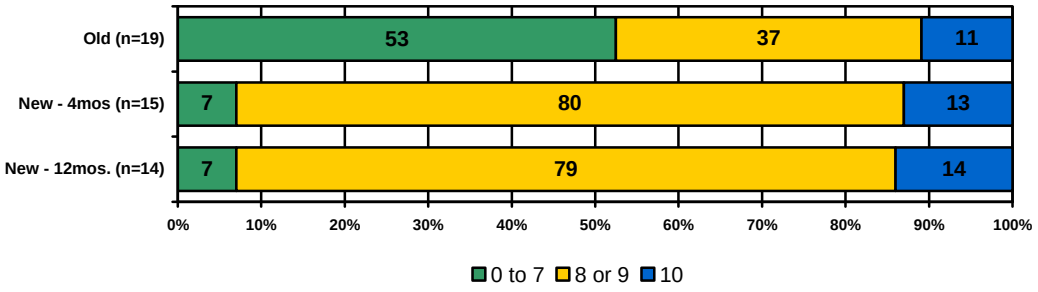
Views about the Care

The perspective of **residents** and **family caregivers** regarding the care provided in the facility is a critical component in the understanding the social/care environment. This includes **residents' views about staff** and **family caregivers' assessments of the care** and any **issues/concerns they may have regarding care**. In addition, it is important to examine the views of **staff** themselves.

Residents' Views

Residents were asked a series of questions about the staff and the care they provided. While the number of residents who were able to answer the questions is small, their views are important to consider. When asked "*Overall, what number would you use to rate the care you get from the staff?*", higher scores were evident in the new facility at both 4 and 12 months after the move than in the old facility space (Figure 13). With possible scores ranging from 0 (worst possible) to 10 (best possible), 37% of 19 residents at the old facility gave a rating of 8 or 9 while 11% gave a 10. At 4 months, the corresponding percentages were 80% and 13%, based on responses from 15 residents. At 12 months, the scores remained high.

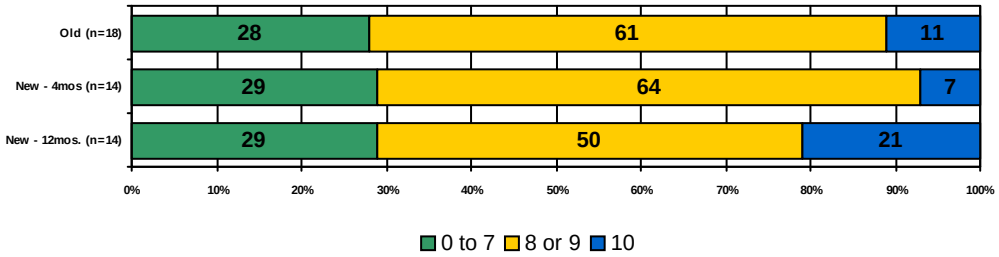
Figure 13. Care from Staff: Residents



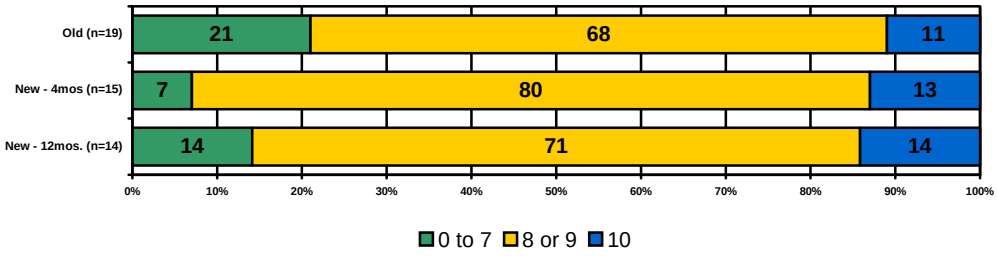
In addition to this overall rating, residents were asked to assess the **gentleness of staff**, the **respect from staff**, **how well staff listen**, and **how well staff explain things**. Considering a score of 10 as the 'gold standard', it is evident that there is room for improvement in these areas (Figure 14). Three or fewer residents rated the staff as a 10 on these various dimensions. Indeed at 12 months, none of the 14 residents gave a 10 for how well staff listen. Overall, the ratings were similar for the old facility and the new facility.

Figure 14. Quality of Staff Interactions: Residents

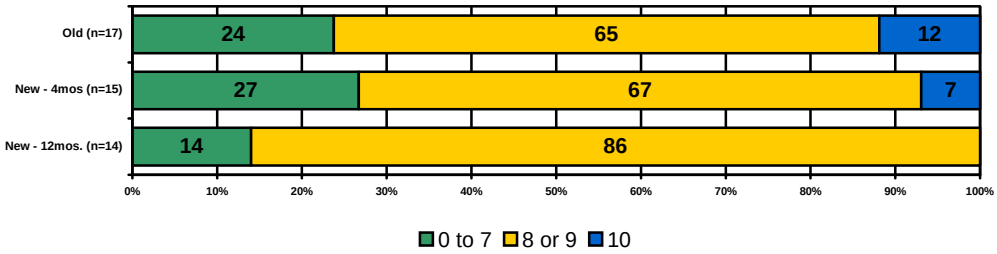
A. How gentle staff are when they're helping you.



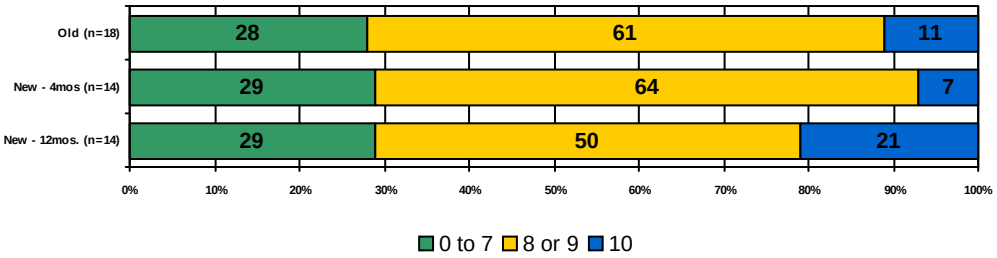
B. How respectful staff are to you.



C. How well staff listen to you.



D. How well staff explain things in a way that is easy to understand.



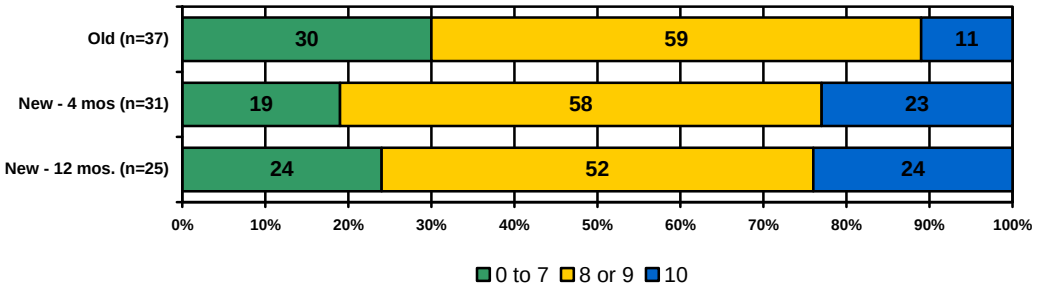
At 4 months, residents were asked "*Thinking about the old and new building, I'd like to know whether some things are better, worse or the same here as in the old building and why".* In terms of time the resident has with the staff, 2 (11%) of the 18 residents who answered the question rated it as **worse**, 11 (61%) thought it was the **same** and 5 (28%) rated it as **better**. They explained:

- *They have no time to spend. That hasn't changed at all.*
- *They still are in a hurry - they don't visit with me.*
- *The staff don't have as many to look after.*
- *Some spend more time but it depends on the person.*

Family Caregivers' Views

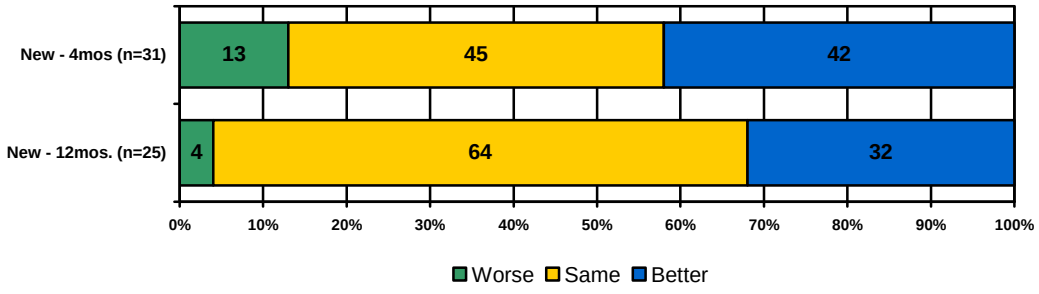
Family caregivers were asked a number of questions related to the provision of care. When asked "*Overall, what number would you use to rate the care (_) gets from the staff?"* From 0 (worst possible) to 10 (best possible), the ratings were similar for the old and new facilities (Figure 15). A score of 10 was given by 11% of the 37 caregivers in the old facility, 23% of 31 caregivers in the new facility at 4 months and 24% of 25 caregivers at 12 months. Among the 25 family caregivers who rated the care from staff in the old facility, and in the new facility at both 4 and 12 months, the average scores were fairly consistent (old – 7.7, new (4 months) - 8.4, new (12 months) – 8.2).

Figure 15. Ratings of Care: Family Caregivers



At 4 months, 13% of 31 family caregivers felt that the care was **worse** while 42% thought it was **better** (Figure 16). At 12 months, the 25 caregivers were asked to reflect on the care since the 4 month interview. About two-thirds (64%) indicated that it was the **same**, 32% thought it was **better** than at 4 months, and 4% reported it was **worse**.

Figure 16. Changes in Care over Time: Family Caregivers



Among the 24 family caregivers who answered this question at both times, one-third thought the care was the **same** at 4 months than in the old facility and remained that way at 12 months. **Improvements** were seen by 50% of the caregivers. For five caregivers, the care was better at 4 months and better again at 12 months. Another five reported it was better at 4 months and then the

same at 12 months while two perceived the care at the 4 month time as the same as that provided in the old facility but reported that it was better at 12 months.

When asked to explain their rating, family caregivers spoke about a **respect for the staff who provide care**, a **concern about their work load**, and perceived **benefits of the cottage model with consistent staff**. Examples of their comments include:

4 Months
Worse

- *Less time for care due to other duties and multitasking.*
- *There isn't enough RN supervision of staff. There's not enough staff and too much for them to do.*

Same

- *The same staff are looking after [ ]. They look after [ ] well.*
- *I'd say it has stayed the same. The staff work very hard to do the care.*

Better

- *I think the surroundings make it easier for the staff. The care is better.*
- *The staff is more consistent and getting to know the residents better. There is more rapport among the staff and residents.*

12 Months
Worse

- *Evening shift is worse. The days/nights are the same.*

Same

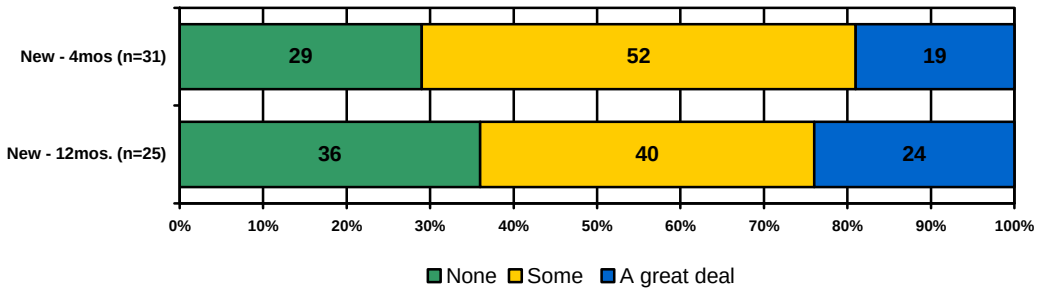
- *They don't have time. They don't seem to humour [ ] to get [ ] to cooperate. I know they are good but they are rushed.*
- *It's always been good. They give 110%.*

Better

- *[ ]'s much better cared for in the new cottage. The staff know her really well. She's much happier.*
- *There's more continuity with the team approach. The staff who know her give her good care. I hope the new ones will learn.*

Prior to the move, several family caregivers expressed concern about the **amount of time the staff had to care for the residents** and the **expectation that HCAs would be providing care, cooking, and cleaning**. At both 4 months and 12 months, family caregivers explicitly were asked "*Would you say that you have none, some, or a great deal of concern about the amount of time staff has to care for (_)?".* As shown in Figure 17, 19% of 31 caregivers expressed a great deal of concern at 4 months and 24% of 25 caregivers did so at 12 months. Only 29% at 4 months and 36% at 12 months had no concerns.

Figure 17. Concerns with Amount of Time Staff Has to Care: Family Caregivers



Among the 24 family caregivers who answered this question at both the 4 and 12 month interview, two-thirds had consistent levels of concern at both times (21% - none, 29% - some, 17% - a great deal). Four caregivers had an increase in concern over time (2 - none -> some, 2 - some -> a great deal) while four had a decrease in concern (3 – some -> none, 1 – a great deal -> none). As illustrated below and consistent with the concerns expressed at the initial interview, family caregivers often perceived that there was simply a **lack of time for the staff to multitask** (care, laundry, and cooking). Several family members recognized that the facility **was short-staffed**.

No Concern at 4 and 12 months

4 months: *They seem to have time to get things done. They still have time to eat and have a break so that's good.*

12 months: *The staff seem to get it all done. I think maybe [ ] gets more attention and doesn't wait so long.*

Some Concern at 4 and 12 months

4 months: *They are understaffed. They are too rushed and if anything goes wrong there isn't enough to cover.*

12 months: *They are still pushed for time if something serious happens. They seem to be short one person all the time. They always are rushed.*

A Great Deal of Concern at 4 and 12 months

4 months: *The staff are too busy. They don't have time to do all the little things…The staff only have time to do the basics. All their responsibilities, e.g., cooking, take away from their time to do care.*

12 months: *They don't have time to do everything.*

continued…

…continued

No Concern at 4 months and Some Concern at 12 months

4 months: *It is good for 8 residents. It could be a problem when full with 12 people.* [cottage not at full capacity of 12 residents]

12 months: *Staff shortages, staff changes.*

Some Concern at 4 months, No Concern at 12 months

4 months: *They have less time to spend with the residents. They have too many things to do. I never see them much. I don't know where they are a lot of the time.*

12 months: *They seem to have enough time to do the care.*

Some Concern at 4 months and A Great Deal of Concern at 12 months

4 months: *They are very busy. They are remarkable people to do all they do.*

12 months: *They are too busy. There's not enough time to do all the care necessary. They are rushed all the time.*

Given the comments at 4 months, family caregivers were explicitly asked at 12 months "*Have you noticed any change in RN involvement in (_)'s care?".* There were varying views with 35% reporting **no change**, 26% indicating **some change**, and 39% replying that there had been **a great deal of change in the RN involvement**. As evident in the following comments, the change was towards less involvement by the RNs:

No Change

- *They still seem to be around.*
- *It's about the same. Some are better than others.*

Some Change

- *They seem more available, I think, more reachable.*
- *I don't seem them as often. I sometimes have trouble contacting them.*

A Great Deal

- *I haven't seen an RN here at all when I'm here. They should be keeping an eye on things.*
- *I don't see the RNs anymore. They don't seem to come around anymore. I used to see them often in the old place.*
- *Much less. They are not available anymore. We used to see them at the nurses' desk at the old place. They aren't helping teach the HCAs and supervise them. That should be a big part of their job – to supervise the aides.*

Family caregivers were also asked to indicate their **satisfaction with various services**, on a scale of 1 (very satisfied) to 4 (quite dissatisfied). A higher score indicated a higher level of dissatisfaction. Table 8 provides the average satisfaction scores and the percentage very satisfied at 12 months, in rank order from highest to lowest.

Table 8. Satisfaction with Specific Services at 12 Months after the Move: Family Caregivers

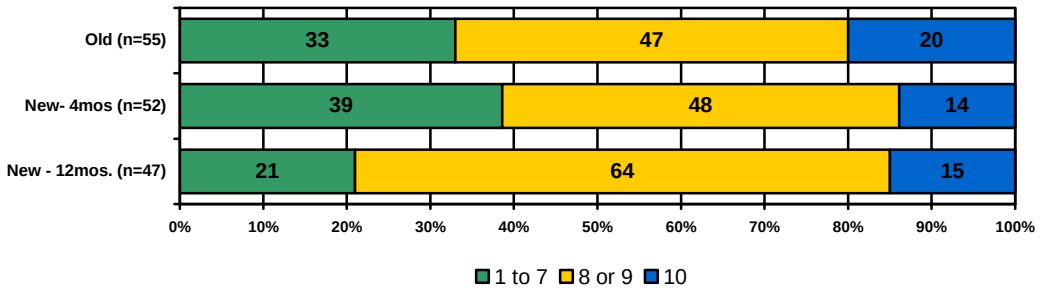
Service[1]	Number of Caregivers	Mean Score[2]	% Very Satisfied
Medication assistance	25	1.3	72%
Housekeeping	25	1.3	68%
Dressing	25	1.5	72%
Hair care	24	1.4	63%
Meals	23	1.4	61%
Oral care	21	1.6	52%
Toileting	25	1.6	48%
Bathing	25	1.7	48%
Podiatry/foot care	22	1.9	46%
Nursing care	24	1.8	33%

[1]Only 11 family caregivers rated physiotherapy (average score 1.43, 46% very satisfied) and 12 rated occupational therapy (average score 2.08, 25% very satisfied).
[2] Possible scores ranged from 1 (very satisfied) to 4 (quite dissatisfied); a higher score indicates more dissatisfaction.

Staff Members' Views

Staff members assessed the **care that the facility provides**. Unlike other questions where the rating scale was 0 to 10, scores here were 1 to 10, with 10 indicating the highest level of satisfaction as this was part of Castle's (2007) job satisfaction scale (see section on Staff Members' Situations for details). As illustrated in Figure 18, there was a fairly consistent pattern in the ratings of the care given in the old facility and the new facility at 4 and 12 months. The average scores were 7.9 for the old facility, 7.6 for the new facility at 4 months, and 8.2 at 12 months.

Figure 18. Ratings of Care Given to Residents: Staff



Among the 36 staff members who rated the care at all three time periods, the **average scores** did not differ significantly for the old facility (7.6), the new facility at 4 months (7.5) or at 12 months (8.2) although there was a trend for an increase at 12 months after the move. However, when considering only the 25 HCAs who answered this question at all three times, there were statistically significant differences, with the average score for the new facility at 12 months (8.5) being significantly higher than the average scores for the (7.7) or new facility at 4 months (7.6).

Choices Available to Residents

Food and Mealtimes

Food and mealtimes have been identified as an ongoing issue in long-term care. Prior to the move and in keeping with the Eden Alternative, attempts were made to enhance the **food and meal service** in the **old facility**. The food was still prepared in the acute care hospital but the meals were not pre-served. The time of the meals remained unchanged. A key informant explained:

> *…we opened up this room…where we had 10 to 12 residents… were sitting at a table, food came on a cart uh but not pre-served so they could have seconds, they had some choices… we couldn't cook on site, unfortunately, and have the smells of the cooking…we brought in a food cart on one of the units so that they would have foods not slopped down on a tray in front of you. It was served at the food cart and your hot meal was brought right to you so temperatures improved, choices improved, they were able to have another helping….one of our biggest issues in most continuing care facilities is food for the residents. Because that is a big part of their life…they really liked to have those choices. They liked to have a hot meal. In fact, when the food first was served to them they were like, 'wow, this is hot!' [laughter] Because you – know, trays came over there tepid* [from acute care hospital]*…we did things like that to help them go through an adjustment.*

In the **new facility**, meals are prepared on the cottages and served in the dining room. While the intent is to offer some choice in the time of breakfast, there were some differences between the cottages in this regard. A key informant explained:

> *…cottages* [X and Y] *are still not as Eden-ized…They're still liking to the medical model. They still like to have everybody up at the same time for breakfast. Whereas cottages* [A,B,C] *are 'As you get up, you get your breakfast'. Not 'Well, you're up first so you'll have to wait until Johnny and Mary and Sadie and everybody's all up!'*

The residents who were cognitively able to share their views were asked to rate the **food** on a scale of 0 (worst possible) to 10 (best possible). Prior to the move, only 30% gave the food an 8 or 9 and no one gave a score of 10 whereas 4 months after the move, 56% rated it as 8-9 and 13% gave a 10. At 12 months after the move, the corresponding percentages were 33% and 20%.

Only 11 residents provided ratings prior to the move (average = 5.1), 4 months after the move (7.9) and 12 months after the move (7.4). There was a statistically significant difference between the rating of the old facility and the new one at four months.

These findings are consistent with the residents' responses to the question at 4 months after the move "*Thinking about the old and new building, I'd like to know whether some things are better, worse or the same here as in the old building and why?*" Twelve of the 18 residents who answered this question (67%) reported that the **food was better** while six (33%) suggested that it was the **same**. Comments included:

- *It's better – easier to chew.*
- *It's fresh.*
- *It's much better. It has taste to it. There was no flavour at all at the old building.*
- *The food smells good when it's cooking. The meals are good.*
- *I can see what is being cooked. I can smell it.*
- *It's good enough.*
- *It's not better – I was hoping it would be.*

Since the move, the dietary staff have been redoing the menus as there were some foods that the residents did not like. For example, a staff member noted that "*our residents didn't like the homemade soups*". Portion size was also an area where modifications were being made. As a key informant stated: "*this is all a learning curve, that is typical with the new menu".*

Residents were also asked "*When you eat in the dining room, what number would you use to rate how much you enjoy mealtimes?*" The ratings were much higher for the new facility than the old facility. Prior to the move, 72% of the 18 residents who answered this question scored it 7 or less compared to 21% of 14 residents at 4 months and 36% of the 14 residents at 12 months. Considering only the 9 residents who answered all three times, the mean score was significantly higher at 4 months (average =7.9) and at 12 months (7.9) than prior to the move (5.8).

The **choice of mealtimes** was also explored. **Residents** were asked whether they had a choice regarding the time at which they had breakfast, lunch and dinner. In the old facility, only five of the 25 residents (25%) perceived that they had a choice for the time for breakfast while none felt they had a choice about lunch or dinner time. At 12 months, five of 15 residents (33%) reported choice in breakfast time while three perceived a choice of lunch times and three of dinner times. The overall pattern is one of no perceived choice in the time of mealtimes, irrespective of new versus old facility and the Eden Alternative which promotes resident choice. This lack of choice is not surprising and reflects the organizational reality of serving meals in a group setting.

Getting Up and Going to Bed

Another reflection of choice for long-term care residents is the extent to which they decide when to **get up in the morning** and when to **go to bed at night**. **Residents** were asked whether they could choose these times. Prior to the move, only six of the 20 residents (30%) reported a choice in the time they get up. At 4 months after the move, seven of 18 residents (39%) indicated a choice while 12 months after the move, 11 of 15 (73%) did so. In terms of the time they go to bed, prior to the move, 12 of the 20 residents (60%) indicated having a choice. At 4 months, the corresponding percentage was 39% (7 of 18 residents). At 12 months after the move, 11 of the 15 residents (73%) reported a choice in their bedtimes.

Differences between the cottages were discussed by a key informant who noted that:

> [Cottage 3] *had the most practice at this….*[in the old facility] *they already had that mindset that you know, we're not going to wake them up at 7 o'clock in the morning. We're going to let them sleep till 9 if they want to. Whereas the other cottages they're so ingrained that everybody has to be washed and dressed and up and shaved and the bed made all before breakfast… that's what we were taught, right, 20 years ago…we're all judged on is how many people can you get up, right, before breakfast?...they're still in that habit…Whereas Cottage 3… they're not going to run in, flick on the lights, rip off the covers.*

Activities

Recreational activities represent an important component in the lives of many residents. As noted earlier, with the move to the new facility, the recreation staff **changed their programming** to more one-on-one and small group activities in the cottages. Large group activities such as religious services were reduced but not eliminated.

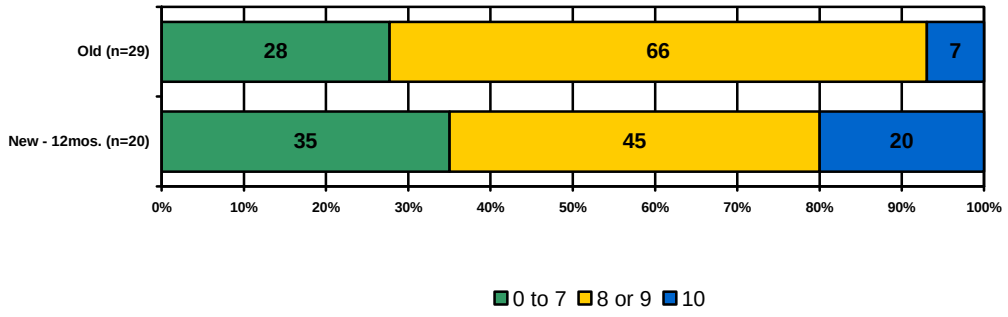
Both **residents** and **family caregivers** assessed the activities offered at the old and new facilities. Residents were asked *"Can you choose what activities you do here?"* and *"Can you choose where you do activities?"* Virtually all residents indicated that they could **choose the activities**, with only one resident in the old facility and one resident in the new facility at 4 months responding no. Less frequent was choice with regards to **location**. In the old facility, 11 of the 21 residents (52%) indicated no choice; at the 12 month follow-up in the new facility, five of 15 residents (33%) felt that they had no choice.

Residents also were asked "*Are there enough organized activities for you to do on the weekends? During the week?*" Prior to and 12 months after the move, all residents who answered these questions indicated that, **during the week**, there were enough organized activities.[4] However, at least one-half of the residents (58% - old facility, 50% - new facility) reported that there are not enough organized activities on the **weekends**.[5]

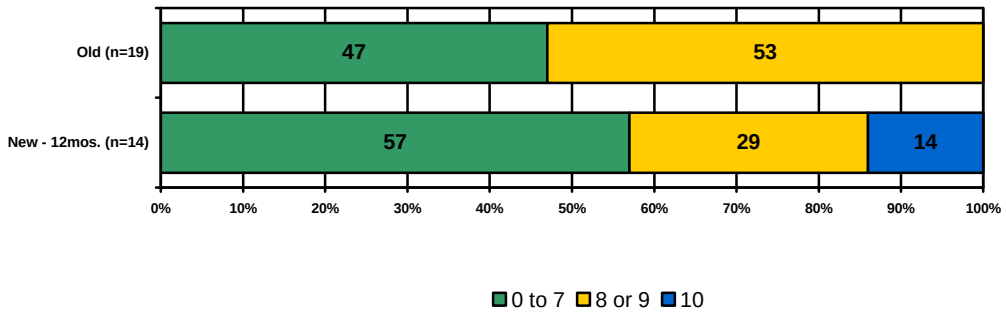
Family caregivers rated the social and recreational activities during the weekdays and in the evenings higher than they did the activities on the weekends at both the old and new facility. On a scale from 0 to 10, with 10 being the best possible, rarely did the family caregivers rate the activities as a 10 (Figure 19). Several family members were unable to assess the activities in the evenings or weekends as they do not visit at that time.

Figure 19. Social and Recreational Activities Available During the Day,

A. During the Weekdays

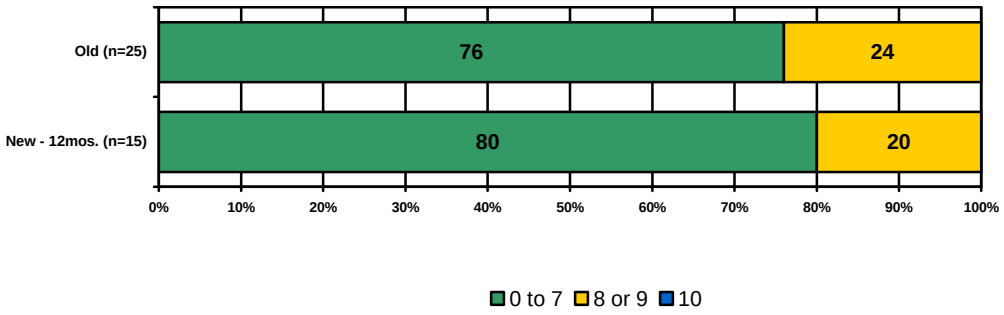


B. In the Evenings



[4] Sample size is 20 residents prior to the move and 14 residents 12 months after the move. At 4 months, 2 of 18 residents indicated that there were not enough organized activities during the week.
[5] Sample size is 19 residents prior to the move and 14 residents after the move. At 4 months, 7 of 17 residents indicated that there were not enough organized activities on the weekends.

C. On the Weekends



With regard to the weekend activities, the following comments from family caregivers prior to the move illustrate their views:

Rating 0-7

- *I'm not aware of any. She asks for us to visit on the weekend because nothing is going on.*
- *There's not any entertainment on the weekends. There's nothing going on. He sits in his room.*
- *Nothing happens on the weekends unless planned such as birthday teas. That's why we usually visit on the weekends.*
- *Quieter - no recreation staff. It's better due to families visit on weekends.*

Rating 8-9

- *It's usually quiet. It is ok to be quiet.*
- *They do have some things on the weekend, different music groups come in.*

Don't know

- *It should be left quiet for the resident's family. There's not much on the calendar.*
- *I visit during the week -* [other family members] *visit on the weekends.*

In order to compare ratings over time, only the scores of **family caregivers** who answered the question prior to and 12 months after the move were examined. The average score for the old facility (out of 10) was 7.2 for weekdays, 6.7 for evenings, and 4.5 for weekends (Table 9). The ratings 12 months after the move had not changed (7.5 – weekdays, 7.2 – evenings, 3.1 – weekends). While not statistically significant, 47% of the 17 family caregivers who rated the weekday activities did give a score that was at least one point higher for the new facility than the old one while 60% of the 10 who rated evening activities did so as well. The pattern for the weekend ratings was the opposite; 55% of the 11 family caregivers who provided ratings gave the new facility a lower score than they had for the old facility.

Table 9. Activity Ratings of the Old Facility and the New Facility (12 Months): Family Caregivers

Feature	Range[1]		Mean Score[2]		
	Old	New	Old	New	N
Weekdays	3 – 10	3 – 10	7.2	7.5[n.s.]	17
Evenings	3 – 9	2 – 10	6.7	7.2[n.s.]	10
Weekends	0 – 9	0 – 8	4.5	3.1[n.s.]	11

[1] Family caregivers were asked *"What number (0-10) would you use to rate the Care Centre's social and recreational activities that are available for residents during weekdays/evenings/ weekends?"* Possible scores ranged from 0 – 10.
[2] Possible scores ranged from 0 – 10. Only the scores of family caregivers who answered the question for the old facility and the new facility (12 months) were included. Differences between the scores for the old and new facility (12 months) were analysed using paired t-tests; n.s. denotes no statistically significant differences; n indicates the number of family caregivers whose scores were examined.

At 4 months, family caregivers were asked *"Is this better, worse or the same as it was in the old building, and why?"* At 12 months, the question posed was "*Are the activities [during the weekdays, in the evenings, on the weekends] better, worse, or the same as when we last spoke?"*

Table 10. Changes in Social and Recreational Activities: Family Caregivers

Time	Interview	Number of Family Caregivers	Worse	Same	Better
Weekdays	**4 months**	20	25%	55%	20%
	12 months	18	17%	67%	17%
Evenings	**4 months**	12	33%	67%	---
	12 months	14	---	93%	7%
Weekends	**4 months**	17	12%	88%	---
	12 months	15	7%	93%	---

Their perspectives are illustrated by the following comments:

WEEKDAYS

Worse at 4 months and at 12 Months

4 months: *[Resident] feels it's less than the old place. Sometimes they don't tell her what's going on - she can't read the bulletin board.*

12 months: *Staff changes have decreased activities. They don't seem to try new activities.*

Same at 4 months, Worse at 12 months

4 months: *[Resident] is supposed to have 1 to 1 – I think it often isn't done. One rec person really works hard. I don't think the others do much.*

12 months: *We lost 2 good staff on recreation. It's gone downhill since they left. Only one new person is trying to keep programs going. Some of the activities are not geared to the seniors – they are 'above their heads'.*

continued…

continued…

Same at 4 months and at 12 months
4 months: *They include her as much as possible. It's the same as the other building. The staff are good.*

12 months: *She has lots to do, lots of variety. They include her in everything.*

Worse at 4 months, Better at 12 months
4 months: *More stuff happening at old building.*

12 months: *Now have a rec person.*

Better at 4 months and 12 months
4 months: *It's a smaller group so she gets more individual attention.*

12 months: *They're always busy. I think they have more to do.*

EVENINGS

Worse at 4 months, Same at 12 months
4 months: *[Resident] says there is less but I don't really know. She spends more time in her room.*

12 months: *Same volunteers all the time – not much variety.*

Family Involvement

Prior to the move and 12 months after the move, **family caregivers** were read a series of statements relating to **family involvement in a long-term care facility** and were asked whether this described their experience with the facility. They were also asked to indicate the importance of these actions to them. These statements are from a tool developed by Reid et al. (2007).

The percentage of **family caregivers** who strongly agreed with these statements varied from 27% for the statements "*I have been asked to bring in pictures, letters, and other personal items to teach staff about my family member" and "I am informed about changes in my family member's care plan"* to 78% for the statement "*The facility holds family information meetings"* (see Figure 20 for all statements and responses). It should be noted that, among the 12 caregivers who strongly disagreed with the statement regarding pictures, letters and other personal items, five indicated that it was unimportant, four felt it was quite important and three thought it was extremely important. Family caregivers reported it was quite (22%) or very (78%) important to them to be informed about changes in the care plan. The family information meetings were also viewed as important (14% - somewhat important, 11% - quite important, 75% - extremely important).

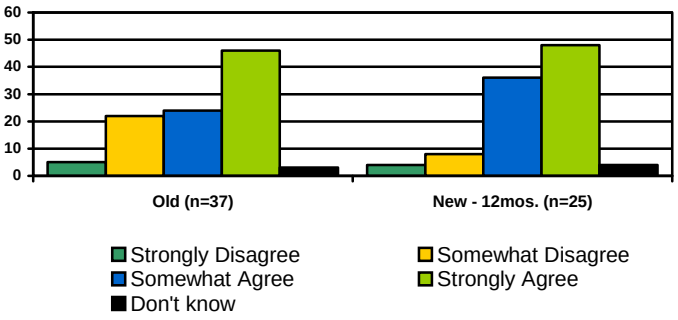
At 12 months after the move, the statement "*The facility holds family information meetings"* again had the highest percentage of family caregivers (72%) who strongly agreed that this described the facility. The lowest percentage at that time point was in response to the statement "*Staff have*

helped me to understand how health concerns affect my family member" (40%). All 25 family caregivers indicated that the latter was important (4% - somewhat, 16% - quite, 80% - extremely).

Figure 20. Family Involvement in the Facility

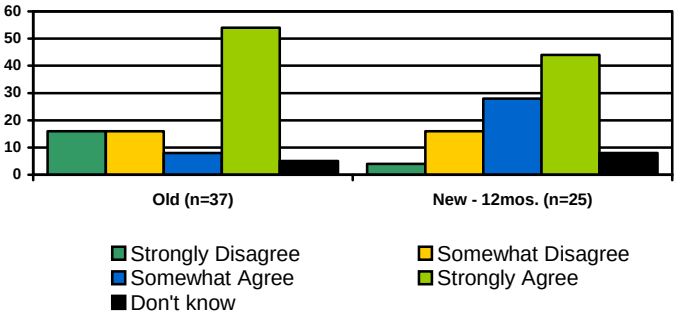
I have been asked about my family member's personal history.

% rating this as extremely important:
Old - 64%; New (12 mos) - 72%



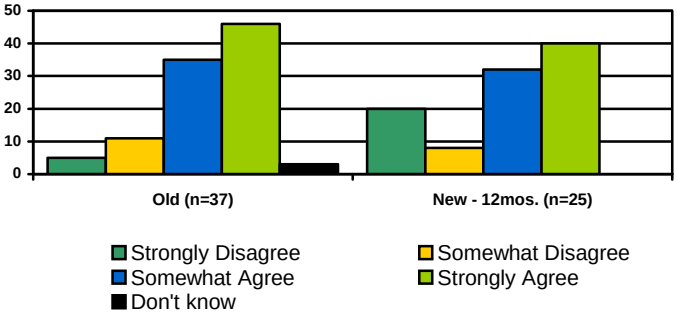
I have been asked about my family member's preferences and values.

% rating this as extremely important:
Old - 64%; New (12 mos) - 70%



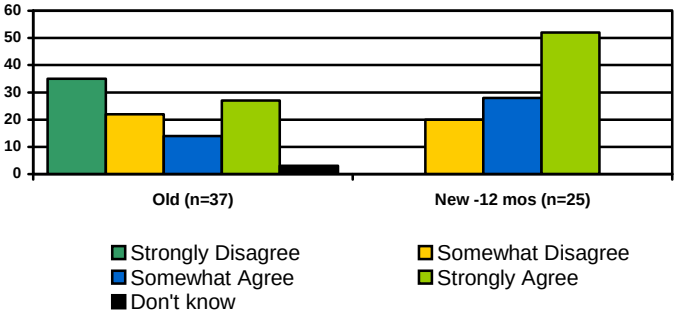
Staff have helped me to understand how health concerns affect my family member.

% rating this as extremely important:
Old - 67%; New (12 mos) - 80%



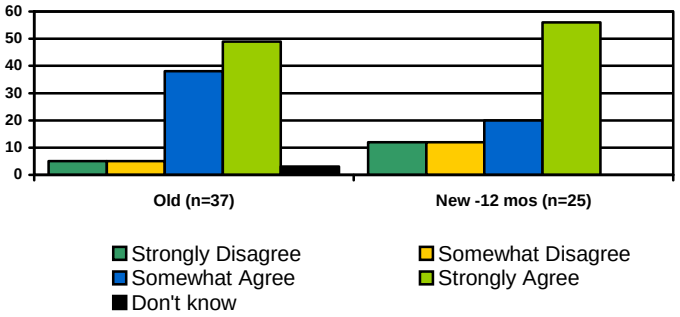
I have been asked to bring in pictures, letters, and other personal items to teach staff about my family member.

% rating this as extremely important:
Old - 51%; New (12 mos) - 76%



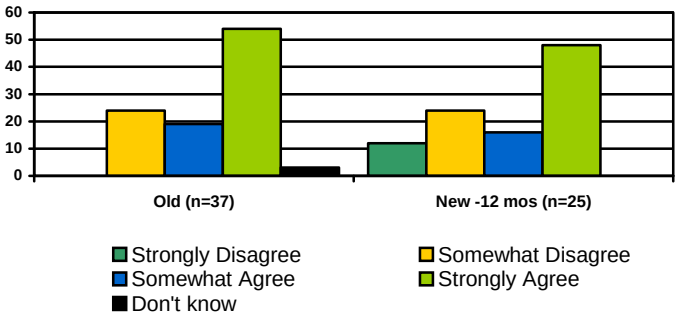
I feel like I am involved in decision-making about my family member's care.

% rating this as extremely important:
Old – 77%; New (12 mos) - 96%



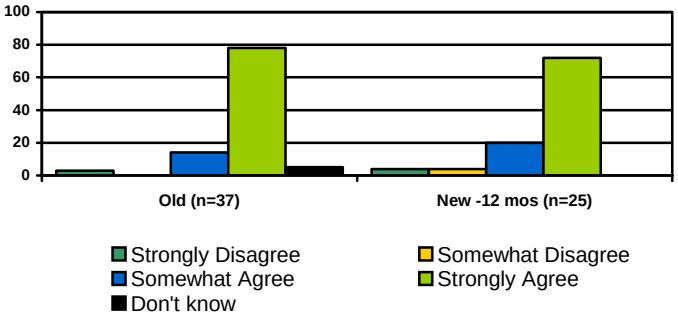
I am informed about changes in my family member's care plan.

% rating this as extremely important:
Old – 78%; New (12 mos) - 92%



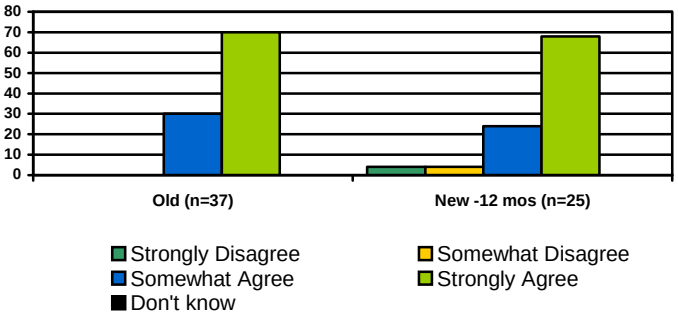
The facility holds family information meetings.

% rating this as extremely important:
Old – 75%; New (12 mos) – 84%



I trust the staff members at this facility.

% rating this as extremely important:
Old – 97%; New (12 mos) - 96%



Considering only family caregivers who answered these questions at the old facility and at the new facility at 12 months, **change** was most evident in the responses to the statement "*I have been asked to bring in pictures, letters, and other personal items to teach staff about my family member.*" (Table 11). Two-thirds of family caregivers gave higher scores indicating more agreement when they responded at 12 months after the move than they had prior to the move. This is not surprising, given the move and the explicit request for families to provide **personal items** for the resident's new room. Similarly, 30% of the family caregivers had higher levels of agreement in response to the statement "*I have been asked about my family member's personal history.*"

Table 11. Changes in Perceived Family Involvement: Family Caregivers

Statement	Mean Score[1]			Change (at new facility)[2]		
	n	Old	New	Lower	Same	Higher
I have been asked about my family member's personal history.	24	3.1	3.3$^{n.s.}$	21%	50%	29%
I have been asked about my family member's preferences and values.	22	3.1	3.3$^{n.s.}$.	23%	50%	27%
Staff have helped me to understand how health concerns affect my family member.	24	3.3	2.0$^{n.s.}$.	42%	38%	21%
I have been asked to bring in pictures, letters, and other personal items to teach staff about my family member.	24	2.2	3.3***	17%	17%	67%
I feel like I am involved in decision-making about my family member's care.	24	3.5	3.2$^{n.s.}$	33%	46%	21%
I am informed about changes in my family member's care plan.	24	3.3	3.0$^{n.s.}$	42%	42%	17%
The facility holds family information meetings.	23	3.9	3.7$^{n.s.}$	17%	74%	9%
I trust the staff members at this facility.	25	3.7	3.6$^{n.s.}$	24%	60%	16%

[1] Possible scores ranged from 1 (Strongly disagree) to 4 (Strongly agree); a higher score indicates more agreement with the statement. Only the scores of family caregivers who answered the question for the old facility and the new facility (12 months) were included. n indicates the number of family caregivers whose scores were examined. Differences between the scores for the old and new facility (12 months) were analysed using paired t-tests; n.s. denotes no statistically significant differences, *** denotes statistically significant differences at p<.001.

[2] Lower indicates that the score at the new facility was lower than it was at the old facility; this includes a change within the agree (from strongly agree to somewhat agree) and the disagree (from somewhat disagrees to strongly disagrees) categories.

A different pattern emerged for the statements focusing on the **involvement in care**. While some family caregivers gave higher ratings, it was more likely that there was a lower rating in the new facility to the following statements: *Staff have helped me to understand how health concerns affect my family member* (42%), *I am informed about changes in my family member's care plan* (42%), and *I feel like I am involved in decision-making about my family member's care* (33%). An explanation for this shift is suggested in the responses at 12 months to the question: "*Would you say that you are now more or less informed about (__)'s situation than before the move or is it about the same?* While over half (56%) of the 25 family caregivers indicated that it was the same, 28% reported less and 16% felt they were more informed. When asked to explain their responses, caregivers explained:

Less Information at New Facility

- *I ask and observe myself. The nurses are never around. I can't find them. I can't usually get them on the phone either. I have left messages and not gotten a call back.*
- *I don't see the RN or head nurse anymore. I used to see them at the desk in the old place. I don't know where they are in this new place.*
- *We had more access to the RN in the old building. We don't see them now.*

Same Amount of Information

- *They still call me if [ ] is sick. The RN or LPN always are the ones to call.*
- *They still answer my questions and keep me updated.*
- *The HCAs still keep me informed. They know [ ] well and tell me what's going on.*

More Information at New Facility

- *The HCAs seem to be more consistent. They keep me informed.*
- *[ ] has needed more care.*

The comments regarding the **lack of contact with the RNs/LPNs** reflect in part the physical layout of the new building where the nurses work out of a resource room in the central area and are not in the cottages on an ongoing basis. This is in contrast to the old building where the nursing station was on the units and served as a focal point for both residents and families.

Family conferences represent one means of keeping family members informed. At 12 months after the move, family caregivers were asked *"Have you had a family conference with the staff since the move?"* Among the 25 caregivers who answered this question, 69% indicated that they had had a family conference, with 31% reporting that they had noticed a change in the way the facility conducted the conferences. At 12 months, about half (48%) of the 25 family caregivers indicated that the health care attendant (HCA) usually provides information about the resident, 16% identified the RN or LPN, and 32% indicated that both the HCAs and RNs/LPNs were sources of information. One family caregiver stated: "*Nothing has been brought to my attention and nobody approaches me to tell me anything."*

When asked "*How comfortable would you be expressing concerns or dissatisfaction with some aspect of the facility to the administrator?",* 62% of the 34 family caregivers who answered this question prior to the move replied very comfortable while 18% felt fairly comfortable. The remaining 20% felt either somewhat (9%) or very (11%) uncomfortable. One family caregiver who reported being very uncomfortable commented: "*I worry there will be repercussions if I complain"* while

another explained "*I have great difficulties. She doesn't listen to us at all. I don't feel that anything ever changes because of our input".* At the new facility at 12 months, only three (13%) of 24 caregivers were somewhat uncomfortable; the remainder were fairly (58%) or very (29%) comfortable.

Costs

Prior to the move, family caregivers were asked "*How do the current monthly charges, including any extras, compare to what you expected when [resident] moved into the facility?"* Almost two-thirds (62%) of the 37 caregivers indicated that the **charges were about what was expected** while 22% responded that the charges were higher than expected. The remaining 16% were not aware of the charges or declined to answer the question.

At 4 months, family caregivers were asked "*Thinking about the monthly base rate, do you think any of the following should be taken into consideration in setting the rate?"* While most family caregivers agreed that the **number of roommates** should be taken into consideration, there was little support for other aspects (Table 12). One family caregiver commented "*There shouldn't be sets of criteria like that. They should all get the same level of care."*

Table 12: Factors for Consideration in Setting Monthly Rates

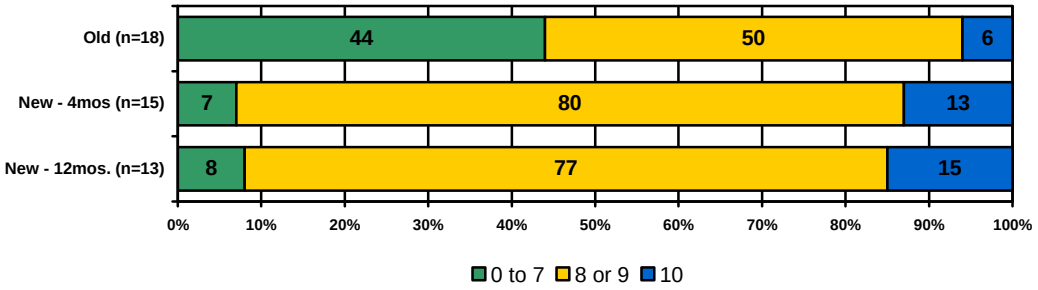
Factor	Number of Caregivers	% Yes
Number of roommates (private vs. shared)	30	87%
Size of room	30	33%
Age of building	30	27%
Level of care required to meet physical health needs of resident	31	3%
Level of care required to meet mental/cognitive health needs of resident	32	3%

Overall Ratings of the Facility

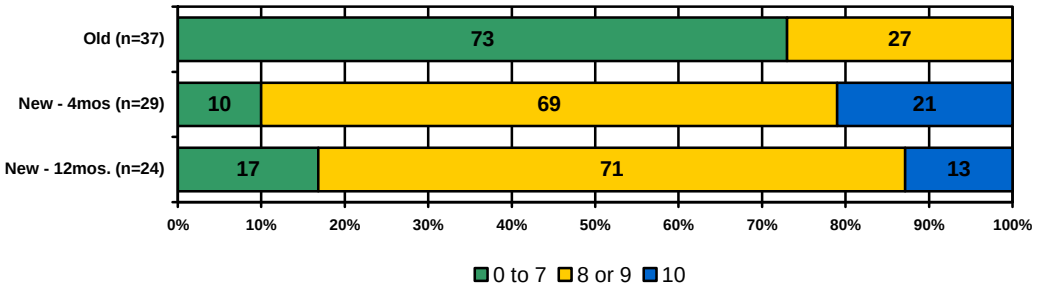
Residents were asked "*Overall what number would you use to rate this facility?"* with 0 being the worst possible and 10 being the best possible. While eight of 18 residents (44%) gave the old facility a score of 7 or lower, only one of 15 residents rated the new facility this way at 4 months and only one of 13 did so at 12 months.

Figure 21. Overall Rating of Facility: Residents and Family Caregivers

A. Residents



B. Family Caregivers



The family caregivers generally were **more positive** about the new facility than the old one. Among the 37 caregivers who rated the old facility, 73% gave it a score of 7 or less. By 4 months, only 10% of the 29 caregivers scored it this low and at 12 months, the corresponding percentage was 17% of 24 caregivers. Considering only the 23 caregivers who rated the old facility and the new facility at both times, the average score was significantly lower for the old facility (5.8) than for the new facility at 4 months (8.7) or at 12 months (8.2) ($p<.001$).

To understand these ratings further, a number of general questions were posed to the residents and family caregivers. At 12 months, **residents** were asked *"Can you tell me what, if anything, do you like about living here? What don't you like?"* All 15 residents identified aspects that they **liked**, including:

- *I like my room. I have all my things. I'm close to the kitchen. I get my meals.*
- *I love it here. I like the small dining room. I like the food better.*
- *I love living here. It's way better than the old building.*
- *No problems. The girls come and look after me. They change me, take me out to eat and do everything. They are just like my family – 100%. Bath once a week.*
- *I like the kitchen. I like the food.*

Only three residents identified an aspect they **disliked**. One responded: *"I am a picky eater* [and dislike] *the spaghetti and rice, soup.* Another stated: *"I wish I had more space for more things."* The third commented that "*The dining room is too small. There is not enough room for chairs."*

At the end of the 12 month interview, residents were asked if there was anything else they wanted to discuss about **living in the facility**. Eight of the 15 residents gave **positive** comments, including:

- *I couldn't live in a better place.*
- *I like it. I can't be at home so it's good, I guess, that I am here.*
- *I can't be at home with my [ ]. These girls* [staff] *are part of my family now.*
- *It's been good to move here. It's new.*
- *I like it very much. I like the staff and the place. I like the patio and flowerbeds.*

Only three were more **negative**, with their comments focusing on an issue with another resident and the lack of choice/activities. One resident commented: "*I would not say it is a dictatorship but almost."* Another stated: *"I'd rather be at home but I'm old so I can't do that. I get lonely. There's not enough I like to do."*

Family caregivers were asked "*Has anything been better than you anticipated in the new facility?"* and *"Has anything been worse than you anticipated in the new facility?"* At 12 months, 22 caregivers identified aspects that were better while nine mentioned areas that were worse. Examples of their comments include:

Better

- *Everything is better. The meals, the surroundings. Staff seem happier and working as a team. [ ] is happier than I thought he would be.*
- *The atmosphere and personnel are better. They seem to care more.*
- *It's been good. [ ] loves the new place and that makes us feel good.*
- *The food is definitely better. I think the sanitation standard stays good – it seems to be working. I had a concern about the kitchen but they seem to be keeping things clean.*
- *Having her own room is much better. She's happier than we anticipated. She never complains like she used to.*
- *Like everything – brighter, not an institution. [ ] is more content, clean and well cared for.*

continued…

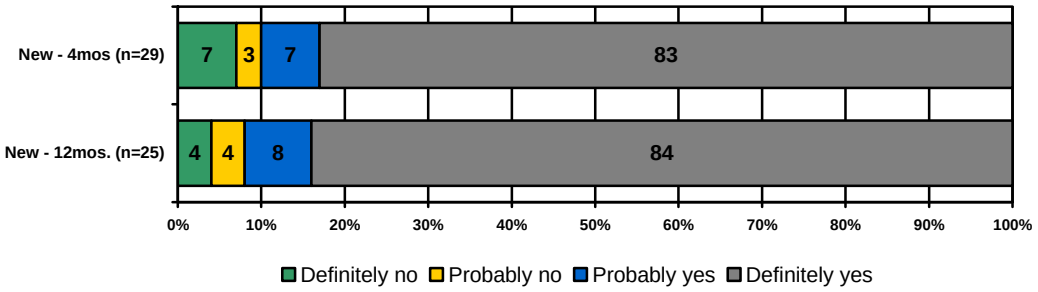
…continued

Worse

- *I thought there would be more staff available. There seems to be fewer staff and more work.*
- *They need more staff. The staff should be designated so that no food prep is done by people doing hands-on-care. That doesn't happen when they are short-staffed.*
- *Concerned with staff being less compassionate due to being so busy.*
- *No staff room, no place for them to get off the cottage to eat. Visitors who don't know them think they're lazy for sitting eating in the cottage.*
- *Lack/less RN involvement.*

A final indicator of satisfaction is whether family caregivers would **recommend the facility to others**. At 4 months and 12 months after the move, family caregivers were asked "*Would you recommend this facility to others?*" Possible responses were definitely no, probably no, probably yes, and definitely yes. Despite the various concerns discussed earlier, 83% of the 29 family caregivers at 4 months responded definitely yes while 84% of 25 caregivers did so at 12 months (Figure 22).

Figure 22. Recommending Facility to Others: Family Caregivers



Among the 24 caregivers who answered this question at both interviews, 19 caregivers were consistent in their definitely yes response while one remained a definite no. The remaining four all gave a better recommendation at 12 months than at 4 months (definitely no -> probably yes – 1; probably no -> probably yes – 1; probably yes -> definitely yes – 2).

Differences between Cottages

While the physical environment is the same across the five cottages as are the rules/ regulations that govern the social/care environment, each cottage is distinct and appears to have its own character. The residents, the family caregivers, and the staff all make a difference to that

character. As noted earlier, some cottages have embraced the Eden Alternative more so than others. In some cottages, residents were able to more fully contribute to the life of their cottage. The decorating of the public areas in the cottages were the responsibility of the staff, including some fundraising while the families and residents were responsible for the residents' rooms. These differences in cottage character require further attention in order to better understand key dimensions and how each may contribute to improved quality of life of residents, family caregivers, and staff members.

Summary

This discussion of the social/care environment highlights the complexity of implementing a new philosophy of care and moving into a new building. Changes in the way care is provided was necessitated in part by region- and province wide system changes, including the implementation of the Eden Alternative. At the same time, the cottage-style design had implications for virtually all aspects of the social/care environment.

Several changes in roles and responsibilities were evident. **HCAs** assumed responsibility for **food preparation, laundry and light housekeeping**. The challenge of multitasking was evident for many staff. The physical layout required an **increase in the number of HCAs** in order to provide the required HCA coverage. As noted earlier, the **RNs/LPNs** faced challenges with the physical layout of the new facility as they had to cover five cottages and were not as visible on the cottages as they had been in the old facility. Perceived/real **communication breakdowns** were identified. Increased time on the units appears to be needed to monitor resident care, provide leadership to and teaching opportunities for the HCAs, and increase RN/LPN accessibility to family members.

Initially it was thought that the HCAs could provide **recreation** to the residents as well as perform their other tasks. It was quickly recognized that their workload did not allow time for this. Ensuring adequate funds are available for recreational activities was viewed as critical in this type of setting. The initial plans also called for one **housekeeper** for the central area and the HCAs cleaning the cottages. Again this approach was not feasible given other demands on the HCAs and a higher level of housekeeping support than initially anticipated has been in place.

Each cottage has developed its own **character**, despite a common physical layout. The success of implementing the **Eden Alternative** that emphasizes flexibility and personal choice by the resident clearly requires buy-in from staff members and to a lesser extent residents and family members.

Attention now turns to the impact on residents, family caregivers and staff members. It is only by considering both the physical and social/care environments together that an understanding of the experiences of the residents, family caregivers, and staff members can be understood.

RESIDENTS' SITUATIONS

The changes in the physical and social/care environment raise the question of the extent of change in the residents' situations. Of interest are **mortality after the move** and **changes in health status, participation in activities**, and **hospital visits**. Given the health needs of a long-term care population, some declines in health and participation would be anticipated. **It is important to recognize that the extent to which any changes in health reflect the trajectory of diseases or the effects of a move or the new environment cannot be determined.**

Mortality after the Move

Nine of the 39 residents who moved to the new facility (23%) died in the year following the move.[6] This rate is lower than the 31% 1-year mortality rate in Alberta and the 25% rate for the former East Centre Health region for a random sample of long-term care residents (Maxwell et al., unpublished).

One resident died just 12 days after the move. The other residents were in the new facility for at least three months, with a range of 105 to 353 days.[7] These residents ranged in age from 71 to 101; one was under 80, five were aged 80 to 89, and three were aged 90 or older. Five of the nine deceased residents were females. All had been residents of the Care Centre for at least one year; the length of residency ranged from 1.1 to 5.6 years.[8]

The **causes of death** were identified as: renal failure, general debility (1 resident); cardio-respiratory arrest (2 residents); respiratory collapse, cerebral atrophy, chest infection (1 resident); congestive heart failure, Alzheimer's dementia (1 resident); complications of Parkinson's disease (1 resident); unknown natural causes, advanced age (1 resident); and anemia, Alzheimer's dementia, lung function, advanced age (1 resident). Eight of the nine deaths **occurred in the facility**. One individual had been in the acute care hospital for five days prior to death.

When asked "*How difficult do you think the move was on the resident*?", six of the eight family caregivers who answered the question indicated that the **move was not at all difficult**. One perceived the move to have been fairly difficult and one thought it had been somewhat difficult for their family member. Their explanations included:

[6] Two residents were assessed but died prior to the move. They are not discussed here.
[7] Number of days between move and death: 12, 105, 111, 206, 214, 231, 281, 332, and 353.
[8] Lengths of residency (in years): 1.1, 1.7, 3.1, 3.7, 3.8, 4.2, 4.4, 5.4, and 5.6.

Not At All Difficult

- *[ ] managed to make the best of everything. We had everything organized for the move so [ ] didn't have to worry.*
- *It all went very smoothly. The move was a really good thing for him. The new place is so nice and warm and cozy.*
- *[ ] was more attached to the people, not the place. [ ] still had the same staff looking after him.*

Fairly Difficult

- *Change of any kind. They loaded earlier than planned. We weren't there to see her onto or off the bus. She was lonely, she said – but she's said that before. She always loved company.*

Somewhat Difficult

- *It was just that [ ] resisted any change.*

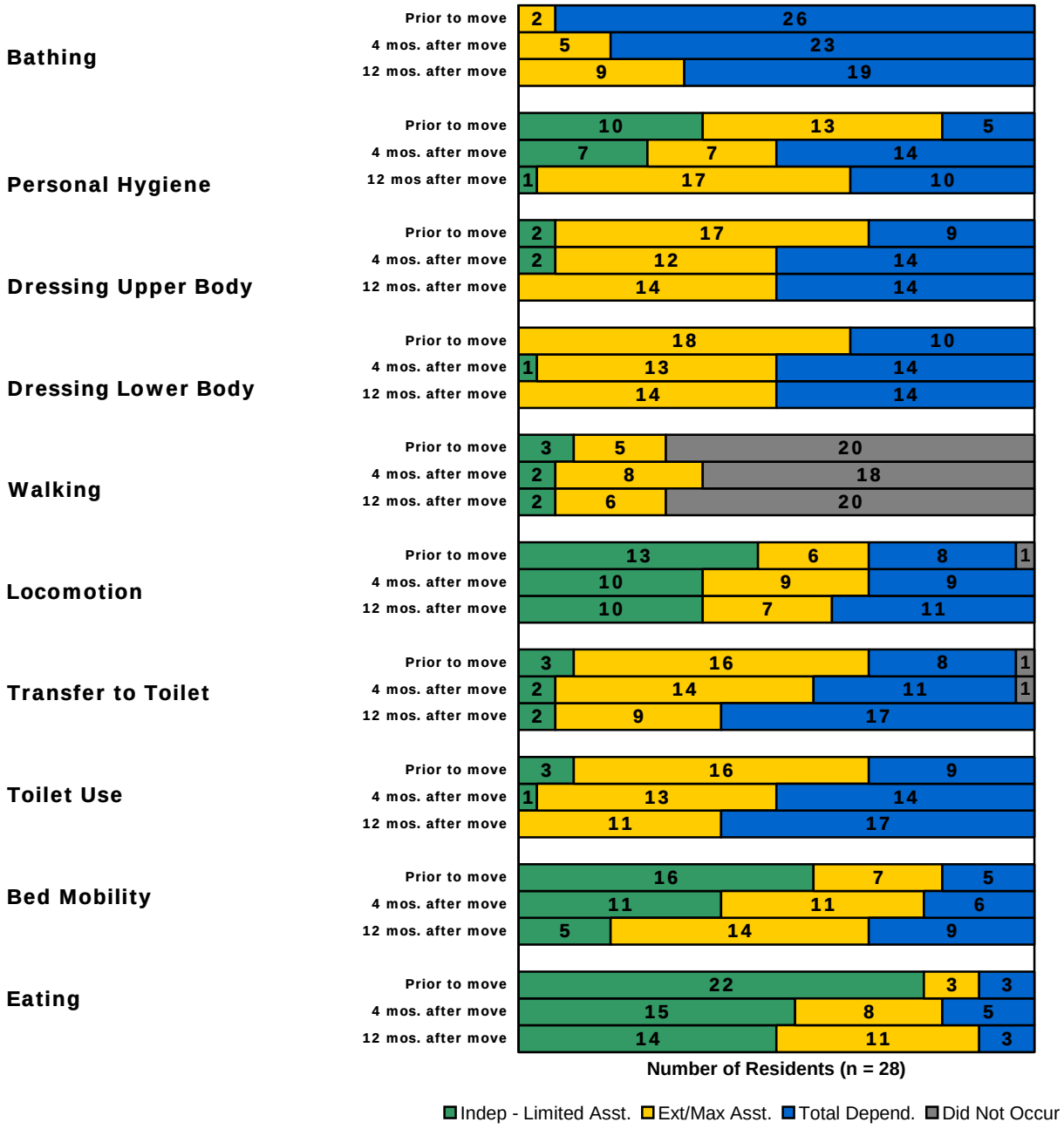
Health Status

Attention now turns to the situation of the 28 residents who were still living in the facility at 12 months. Of interest are **changes in physical, mental, and social functioning.** More specifically, changes in functional disabilities, continence, pressure ulcers, weight, sleep, balance, falls, the use of restrictive devices, cognitive skills for daily decision making, memory, behavioural symptoms, mood, initiative and involvement, close relationships and outlook on life, and unsettled relationships and feelings are examined. The data are from the *inter*RAI-LTCF assessments completed by study assessors prior to the move, 4 months after the move, and 12 months after the move. These assessments involve a chart review and information gathering from residents, family members, and staff. Given the diversity in health status among the residents, the numbers of residents experiencing various changes are presented rather than percentages. Residents are considered as **stable** if assessed at the same level prior to the move, at 4 months after the move, and at 12 months after the move.

Functional Disabilities

At 12 months, residents were most likely to be totally dependent with **bathing**, **locomotion**, and **transfers to the toilet** (Figure 23). An examination of the residents' abilities to perform 10 activities of daily living (ADLs) revealed a general pattern of increased dependence over time, with the exception of bathing (Figure 23).

Figure 23. Activities of Daily Living[1]



[1] Categories grouped as following: Independent to Limited Assistance ranges from no help to limited help with no weight-bearing support (Independent, Independent with Set-up Help, Supervision, Limited Assistance); Extensive/Maximal Assistance requires some help from 1 or 2 persons giving weight-bearing support (Extensive Assistance, Maximal Assistance); Total Dependence requires full performance by others; and Activity Did Not Occur means that it did not occur in the 3-day assessment time period.

The number of residents who were **stable** in each ADL over time varies by activity: bathing (19), personal hygiene (9), dressing upper body (18), dressing lower body (17), walking (22), locomotion (14), transfer toilet (14), toilet use (14), bed mobility (8), and eating (15). Among the residents who **experienced a change**, the most likely pattern was **increased dependence over time** (details available upon request). The exception was again with regards to **bathing** with which seven residents were less dependent over time, one showed increased dependence at 4 months but a decrease by 12 months, and one was totally dependent prior to the move and at 12 months but required extensive – maximal assistance at 4 months.

The decreased dependence in bathing for seven residents is interesting, given the changes in the bathing/showering amenities at the old and new facility. As discussed in the section on the Physical Environment, the new facility offers residents the opportunity for a shower in their own room. Some residents may be able to assist when showering but cannot do so when using a tub.

Continence

Both **bladder and bowel continence** were assessed at the three time points. All 26 residents were incontinent of bladder, with some or no control, at all time points. Twelve residents were incontinent with some bladder control present (includes control with any catheter or ostomy) prior to the move, and at 4 months and 12 months after the move while four were incontinent with no control at all three time points. Four residents who had some control prior to the move were lacking any bladder control after the move (1 losing control at 4 months, 3 at 12 months). The opposite pattern was evident for one resident who gained some control at the 4 and 12 months. The other five residents had varying patterns over the time period. Information is missing for 2 of the residents.

Turning to **bowel continence**, 18 residents had stable patterns over the three time periods. Among these 18, three had no problems (includes control with ostomy), 11 were incontinent of their bowels with some control present, and four were incontinent with no control. Among the other 10 residents, one had some control prior to the move but lacked any control after the move (losing control at 12 months). One resident steadily declined and went from being continent prior to the move to having some control at 4 months to no control at 12 months. Three residents went from being continent prior to the move to having some control at the 4 and 12 months. The opposite pattern was evident for one resident who gained some control at the 4 and 12 months and two residents who went from some control to continent (1 at 4 months and 1 at 12 months). The other two residents had varying patterns over the time period.

These varying patterns highlight the diversity among residents and the difficulty of ascertaining the impact of the changes in the physical and social/care environments on issues such as continence. Study assessors did note environmental features related to changes for three residents, including staff having more time to toilet a resident on the cottage, a resident asking to toilet more

since it is possible to access the bathroom in their own room, and having one's own wheelchair accessible bathroom.

Pressure Ulcers

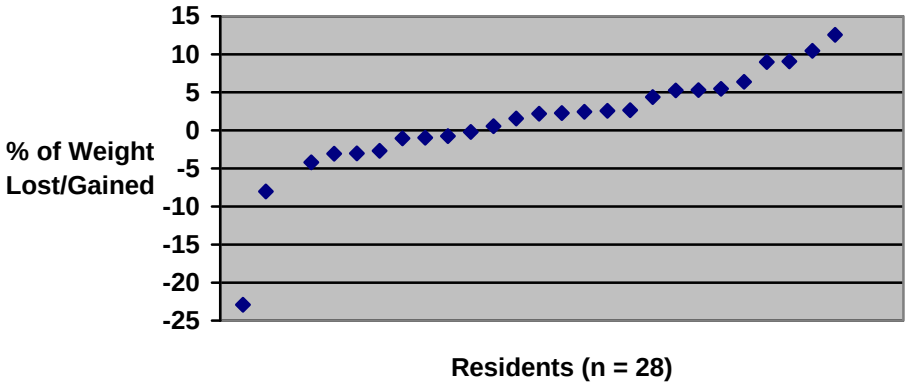
The likelihood of **pressure ulcers** increased after the move. Eleven residents were assessed with pressure ulcers at 12 months but not prior to the move or at 4 months. Two developed pressure ulcers by 4 months after the move and this continued to be a problem. One resident was assessed with pressure ulcers both prior to the move and at 4 months but not at 12 months. Three residents had pressure ulcers at 4 months only and one had ulcers only prior to the move. The remaining 10 residents were stable in this regard (9 with no ulcers, 1 with ulcers prior to, 4 months and 12 months after the move).

The extent to which the increases in pressure ulcers reflects changes in the social/care environment needs to be considered. As discussed earlier, there were changes in the HCAs' and the RNs/LPNs' roles. The RNs/LPNs were not as involved in the day-to-day situations of residents in the new facility and were likely less available to the HCAs than in the old facility. It may be that the HCAs require increased training regarding signs and care of pressure ulcers and when a situation warrants the attention of the RNs/LPNs. This may be a particular concern when hiring new staff who have not yet completed their HCA course.

Weight

Variations in the **percentage of weight lost or gained** from prior to the move to 12 months after the move were evident.[9] The range was from -23% to +13% (Figure 24). Twelve residents experienced a decrease while 16 residents experienced an increase. Using a 5% weight loss/gain as marker of expected change, only four residents had losses above 5% and eight had gains above 5%.

Figure 24. Weight Loss/Gain



[9] Calculated as follows: ((weight at 12 months – weight at baseline)/weight at baseline) * 100

The month-by-month patterns of individuals reveal both fluctuations and stability over the time period. Rarely was there a steady decline or gain over time.

It could be speculated that these weight gains reflect the cooking of meals in the cottages; the extent to which this is the cause cannot be determined with the available information. Disease progression, activity levels, and mobility all have a role to play along with other factors.

Sleep

An examination of sleep patterns revealed some changes over time for 18 residents. Seven were assessed as not having **difficulties falling asleep** until the 4 month assessment (1 resident) or the 12 month assessment (6 residents). Five residents who had difficulty prior to the move did not have problems at 12 months. Six residents had varying patterns over the time period. The remaining 10 residents showed no change over time (2 without difficulty, 8 with difficulty).

Balance

With regard to balance, there was consistency in the presence of difficulty moving or being unable to **move to a standing position** unassisted (26 of 28 residents) and being unable to **turn around and face the opposite direction** when standing (25 residents).

Only nine residents had a stable pattern in terms of **dizziness**. This included seven residents who were not assessed with dizziness at any time period and two who had consistent problems. Thirteen residents not assessed with **dizziness** prior to move were reported to experience this problem 4 months after the move and this continued at 12 months. Another individual had dizziness only at 4 and 12 months while one had the problem at 12 months only. Four residents were assessed with dizziness prior to the move but had relief at either 4 months (2 residents) or at 12 months (2 residents).

In terms of **unsteady gait**, eight residents who were not assessed with this prior to the move did have the problem at 4 and 12 months after the move. Three residents had problems with unsteady gait but saw some improvement at either 4 or 12 months (1 with unsteady gait prior to the move only, 1 with the problem prior to and 4 months after only, 1 with the problem prior to and 12 months after only).

The change in both dizziness and unsteady gait is interesting. The relatively large increase in the assessment of dizziness since the move may reflect changes in medications or better knowledge/assessments of the residents by the HCAs or the RNs/LPNs.

Falls

Fifteen of the 28 residents had **fallen** at least once since the move. For eight residents, this represented a continuation of falls from prior to the move. At 12 months, 16 residents had not fallen in the previous 90 days while 12 had experienced a fall.

Restrictive Devices

Since the move, there has been a reduction in the use of **full beds rails** on all open sides of the bed. Eighteen residents who had these rails prior to the move did not in the new facility. One resident had full rails throughout the time period while four residents did not have these rails prior to and after the move. Rails were in place for two residents until 12 months after the move while three had rails prior to the move and at 12 months but not at four months after the move. These changes are as expected given that the new facility had new Hillrom long-term care beds with upper half bedrails. A key informant explained:

> *…all brand new Hillrom long-term care beds…The new long-term care beds have the upper half bedrails with the controls in them…we only have five beds that have 'full bedrails' but there's a space in between so it's not the old fashioned full rails…. These beds go very low. So they're really nice that way so if you do fall out of bed you're not falling so far. We have fall mats…the ones that are at higher risk we have put the full bedrails…it's better to fall out of bed, not over a bedrail, you know, um it's a different philosophy…the way of the future....It was difficult for the staff and for families.*

Trunk restraints showed a more consistent pattern of use prior to and after the move. Fourteen residents were not restrained in this way prior to, 4 months or 12 months after the move while six residents were. Six residents who did not have a trunk restraint prior to the move did so at 4 and 12 months after the move. One individual had the restraints prior to and 4 months but not at 12 months. The remaining resident had trunk restraints prior to the move and at 12 months but not at 4 months.

The **use of a chair to prevent rising** was noted across all time periods for 12 residents while eight were not restrained in this way. Six residents not restrained by a chair prior to the move were after the move (2 at 4 months only, 2 at 12 months only, 2 at both 4 and 12 months). One resident had chair restraints prior to the move but not after the move while one had such restraints prior to and 12 months after the move but not at 4 months.

Cognitive Skills for Daily Decision Making

As illustrated in Table 13, various patterns of change were evident with regards to the residents' abilities to make decisions regarding the tasks of daily life. Twelve residents experienced no change while the remaining 16 had changes in this regard.

Table 13. Daily Decision Making Skills

Type of Change[1]	Number
No Change	**12**
Modified independence	1
Minimally impaired	2
Moderately impaired	4
Severely impaired	5
Same Prior to Move and at 4 months, Declined at 12 months	**8**
Independent -> Independent -> Moderately impaired	1
Minimally impaired -> Minimally impaired -> Moderately impaired	2
Minimally impaired -> Minimally impaired -> Severely impaired	1
Moderately impaired -> Moderately impaired -> Severely impaired	4
Same Prior to Move and at 12 months, Different at 4 months	**4**
Independent -> Modified independence -> Independent	1
Modified independence -> Minimally impaired -> Modified independence	1
Minimally impaired -> Moderately impaired -> Minimally impaired	1
Severely impaired -> Moderately impaired -> Severely impaired	1
Declined from Prior to Move to 4 months, Improved at 12 months	**1**
Minimally impaired -> Moderately impaired -> Modified independence	1
Improved from Prior to Move to 4 months, Declined at 12 months	**1**
Severely impaired -> Minimally impaired -> Moderately impaired	1
Declined from Prior to Move to 4 months, Then Stable	**2**
Modified independence -> Minimally impaired -> Minimally impaired	1
Moderately impaired -> Severely impaired -> Severely impaired	1

[1] Independent – decisions consistent, reasonable, and safe; Modified independence – some difficulty in new situations only; Minimally impaired – in specific recurring situations, decisions become poor or unsafe; cues/supervision necessary at those times; Moderately impaired – decisions consistently poor or unsafe; cues/supervision required at all times; Severely impaired – never or rarely makes decisions.

Memory

In terms of **short-term memory**, 22 of the 28 residents were assessed as having problems at all three time points. One resident had no such problems prior to the move, at 4 months or 12 months after the move. The remaining five residents experienced some changes (1 had problems prior to and at 4 months, 3 had problems prior to and at 12 months; 1 had problems at 4 months only).

Seventeen residents had stability in **procedural memory** (ability to perform all or almost all steps in a multitask sequence without cues), with 14 having such problems over time. Eight residents showed declines from prior to the move to 12 months after the move (5 at 4 months, 3 at 12 months) while two showed improvements (1 at 4 months, 1 at 12 months). The remaining resident was assessed with a problem prior to and 12 months after the move.

Finally, in terms of **situational memory** (ability to recognize caregivers' names/faces frequently encountered and know the location of places regularly visited), 21 residents showed stability (5 with the problem at all three time periods). Five individuals showed improvements by either 4 months (2 residents) or 12 months (3 residents) after the move. One individual did not have a problem until the 12 month assessment and one person was assessed with a situational memory problem prior to and 12 months after the move.

Behavioural Symptoms

Changes in **behavioural symptoms** were evident for some residents although the patterns vary depending on the specific symptom under consideration (Table 14). For example, six residents who were assessed with socially inappropriate or disruptive behaviours were not exhibiting these symptoms after the move. Four individuals who were not wandering prior to the move were doing so after the move. For many residents, however, there was stability over time.

Table 14. Changes in Behavioural Symptoms

	Number of Residents (n=28)							
	No Change[1]		Change				Pattern Varies	
			Improved		Declined			
Symptom	YYY	NNN	YNN	YYN	NYY	NNY	YNY	NYN
Wandering	2	17	4	---	3	1	---	1
Verbal abuse	10	9	2	1	1	1	2	2
Physical abuse	2	17	1	1	2	2	1	2
Socially inappropriate or disruptive behaviour	5	12	4	2	---	2	1	2
Inappropriate public sexual behaviour or public disrobing	4	23	---	1	---	---	---	---
Resists care	11	8	1	2	4	1	---	1
Intimidation of others or threatened violence	3	17	2	1	1	2	2	---

[1] YYY = behaviour present prior to the move, at 4 months and at 12 months after the move.
NNN = behaviour not present prior to the move, at 4 months or at 12 months after the move.
YNN = behaviour present prior to the move but not present at 4 months or at 12 months after the move.
YYN = behaviour present prior to the move and at 4 months after the move but not at 12 months after the move.
NYY = behaviour not present prior to the move but present at 4 months and at 12 months after the move.
NNY = behaviour not present prior to the move or at 4 months after the move but present at 12 months after the move.
YNY = behaviour present prior to the move and at 12 months after the move but not present at 4 months.
NYN = behaviour not present prior to the move and at 12 months after the move but present at 4 months.

Mood

Both stability and change were evident in the **residents' moods**. Irrespective of the dimension under consideration, improvements and declines were apparent (Table 15). For example, the repetitive health complaints evident prior to the move were not assessed as present after the move for eight residents. On the other hand, after the move, eight residents were assessed with having expressions of what appeared to be unrealistic fears that were not present prior to the move.

Table 15. Changes in Mood

	Number of Residents (n=28)							
	No Change[1]		Change				Pattern Varies	
			Worse / More		Better / Less			
	YYY	NNN	NYY	NNY	YNN	YYN	YNY	NYN
Made negative statements	2	13	4	3	2	---	1	3
Persistent anger with self or others	13	5	2	1	3	1	2	1
Expressions, including non-verbal of what appear to be unrealistic fears	4	7	5	3	2	---	4	3
Repetitive health complaints	6	9	2	---	3	5	2	1
Repetitive anxious complaints / concerns (non-health related)	10	7	2	1	1	1	5	1
Sad, pained or worried facial expressions	16	2	5	1	2	1	1	---
Crying, tearfulness	9	8	3	3	---	4	1	---
Recurrent statements that something terrible is about to happen	---	19	2	3	---	---	2	2
Withdrawal from activities of interest	10	8	5	2	3	---	---	---
Reduced social interactions	10	7	4	4	2	---	1	---
Expression (including non-verbal) of a lack of pleasure in life	5	10	2	4	1	---	5	1

[1] YYY = behaviour present prior to the move, at 4 months and at 12 months after the move.
NNN = behaviour not present prior to the move, at 4 months or at 12 months after the move.
YNN = behaviour present prior to the move but not present at 4 months or at 12 months after the move.
YYN = behaviour present prior to the move and at 4 months after the move but not at 12 months after the move.
NYY = behaviour not present prior to the move but present at 4 months and at 12 months after the move.
NNY = behaviour not present prior to the move or at 4 months after the move but present at 12 months after the move.
YNY = behaviour present prior to the move and at 12 months after the move but not present at 4 months.
NYN = behaviour not present prior to the move and at 12 months after the move but present at 4 months.

Initiative and Involvement

Most residents experienced no change with regard to various actions that indicate **initiative and involvement** (Table 16). The exception was the easy adjustment to a change in routine where only 11 residents experienced no change. Five residents were assessed as not adjusting easily prior to the move but were doing so after the move. Six residents had the opposite pattern, with easy adjustment prior to the move and more difficulty after the move.

Table 16. Changes in Initiative and Involvement

	Number of Residents (n=28)							
	No Change[1]		Change				Pattern Varies	
			Improved		Declined			
Action	YYY	NNN	NYY	NNY	YNN	YYN	YNY	NYN
At ease interacting with others	2	19	4	1	---	---	---	2
At ease doing planned or structured activities	5	17	--	2	---	2	2	---
Accepts invitation(s) into most group activities	6	14	---	3	1	---	3	1
Pursues involvement in life of facility	9	9	2	2	1	3	1	1
Initiates interaction(s) with others	10	10	3	3	---	1	---	1
Reacts positively to interactions initiated by others	22	---	1	1	---	2	1	1
Adjusts easily to change in routine	5	6	3	2	3	3	---	6

[1] YYY = behaviour present prior to the move, at 4 months and at 12 months after the move.
NNN = behaviour not present prior to the move, at 4 months or at 12 months after the move.
NYY = behaviour not present prior to the move but present at 4 months and at 12 months after the move.
NNY = behaviour not present prior to the move or at 4 months after the move but present at 12 months after the move.
YNN = behaviour present prior to the move but not present at 4 months or at 12 months after the move.
YYN = behaviour present prior to the move and at 4 months after the move but not at 12 months after the move.
YNY = behaviour present prior to the move and at 12 months after the move but not present at 4 months.
NYN = behaviour not present prior to the move and at 12 months after the move but present at 4 months.

Close Relationships and Outlook on Life

Only 14 of the 28 residents were assessed as being **close to someone in the facility** (resident or staff) at 12 months. For seven residents, this represents a consistent pattern over the three time periods (Table 17). Twelve residents did not have a close relationship prior to or after the move. Five residents did not have this type of relationship prior to the move but were reported to feel close to someone after the move. It may be that the cottage-model facilitated the development of these relationships as residents had an opportunity for more interaction with their fellow cottage residents. In terms of **relationships with family**, 22 were assessed across the time periods as having strong and supportive relationships with their family.

Table 17. Changes in Relationships and Outlook on Life

	Number of Residents (n=28)							
	No Change[1]		Change				Pattern Varies	
			Improved		Declined			
	YYY	NNN	NYY	NNY	YNN	YYN	YNY	NYN
Close to someone in the facility (resident or staff) (n=27)	7	12	2	3	1	---	2	---
Strong and supportive relationships with family	23	3	---	1	---	1	---	---
Consistent positive outlook	12	8	1	2	1	2	---	2
Finds the meaning in day-to-day life	8	6	1	2	1	5	1	4

[1] YYY = yes prior to the move, at 4 months and at 12 months after the move.
NNN = no prior to the move, at 4 months or at 12 months after the move.
NYY = no prior to the move but yes at 4 months and at 12 months after the move.
NNY = no prior to the move or at 4 months after the move but yes at 12 months after the move.
YNN = yes prior to the move but no at 4 months or at 12 months after the move.
YYN = yes prior to the move and at 4 months after the move but no at 12 months after the move.
YNY = yes prior to the move and at 12 months after the move but no at 4 months.
NYN = no prior to the move and at 12 months after the move but yes at 4 months.

A **consistent positive outlook** was evident at 12 months for 15 residents. Of these, 12 were assessed with this outlook at all three points in time (Table 17). Three residents showed improvements and three showed declines with regard to a positive outlook. With regards to finding **meaning in day-to-day life**, 14 residents experienced a change. The most frequent pattern was a decline such that the person no longer found meaning in day-to-day life (1 by 4 months, 5 by 12 months).

Unsettled Relationships and Feelings

Several residents had **conflict with or repeated criticisms of staff** (Table 18). For two residents, this was a consistent pattern. Seven residents who had not shown conflict prior to the move did so after the move. Two residents were assessed as having a conflict prior to the move but not after the move. It may be that having more consistency in staff within the cottage model brings both positive and negative consequences. For some residents, it may be an opportunity to minimize conflict with staff who are no longer on their cottage while for others, it may create a problem that is difficult to resolve without moving the resident or the staff member to another cottage.

There were also changes with regards to **conflict with or repeated criticism of other residents**. While 13 residents had consistent assessments, six were more likely after the move to exhibit this type of conflict while five were less likely to do so. The pattern varies for the remaining four residents. Similar to relationships with staff, the cottage model may either reduce or heighten problematic relationships with other residents as it offers fewer people with whom to interact.

Table 18. Changes in Unsettled Relationships

	Number of Residents (n=28)							
	No Change[1]		Change				Pattern Varies	
			Worse		Better			
	YYY	NNN	NYY	NNY	YNN	YYN	YNY	NYN
Conflict with or repeated criticism of staff	2	14	4	3	1	1	2	1
Conflict with or repeated criticism of other resident	1	12	2	4	3	2	2	2
Staff report persistent frustration in dealing with person	8	9	2	2	1	---	5	1
Says or indicates he/she feels lonely	10	7	1	1	2	1	3	3
Expresses sadness over recent loss	3	12	---	3	5	---	1	4

[1] YYY = yes prior to the move, at 4 months and at 12 months after the move.
NNN = no prior to the move, at 4 months or at 12 months after the move.
NYY = no prior to the move but yes at 4 months and at 12 months after the move.
NNY = no prior to the move or at 4 months after the move but yes at 12 months after the move.
YNN = yes prior to the move but no at 4 months or at 12 months after the move.
YYN = yes prior to the move and at 4 months after the move but no at 12 months after the move.
YNY = yes prior to the move and at 12 months after the move but no at 4 months.
NYN = no prior to the move and at 12 months after the move but yes at 4 months.

At 12 months, 15 of the 28 residents were reported to **feel lonely**. For 10 residents, this represented a consistent pattern from before the move (Table 18). Two residents not assessed as lonely prior to the move were assessed as such after the move. Three residents were reported to feel lonely prior to the move but not after. The remaining six had no consistent pattern in this regard. Given this variation, it is difficult to ascertain the impact of private rooms on the feelings of loneliness. It may have contributed to feelings of loneliness for some but not other residents.

Only seven residents expressed **sadness over a recent loss**. Fifteen residents had no change over time. Three experienced sadness after the move while five had done so prior to the move but not after the move.

Participation in Activities

An examination of recreational and social activities reveals variations in the likelihood of change across activities (Table 19). Participation in activities such as **music or singing**, **spiritual/religious activities**, and **discussing/reminiscing about life** were relatively consistent over time which is not surprising given the recreation programming in the facility.

Table 19. Changes in Participation in Recreational and Social Activities

Activity	Number of Residents (n=28)							
	No Change		Change				Pattern Varies	
			Decrease		Increase			
	YYY	NNN	YNN	YYN	NYY	NNY	YNY	NYN
Music or singing	20	1	---	1	2	2	2	---
Spiritual or religious activities	15	4	1	5	---	2	1	---
Discussing/reminiscing about life	20	1	---	1	4	---	---	2
Watching TV or listening to radio	14	1	3	2	4	3	1	---
Exercise program, stretching, strengthening	13	3	3	1	2	2	2	2
Trips, shopping, functions	6	5	4	4	2	1	5	1
Reading, writing or crossword puzzles	4	8	4	5	1	4	1	1
Pets	3	7	9	---	2	2	4	1
Cards, games, puzzles, bingo	10	7	2	1	2	1	3	2
Conversation or talking on the phone	9	6	4	2	5	1	---	1

[1] YYY = yes prior to the move, at 4 months and at 12 months after the move.
NNN = no prior to the move, at 4 months or at 12 months after the move.
NYY = no prior to the move but yes at 4 months and at 12 months after the move.
NNY = no prior to the move or at 4 months after the move but yes at 12 months after the move.
YNN = yes prior to the move but no at 4 months or at 12 months after the move.
YYN = yes prior to the move and at 4 months after the move but no at 12 months after the move.
YNY = yes prior to the move and at 12 months after the move but no at 4 months.
NYN = no prior to the move and at 12 months after the move but yes at 4 months.

Other activities showed more variation. For example, five residents who **watched TV or listened to the radio** prior to the move were not doing so by either 4 or 12 months while the reverse was evident for seven residents. Nine residents who were **reading, writing, or doing crossword puzzles** prior to the move ceased this activity at some point after the move while five added this activity. **Conversation** or **talking on the phone** decreased for six residents but increased for another six. Given this diversity, it is difficult to attribute these changes to the new physical environment. At the same time, the reduction in the interaction with **pets** does reflect, in part, the visit by a staff member's dogs at the old facility which was not occurring at the new facility as the individual no longer worked there.

Hospital Visits

As mentioned earlier in the Social/Care Environment section, relatively few residents had been admitted to a hospital since the move or visited the emergency department. At 12 months, only three residents had had at least one inpatient acute hospital visit with an overnight stay in the 90 days prior to the assessment (2 residents – 1 visit, 1 resident – 3 visits). Two had an emergency room visit (1 resident – 1 visit; 1 resident – 3 visits). In comparison, in the 90 days prior to the assessment

completed before the move, one resident had been admitted to the hospital and three had emergency room visits.

Summary

This examination of the residents' situations reveals the complexity and the diversity among residents. Mortality rates were relatively low after the move, suggesting that the move itself did not lead to increases in the number of deaths. Both stability and change in health status and participation in recreational and social activities were evident. The study assessors' summary observations at 4 and 12 months highlight this complexity.

4 months	12 months
Resident #1 *Resident much more positive, enthusiastic about life. Hobbies, family gatherings, enjoys room and meals. Not as anxious and complaining as in old building.*	*More aggressive and complaintive. Less compliant with diet.*
Resident #2 *Resident appears more alert much of time. Seems to enjoy activity in the dining area. Dozes off a lot. Tries to attend activity but tires easily. Smiles and shows more affect. Enjoyed recent shopping trip a lot.*	*Generally sleeps more of time. Slower verbal response to questions. Engages other residents and staff in conversation when she is rested and alert. Seems to enjoy smaller setting – out of room a lot. Generally appears more involved in day-to-day life on cottage. Makes own choices a lot. Fatigue limits her activity but she seems more content with activities, etc.*
Resident #3 *Resident wanders a lot in wheelchair. Has alarm on chair which unfortunately goes off whenever wheels near any doors. Cannot sit in the living room because it sets the alarm off. At times, this visibility upsets and confuses the resident. Staff redirects a lot because of this. Her ability to wander freely in the cottage is limited.*	*Resident spending less time wandering 'anxiously'. Has longer settled periods. Involved in more one-on-one projects, e.g., folding, puzzles.*
Resident #4 *Resident appears to spend most of time in room or dozing in chair in dining room. Staff attempting to have her out and more involved in activities but usually doesn't respond or take part.*	*Resident has periods of alertness but generally dozing much of day. Rehab report they have suspended walking program related to resident's increased weakness. Staff still encourage her to attend activities on her own cottage. Observed sleeping most of the time.*
Resident #5 *Resident communicates at same variable level. Activity and participation level has decreased in past 2 weeks. Spends time sitting quietly in dining room. Usually out for meals only. Not crying out or visibly agitated when in dining room. Smiles and says few words at times, otherwise no response.*	*Resident less responsive generally. Requiring more constant urging to eat – often misses meals. More resistive to care, e.g., bathing, eating. Shouts at caregivers more. Calling out often when left in room.*
Resident #6 *Resident's condition appears consistent since prior to move. Remains in bed 23 hours out of 24. Cries out if in Broda chair for longer than ½ hour. Family reports she is eating better here – thinks she enjoys taste of food more. Family feels that resident is generally failing – less responsive.*	*Out of Gerichair more for meals with family feeding. Has gained some weight. Family feeds resident most of meals. Becomes more agitated with staff than with family doing her care. Still tries to bite, pinch staff and family.*

Given the variation, it is difficult to ascertain the influence of the changes in the physical and social/care environments on changes in the residents' health and activity participation. At the same time, some residents experienced changes such as increased independence in bathing, an increase in the number of pressure sores, an increase in close relationships with other residents or staff, or an increase in unsettled relationships that may, in part, reflect the changed environment.

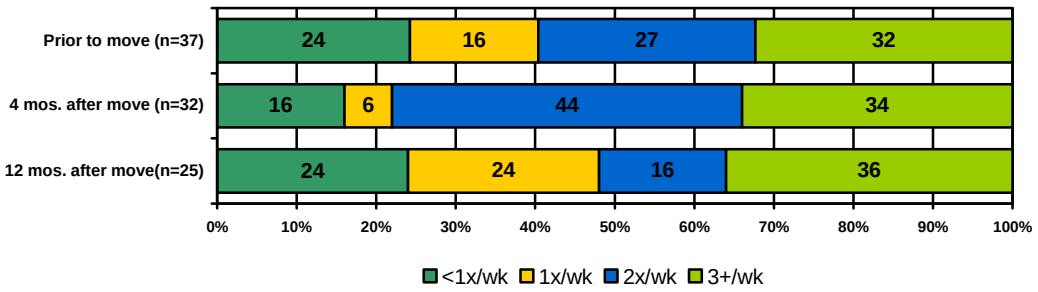
FAMILY CAREGIVERS' SITUATIONS

Attention now turns to the situations of family caregivers from prior to the move to 12 months after the move. Of interest are **changes in visiting**, **caregiving tasks**, **caregiver burden**, **impact on work**, **self-rated health**, and **ratings of the caregiving experience**.

Visiting

Family caregivers were asked about the **frequency of their visits** prior to the move, at 4 months, and again at 12 months post-move. As illustrated in Figure 25, the overall pattern of the frequency of visits is similar at the three time periods. Prior to the move, 32% of the 37 family caregivers reported **visiting at least three times per week**. The corresponding percentages were 34% of 32 caregivers at 4 months and 36% of 25 caregivers at 12 months. There was a slightly higher percentage of family caregivers who visited twice a week at the 4 month period. However, a comparison of the frequency of visits among the 25 family caregivers who answered this question at all three time periods revealed no statistically significant differences in the frequency of visiting.

Figure 25. Frequency of Visiting: Family Caregivers



At four months, when asked "*Since the move, would you say that there has been an increase, decrease, or about the same amount of visits?*", 63% of the 32 family caregivers reported it was the **same** while 31% indicated an **increase** and 6% thought there had been a **decrease in the amount of their visits**. Some caregivers explained their increase in visits in relation to helping the resident settle in while others commented on the closer proximity and ease of visiting. Examples of their comments included:

Increase in Amount of Visits

- *Helping [ ] settle in…[ ] didn't like it at first and hates the food and often won't eat.*
- *I've been doing a lot of arranging things for her to get settled.*
- *It's closer to our house. [ ] needed our help to settle in. [ ] seems to keep to herself more.*
- *More visits from others – they want to see the new place. It's close for me to pop across the street for short visits.*

Decrease in Amount of Visits

- *I used to work at the hospital so I popped in daily.*
- *Life is busy and [ ] is well looked after, comfortable with the staff.*

Family caregivers were asked about their activities with the resident when visiting. Prior to the move and 12 months after the move, **cleaning up the resident's room** and **taking the resident for walks around the facility** were the two most frequent activities (Table 20). At 4 months, cleaning up the room dropped to the 4th most frequent activity.

Table 20. Activities When Visiting Residents: Family Caregivers

	% Sometimes/Always			% with Change[2]			
	Prior to Move	After Move			Since Move		
Activities		4 mos	12 mos	No	Increase	Decrease	Varies[3]
Clean up [ ]'s room	73%	45%	72%	56%	28%	4%	12%
Take [ ] for a walk around the facility	70%	81%	76%	72%	4%	8%	16%
Eat meals with [ ]	58%	58%	68%	42%	21%	8%	29%
Watch TV with [ ]	51%	61%	56%	52%	16%	16%	16%
Take [ ] for a drive	36%	36%	32%	76%	---	4%	20%
Read to [ ]	35%	36%	32%	60%	12%	16%	12%
Play games with [ ]	16%	19%	16%	84%	---	4%	12%

[1] Samples sizes are as follows: Prior to the move, n=37, with the exception of eating meals (n=36) and take resident for a drive (n=36); 4 months after the move, n=31; 12 months after the move, n=25.
[2] n=25, with the exception of eating where n=24.
[3] Varies includes the following patterns: never -> sometimes/always -> never and sometimes/always -> never -> sometimes/always.

Considering only the 25 family caregivers who answered the questions prior to, at 4 months and 12 months after the move, there was some change in activities since the move. This change may have occurred at 4 months after the move and continued or happened by 12 months after the move. For example, 28% were more likely to **clean the resident's room** after the move than prior to the move while 21% were more likely to **eat meals with the resident** after the move. For some caregivers, their activities fluctuated. For example, prior to the move and 12 months after the move, one caregiver reported not **eating with the resident** while at 4 months they were engaged in that

activity. The opposite pattern was also evident; five caregivers reported eating with the resident prior to the move and at 12 months but not at 4 months.

Four months after the move, when asked "*Since the move, has there been none, some or a great deal of change in the things you do when you visit?*", 21 of the 31 family caregivers (68%) indicated that there had been **no change**. Eight caregivers reported some change while two suggested that there had been a great deal of change. When asked why the change had occurred, caregivers' explanations often were related to the physical and/or social care environment or the resident's health status. They commented:

Some Change

- *We just don't take her walking – with a wheelchair, there's not much space for a walk.*
- *[ ] gets out more here into the dining room and living room.*
- *We used to order a meal in the old building but not here.*
- *I help with the meal-set up and serving.*
- *I don't take [ ] outside anymore.*
- *We take her out less often but that's mainly due to her difficulty walking.*

A Great Deal of Change

- *We can take her out to a restaurant and do more crafts.*
- *We bring [ ] home for a meal weekly now – we couldn't before as [ ] was hard to put in the car* [caregiver lives in close proximity to the care centre and does not require a car to transport the resident].

Caregiving Tasks

Family caregivers often perform a number of different tasks in addition to visiting the residents. Prior to the move, at 4 months and 12 months after the move, all caregivers reported **shopping for necessities and for non-essentials** for the resident (Table 21). Almost all **paid bills/managed the finances** for the resident. Over one-half **telephoned to see how the resident was doing** or **wrote letters/called family or friends** for the resident. Less frequently performed tasks included **talking to a family physician** or to a **specialist** about the resident, **making appointments**, or **driving the resident to appointments**.

Table 21. Caregiving Tasks: Family Caregivers

Task	% Yes			% with Change			
		After Move[2]			Since Move[2]		
	Prior to Move	4 mos	12 mos	No	Increase	Decrease	Varies[3]
Shopped for necessities for [ ]	100%	100%	100%	100%	---	---	---
Shopped for non-essentials for [ ]	100%	100%	100%	100%	---	---	---
Paid bills/managed finances for [ ]	89%	84%	96%	92%	4%	---	4%
Telephoned to see how [ ] is doing	60%	65%	60%	52%	16%	20%	12%
Written letters or called family or friends for [ ]	54%	61%	92%	44%	36%	4%	16%
Talked to a family physician about [ ]	30%	19%	32%	60%	8%	12%	20%
Made appointments for [ ]	22%	36%	28%	52%	16%	12%	20%
Talked to specialist about [ ]	16%	7%	4%	84%	---	12%	4%
Driven [ ] to appointments	14%	16%	16%	72%	8%	12%	8%

[1] Samples sizes are as follows: Prior to the move, n=37; 4 months after the move, n=31; 12 months after the move, n=25.
[2] At 4 months, family caregivers were asked about changes "*since the move*"; at 12 months, they were asked about changes "*since we last spoke*".
[3] Varies includes the following patterns: yes -> no -> yes and no -> yes -> no.

Considering only the 25 family caregivers who answered the questions at all three time periods, **shopping for necessities** and for **non-essentials** were activities that continued over time for all caregivers. All but two reported ongoing **payment of bills/management of finances**. There were changes in the other tasks for some caregivers, with both increases and decreases emerging (see Table 22).

Some family caregivers also are involved in providing assistance with activities of daily living. This assistance may take place inside or outside the facility. The most frequent task was assistance with **eating** (Table 22), followed by assistance with **taking care of the resident's appearance** and **dressing and undressing**. Less frequent was the provision of assistance with **walking**, **getting in and out of bed**, **taking a bath or shower**, **going to the bathroom or using a commode**, and **taking medications**.

Table 22. Assistance with Activities of Daily Living

Task	Prior to Move		4 mos after Move		12 mos after Move	
	N[1]	% Yes	N[1]	% Yes	N[1]	% Yes
Eating	23	61%	17	59%	18	72%
Taking care of appearance	29	38%	25	44%	20	55%
Dressing and undressing	36	25%	29	17%	24	21%
Getting in and out of bed	36	11%	28	7%	23	17%
Going to the bathroom or commode	37	11%	29	14%	25	8%
Taking medications	37	11%	31	13%	25	20%
Walking	32	6%	28	4%	23	9%
Taking a bath or shower	37	---	31	---	25	4%

[1] Sample size varies as only caregivers of residents who require assistance with this task are included.

Caregiver Burden

Caregiver burden was assessed by using the **Caregiver Reaction Assessment Scale** (CRA), an instrument designed to assess specific aspects of the caregiving situation (Given et al., 1992). The CRA assesses **five domains** of the caregivers' lives, namely **disrupted schedules**, **financial problems**, **lack of family support**, **health problems**, and **the impact of caregiving on the caregiver's self-esteem**. Prior to the move and at 12 months after the move, family caregivers were read 24 statements and asked to indicate their level of agreement with the statements from strongly disagree (1) to strongly agree (5).

Considering only the 25 family caregivers who responded to these statements prior to the move and at 12 months, virtually no change was evident across the two time periods. Looking first at the five domains, a statistically significant difference was evident only for the impact of caregiving on the caregiver's **self-esteem** (Table 23).[10] The ratings on **positive self-esteem** were slightly higher after the move but there was no difference in the scores for the individual statements that fall within this scale. Assessments regarding the lack of family support, financial problems, disrupted schedules, and health problems did not vary over time. In terms of specific statements, there was only one statement where the scores prior to the move differed significantly from the scores 12 months after the move. Family caregivers were more likely to disagree with the statement ***"I have eliminated things from my schedule since caring for (__)"*** prior to the move than they were 12 months after the move. However, given the relatively small number of family caregivers, caution needs to be taken when interpreting these findings. The overall pattern is one of **consistency in the caregivers' reactions to their situation**. Given this consistency, it appears that neither the new physical

[10] Based on paired t-test; $p<.05$.

environment nor the changing needs of the residents had an impact on caregiver burden as assessed by this tool.

Table 23. Caregiver Reaction Assessment Scale

Subscale / Items	Mean Score[1]	
	Prior to Move (n=25)	12 months after Move (n=25)
Positive Self-Esteem (n=24)	**4.2[2]**	**4.3[2]**
I feel privileged to care for (__).	4.2	4.4
I resent having to take care of (__).*	1.6	1.4
I really want to care for (__).	4.5	4.6
I will never be able to do enough caregiving to repay (__).	3.0[2]	2.8[2]
Caring for (__) makes me feel good.	4.4	4.6
Caring for (__) is important to me.	4.4	4.5
I enjoy caring for (__).	4.3	4.5
Lack of Family Support (n=25)	**2.3**	**2.3**
Others have dumped caring for (__) onto me.	2.7	2.4
It is very hard to get help from my family in taking care of (_).	2.4	2.4
My family works together at caring for (__).*	3.6	3.6
Since caring for (__), I feel my family has abandoned me.	1.5	1.7
My family (brothers, sisters, and children) left me alone to care for (__).	2.2	2.4
Financial Problems (n=25)	**1.7**	**1.6**
My financial resources are adequate to pay for things that are required for caregiving.*	4.2	4.3
Caring for (__) puts a financial strain on the family.	1.6	1.6
It is difficult to pay for (____)'s health needs and services.	1.7	1.5
Disrupted Schedule (n=25)	**2.4**	**2.2**
My activities are centered around caring for (__).	3.0	2.8
I have to stop in the middle of work.	2.3	2.0
I visit family and friends less since I have been caring for (__).	2.3	2.2
I have eliminated things from my schedule since caring for (__).	2.4	2.0
The constant interruption makes it difficult to find time for relaxation.	1.7	1.9
Health Problems (n=25)	**2.6**	**2.5**
Since caring for (__), it seems like I'm tired all of the time.	2.6	2.2
My health has gotten worse since I have been caring for (__).	1.9	1.8
I have enough physical strength to care for (__).*	3.8	3.9
I am healthy enough to care for (__).*	4.0	4.1

[1] Scores were 1 = Strongly disagree, 2= Disagree, 3 = Neither, 4 = Agree, 5= Strongly agree. * indicates reverse coding is required when computing the scale score. Shading denotes statistically significant differences at p<.05, based on paired t-tests.

[2] Sample size is 24 as one caregiver did not provide a score.

Impact on Employment

Prior to the move, only 10 family caregivers were working for pay. Eight worked 35 or more hours per week. Nine caregivers answered a series of questions designed to determine whether caring for the resident had ever had an impact on different aspects of their work situation. Some caregivers reported that due to caring they had **decreased hours worked** (1 caregiver), **changed the shifts** they worked (3 caregivers), **came late to work** (1 caregiver), **missed work** (1 caregiver), **left work for doctors' appointments pertaining to the resident** (4 caregivers), **left work suddenly** (3 caregivers), or **got interrupted frequently by phone calls from or pertaining to their family member** (1 caregiver). No caregivers reported that they had changed jobs or employers, increased the hours they worked, felt that their work performance was affected, declined a job advancement, quit their job, or considered quitting their job.

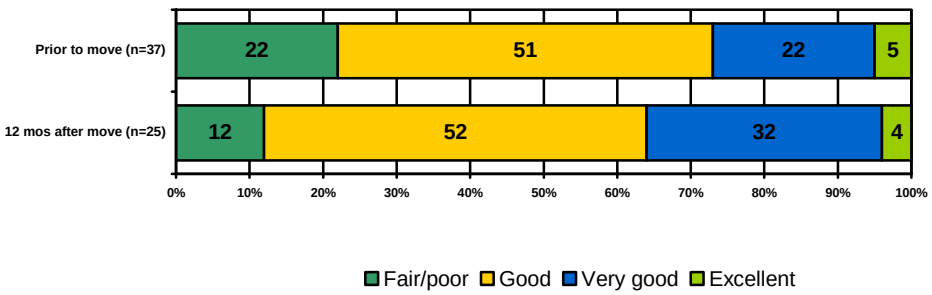
At 12 months after the move, only six family caregivers were employed for pay. Five answered the questions regarding the impact of caring on their work situation. Since the 4 month interview, only one caregiver had **left work for doctors' appointments pertaining to the resident** while one had had **left work suddenly**. Only one indicated **frequent interruptions by phone calls from or pertaining to their family member**.

Overall, it would appear that caring for the resident generally has had minimal impact on those caregivers who were still working. The extent to which caregiving has had an effect on those who were no longer in the work force, and may have contributed to their leaving paid employment is not known.

Self-rated Health

Prior to the move and at 12 months after the move, family caregivers were asked "*In general would you say your health is excellent, very good, good, fair or poor?*" Prior to the move, over one-quarter of the 37 caregivers rated their health as excellent (5%) or very good (22%) (Figure 26). At 12 months after the move, the corresponding percentages were 4% and 32% respectively.

Figure 26. Family Caregivers' Self-rated Health

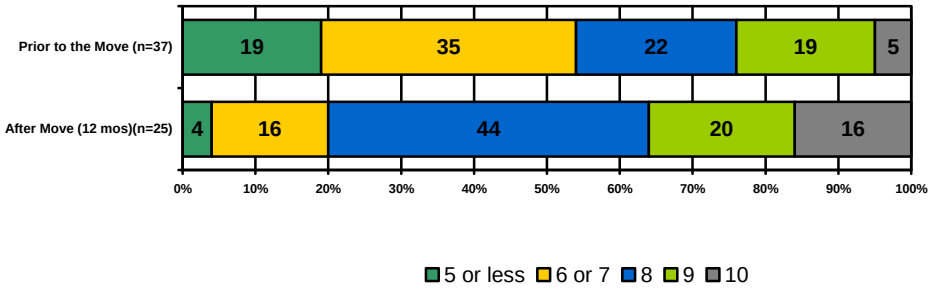


Among the 25 family caregivers who responded both prior to and 12 months after the move, 15 (60%) rated their health the same at both time periods (very good -> very good – 3; good -> good – 10; fair -> fair – 2). Three caregivers (12%) reported poorer self-rated health at 12 months than they did prior to the move (excellent -> very good – 2; good -> fair – 1). The remaining seven caregivers' assessments of their own health (28%) were better at 12 months after the move (very good -> excellent – 1; good -> very good – 2; fair -> very good – 1, fair -> good – 3).

Ratings of the Caregiver Experience

Family caregivers also were asked "*On a scale of 0 to 10, how would you rate your experience as a caregiver to (_), with 0 being the most negative and 10 being the most positive?*" Overall, family caregivers **rated the experience positively**. Prior to the move, 19% of the 37 family caregivers gave this a 9 and 5% rated it as 10 (Figure 27). Their average score was 7.2, with a range from 3 to 10. At 12 months after the move, the corresponding percentages for 25 caregivers were 20% and 16% respectively; the average score was 8.2 out of 10, with a range from 5 to 10.

Figure 27. Ratings of the Caregiving Experience: Family Caregivers



To understand changes over time, only the scores of the 25 family caregivers who responded both prior to and after the move were examined. Among these caregivers, the average scores were 7.2 out of 10 prior to the move and 8.2 after the move. This represents a statistically significant increase, indicating **more positive ratings** of the caregiving experience 12 months after the move.[11] Only three caregivers had lower scores at 12 months than prior to the move while six gave the same score. The remainder increased their scores by 1 to 5 points.

When asked to discuss "*some of the positive aspects of caregiving*", family caregivers often spoke of caregiving as a learning experience, irrespective of whether their ratings changed over time or remained constant. Examples of the explanations offered by caregivers who answered the question prior to and after the move included:

[11] Based on paired t-test; p<.01.

Same Rating Prior to and 12 months after Move

- Prior: *[ ]'s getting the best care. I know [ ]'s being looked after.*
  After: *I enjoy caring for [ ]. I've learned a lot about getting old. I know [ ] is looked after. I look out for [ ]'s interests.*

- Prior: *It's a good experience, for learning for the future. Any family member could be in this situation. The more I learn, the better.*
  After: *I enjoy caring for [ ]. I've learned a lot about getting old. I know she gets looked after. I look out for her interests.*

Higher Rating at 12 months after Move

- Prior: *It's been hard but it's been a positive experience. I looked at the bright side – I know [ ]'s looked after.*
  After: *I like being able to help her. It makes me feel good. I've learned a lot.*

- Prior: *I have learned to be more compassionate, patient, caring – all more strong in me now.*
  After: *It's been gradual and evolved. I've learned on the go. It's been a learning experience.*

Lower Rating at 12 months after Move

- Prior: *The last year has been better. Confrontations can be hard when I have to complain for [ ].*
  After: *I love being with [ ], enjoy crafting with [ ], talking and confiding in [ ].*

- Prior: *Knowing that [ ] is safe and secure here. It's a good facility.*
  After: *Now that he is in care, it is ok.*

Summary

This examination of the caregiving situation suggests a general pattern of stability for the family caregivers. The majority did not change their frequency of visiting or the activities while visiting. There was virtually no change in caregiver burden as measured here. Any impact on employment was not widespread. The exception to this pattern is a higher rating of the caregiving experience 12 months after the move than prior to the move. Having a family member in a new purpose-built facility with consistency in staff may be a contributing factor to a better overall assessment of the experience.

As discussed earlier, prior to the move, some family caregivers were concerned about the distance from the hospital and the increased workload of staff. By 12 months after the move, some of these concerns had been reduced and may be reflected in these ratings. However, given the relatively small number of family caregivers and the lack of a comparison group, it is difficult to assess the extent to which changes in the physical and social/care environments influenced the family caregivers' overall ratings of their caregiving experiences.

STAFF MEMBERS' SITUATIONS

Attention now turns to the situation of staff members. As discussed earlier, the staff was dealing with changes to both the physical environment and the social/care environment. Of interest here is their **job satisfaction**, **concerns about workload**, **concerns about the time with residents**, **assessments of morale**, and the **challenges facing staff**.

It should be noted that the facility was **not operating at full capacity** at the time of the move. Cottages 1 and 2 were at half capacity and did not reach full capacity until September. In comparison, Cottages 3, 4 and 5 were at or near full capacity since the move. The new residents were described as having higher care needs/higher acuity than new residents in the past. A key informant explained:

> *…for so long we had limited our numbers, you know, the transition here in May and then over the summertime, we knew we were giving holidays and so we kept our numbers low…then in September…we're back up to speed…since we got here in May, we've admitted 18 or 19 new people…so they [HCAs] had a huge learning curve because they now had all these extra people, and they've got high acuity people,…severe asthma and COPD,…a trach…feeding tubes…colostomies…by the time they [new residents] are coming to us…they're already requiring a high level of care… So to go from your cottage being half-full, to being completely full with now high needs people, it was big…All of a sudden they've got 6 more residents to learn, and to organize, and baths to give…And families.*

Staff members would have been dealing with these changing demands at the time of the 4 month follow-up interviews.

Job Satisfaction

To assess job satisfaction, **staff members** were asked to complete Castle's Nursing Home Nurse Aide Job Satisfaction questionnaire. This tool consists of seven subscales:

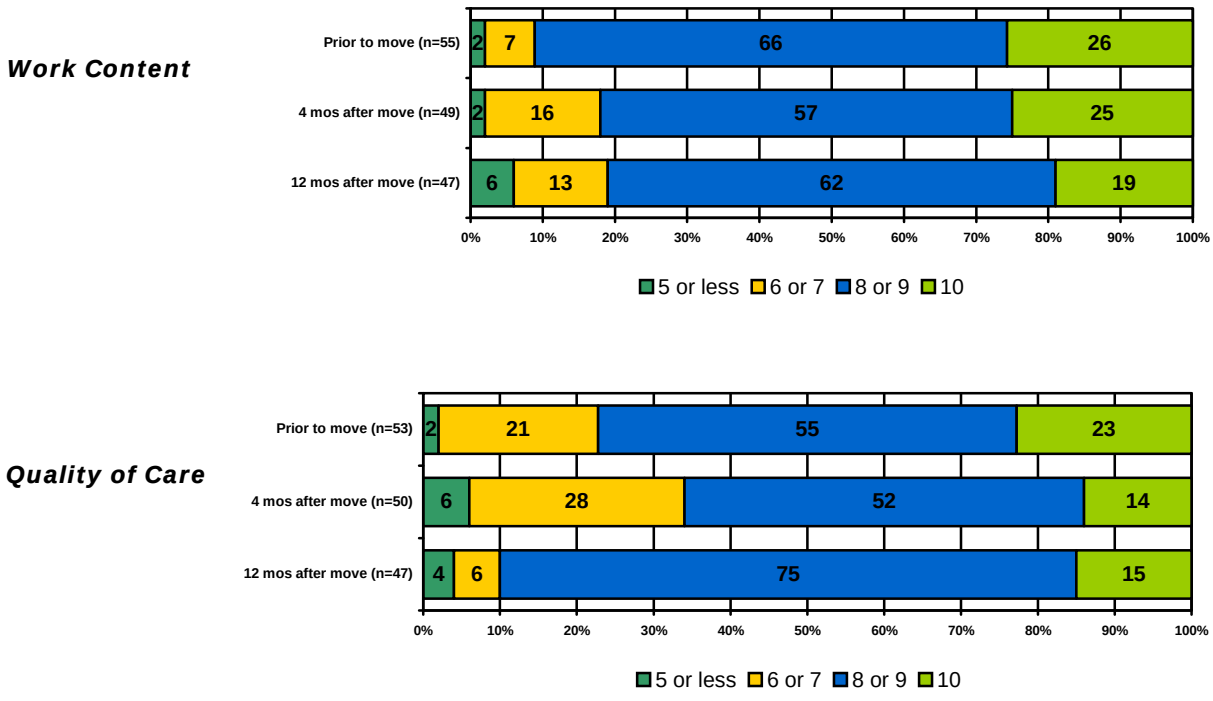
- **Work Content** (how much you enjoy working with residents; how your role influences the lives of residents; your closeness to residents and families)
- **Quality of Care** (care given to residents; effect you have on residents' lives)
- **Training** (whether your skills are adequate for the job; the training you have had to perform your job; chances you have for more training)
- **Coworkers** (people you work with; whether you feel part of a team effort; cooperation among staff)
- **Work Demands** (support you get when doing your job; chances you have to talk about your concerns; demands residents and family place on you)
- **Workload** (your workload; your work schedule; amount of time you have to do your job)
- **Rewards** (how fairly you are paid; your chances for further advancement)

Two **global** questions are also asked "*Generally speaking, how satisfied you are with your job*?" and *"Would you recommend working at this facility to a friend?"* Possible scores ranged from 1 (low) to 10 (high). While the tool was developed for nursing aides, it has relevance for other staff members as well. As a result, some of the findings presented below are for the staff as a whole while others are limited to the HCAs.

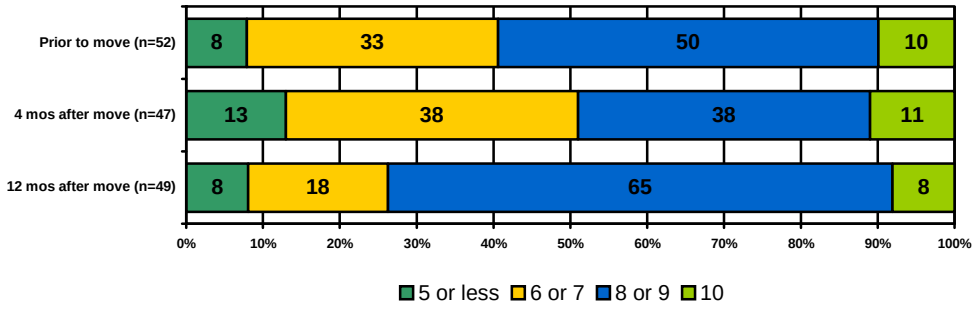
Prior to the move, the staff were satisfied with the **quality of care** (average = 8.1 out of 10) (Figure 28). Their levels of satisfaction with their **training** (7.7), the **content** of their work (7.6) and **coworkers** (7.4) were slightly lower. The satisfaction levels with **workload** (6.7), **work demands** (6.5) and **rewards** (5.2) were much lower.

The same patterns were evident among the staff interviewed at 4 months and the group interviewed at 12 months (Figure 28). The average scores were: **work content** (7.5 – 4 months; 8.3 – 12 months), **quality of care** (7.9 – 4 months; 8.1 – 12 months), **training** (7.4 – 4 months; 7.9 – 12 months) , **coworkers** (7.2 – 4 months; 7.8 – 12 months), **work demands** (6.2 – 4 months; 6.9 – 12 months), **workload** (6.2 – 4 months; 7.0 – 12 months) and **rewards** (5.8 – 4 months; 6.4 – 12 months).

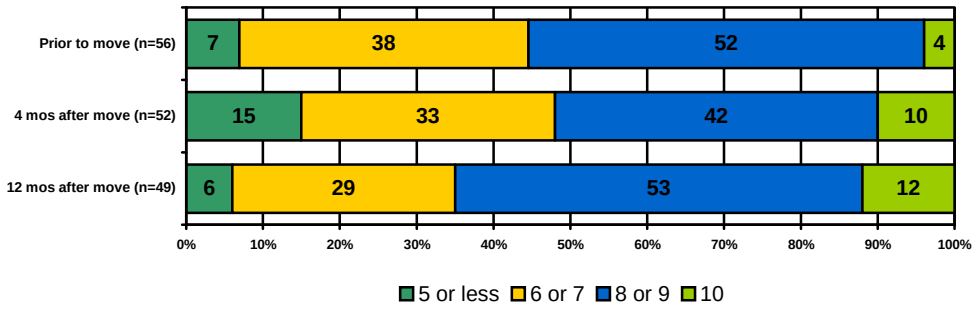
Figure 28. Job Satisfaction Questionnaire Subscales: All Staff



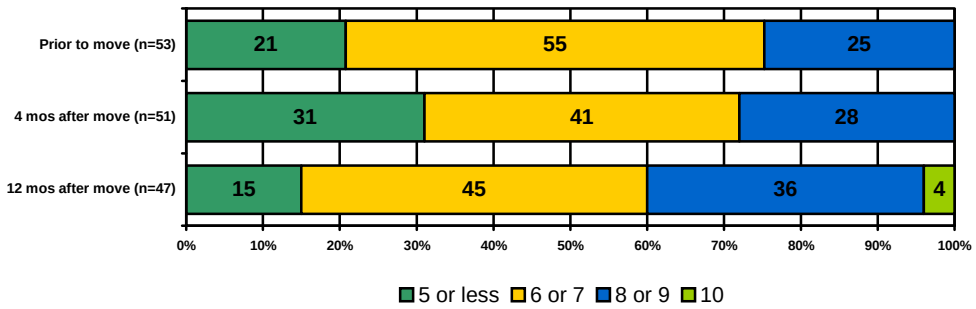
Training



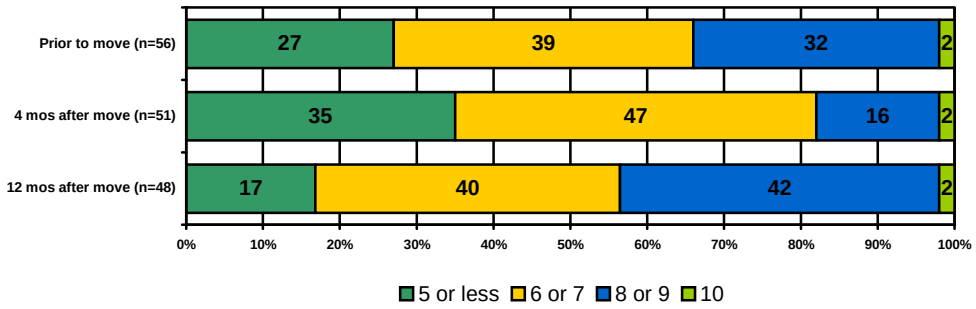
Coworkers



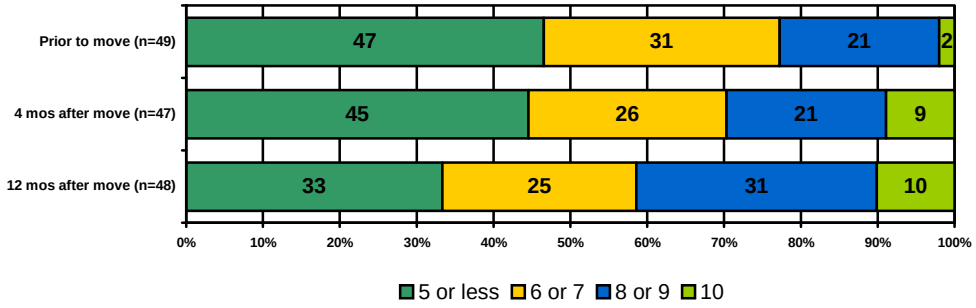
Work Demands



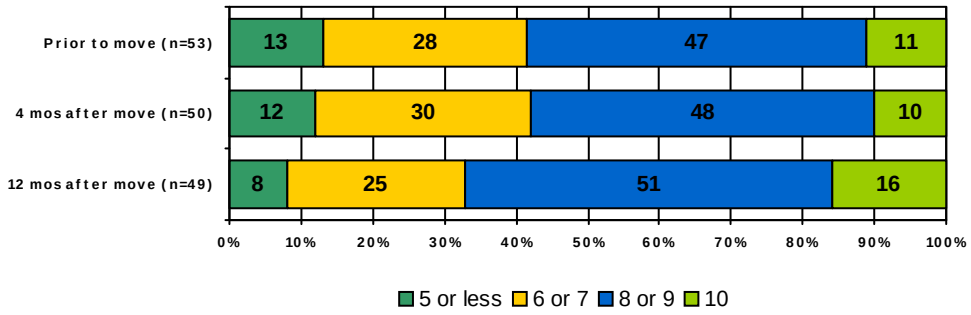
Workload



Rewards



Global



In order to assess change in job satisfaction, only the ratings of the **staff members** who were interviewed at all three time periods were examined. The number of staff ranged from 30 to 38 depending on the sub-scale under consideration. There were significant changes for three subscales: **coworkers**, **workload**, and **rewards**. Considering first **coworkers**, there was a significant improvement from the ratings at 4 months after the move (average = 7.2) to those at 12 months (7.9). For **workload**, the significant difference was between satisfaction at 4 months (6.6) and at 12 months (7.1). The ratings for **rewards** increased from prior to the move to 12 months; the significant difference is between the ratings prior to the move (5.1) and at 12 months after the move (6.4).

To examine this further, and given the concerns discussed in the section on the Social/Care Environment, **changes in job satisfaction for the HCAs** only were examined (Table 24). Among HCAs, satisfaction with **coworkers** increased over time, with ratings at 12 months significantly higher than those prior to the move and at 4 months. Of note is the difference in the ratings on one of the items in this subscale. The rating in response to "*whether you feel part of a team effort"* was much higher at 12 months than prior to the move or at 4 months. This suggests that time is likely a critical element in the building of a team effort. Working out their routines and problem-solving together as well as having some consistency in coworkers may have been beneficial in creating that team environment.

Improvements in ratings were evident with regards to **rewards** as well. The ratings increased from prior to the move, to 4 months and to 12 months after the move. The significant difference was between the ratings prior to the move and at 12 months after the move. This change is largely accounted for by the change in the rating of "*how fairly you are paid"*. The average scores at both 4 and 12 months were significantly higher than the rating prior to the move. This trend reflects a province-wide salary increase for HCAs that was negotiated during this time period.

While the change in the **workload** subscale for HCAs only was not significant, the ratings of the item specifically on staff's workload did show a drop from prior to the move to 4 months after the move, and then a higher rating at 12 months. Similarly, while no differences emerged for the Quality of Care subscale, the HCAs gave significantly higher scores for "*care given to residents"* at 12 months

compared to prior to the move and at 4 months. Again this suggests that time is required to adapt to the new work demands and to find a routine that works for the individual.

Table 24. Job Satisfaction Questionnaire Scores: HCAs

Item/Subscale	Average Scores[1]			Significant Differences Between Groups[2]
	Prior to Move (1)	After Move		
		4 Months (2)	12 Months (3)	
Work Content (n=26)	**8.7**	**8.8**	**8.6**	**n.s.**
How much you enjoy working with residents	9.2	9.2	9.1	n.s.
How your role influences the lives of residents	8.6	8.4	8.4	n.s.
Your closeness to residents and families	8.4	8.7	8.2	n.s.
Quality of Care (n=25)	**8.1**	**7.8**	**8.3**	**n.s.**
Care given to residents	7.7	7.6	8.5	1&3, 2&3
Effect you have on residents' lives	8.5	8.0	8.2	n.s.
Training (n=23)	**7.8**	**7.4**	**8.0**	**n.s.**
Whether your skills are adequate for the job	8.3	8.1	8.3	n.s.
The training you have had to perform your job	8.0	7.2	8.0	n.s.
Chances you have for more training	7.1	6.8	7.4	n.s.
Coworkers (n=26)	**7.3**	**7.5**	**8.2**	**1&3, 2&3**
People you work with	7.9	7.9	8.5	n.s.
Whether you feel part of a team effort	7.1	7.0	8.2	1&3, 2&3
Cooperation among staff	7.1	7.5	8.1	n.s.
Work Demands (n=27)	**6.2**	**6.1**	**6.5**	**n.s.**
Support you get when doing your job	6.4	5.8	7.0	2&3
Chances you have to talk about your concerns	5.5	5.3	6.1	n.s.
Demands residents and families place on you	7.1	7.2	6.8	n.s.
Workload (n=27)	**6.5**	**6.3**	**7.0**	**n.s.**
Your workload	5.6	4.8	6.3	2&3
Your work schedule	7.5	8.7	8.0	n.s.
Amount of time you have to do your job	6.3	5.5	6.5	n.s.
Rewards (n=22)	**4.3**	**5.4**	**6.2**	**1&3**
How fairly you are paid	3.6	6.0	6.8	1&2, 1&3
Your chances for further advancement	5.2	4.9	5.6	n.s.
Global Rating (n=27)	**7.3**	**7.5**	**7.6**	**n.s.**
Overall satisfaction with your job	8.0	8.1	8.1	n.s.
Recommend working at this facility to a friend	6.6	7.1	7.1	n.s.

[1] Scores ranged from 1 = lowest satisfaction to 10 = highest satisfaction.

[2] Based on repeated measures analyses. Shading denotes statistically significant differences. 1 refers to scores prior to the move, 2 refers to scores 4 months after the move and 3 refers to scores 12 months after the move. The numbers in this column show where there are statistically significant differences between specific groups. For example, with regard to care given to residents, 1&3, 2&3 indicate that there are statistically significant differences in the scores prior to the move (1) and the scores 12 months after the move (3) as well as differences between the scores at 4 months (2) and 12 months (3) but no differences between the scores prior to the move and 4 months. n.s. indicates no statistically significant differences between groups. It is possible to have an overall statistically significant difference but no differences between the groups.

Finally, it is important to note that there were improvements from 4 months to 12 months in terms of the "*support you have when doing your job".* Feelings of not being recognized, being devalued, and not being heard were expressed by some HCAs prior to the move and at 4 months (see below for further discussion). It may be that, by 12 months, staff had developed ways to obtain the necessary support for their work.

Concerns about Workload

Prior to the move, concerns about workload were readily apparent. At the 4 and 12 month interviews, staff were asked *"When we talked to staff before the move, there were various issues that came up about the new facility. I'd like to know whether this issue NOW gives you none, some or a great deal of concern?"* One of these issues was an increased workload. At 4 months after the move, 52% of the 52 staff members responded that they had a great deal of concern and 29% had some concern. Only 19% had no concern. At 12 months, 32% of 47 staff expressed a great deal of concern, 32% had some concern, and 36% had no concern. This pattern is consistent with the ratings of workload discussed above.

At 4 months, one staff member described the situation as follows:

> *…we shouldn't have to do all that extra work….it's taking our time away from the residents and that's what we're getting paid for…Like we're a nurse, we're not a laundry girl or a dishwasher or a floor scrubber. We're supposed to be looking after them and they don't have our time.*

For some staff, there was the feeling of not 'getting all of it done':

> *… sometimes it's not getting all of it done at the end of my shift, and I try to get everything done before I leave, and then I'm all upset because I couldn't finish it …and it leaves the girls, the girls are left here to do it, and if they don't have time… it's like, they don't get the chance to take their break, so it's, it's… it's an issue of fairness…*

The need for increased staff was discussed by some staff in relation to their concern about the workload. At 12 months, a staff member who indicated she had a great deal of concern stated:

> *If you have the staff, I wouldn't have* [a great deal of concern]*. But you don't have the staff, eh? ...you're trying to help like the next shift and you don't even have time to do your own shift… How much more do you want us to do? We're passing the meds, we're cooking supper, we're putting them to bed, we're scrubbing the floor and we're sweeping, we're doing laundry, we're doing everything, and you still want us to do the dishes? You still want us to do more?*

Another commented:

> *Yeah, it's a HUGE concern! Huge... It wouldn't be bad if you had enough people, but… at the present we don't have enough people, it's too much with too little people.*

Consistent with the improvement in the staff's ratings of their workload discussed earlier, some staff explained that there had been adjustments to the workload over time:

> *At the very beginning* [had concerns]*…it has changed… we've adjusted. It's definitely hard…You earn your money…you just multitask and you just figure things out and if something doesn't get done in that day well, it'll get done tomorrow. So it's not a big deal.*

> *…I guess over time, you know, we're very – help to adjust – where we can this or that, you know like manage our day. It's taken us a long time to settle in. 'Cause that first month was just awful, it was awful. Now that it's been – well, it's been four months, yeah, I think the first three months were hell, yeah, and then now we're starting to kind of like okay, settling down.*

> *… at the very beginning, yes, I was very worried. But now I think we have got a routine down and it's not too bad. And we started out full…other… cottages started out small, and now they're increasing now, and I think they're going to – yeah, they're going to find it tough…And then even just not having that one resident makes a huge difference for us. So we do what we can do in the time we can do it. And we don't get upset about it.*

Staff also was asked about any concerns with *"not having enough time to spend with residents"*. At 4 months, 46% of the 50 staff members responded that they had a great deal of concern and 34% had some concern. Only 20% had no concern. At 12 months, 34% of 47 staff expressed a great deal of concern and 38% had some concern while 27% had no concern. Staff members commented:

> *… I'll say a great deal. Because so many times I feel bad saying, "you know, I'm sorry, I just have to get my computer work done", or "I just have to throw this laundry in or help with dishes", and it's things that – they don't understand … you know, "why do you have to go to the computer?" "Well, I have to get on before shift change or – and then would you like me to sit and have a cup of coffee with you or, you know, paint your nails or something"… that bothers me because I know I turn a lot of people away in the day and at the end you feel bad because you said, "I promise I'll try to come back if I can"…Then you feel bad at the end of the day.*

> *That bothers me. It bothers me a lot. 'Cause there's a lot of things I like to do with them. And you feel bad telling them later, later. I know we can't fit it in. Say "I'll be back tomorrow, I'll try tomorrow, try and do that for you, I promise"….that bothers me. I like to spend time with them.*

Overall, workload was and, for some, continues to be a major issue. The extent to which these views are unique to this setting cannot be ascertained with the available information. Some of the changes facing the staff would be those facing staff in other facilities while other changes may be specific to this setting and the need to adjust to the cottage-style model.

Morale

Prior to the move, it was evident that **staff morale** was an issue. As discussed above and in the section on the Social/Care Environment, several staff members were concerned about the workload and work demands. The lack of a staff room in the new building led some staff members to question the value that the facility has for them. As a result, at the 4 and 12 month interviews, staff members were asked "*From 1 being the lowest to 10 being the highest, how would you rate the morale of the staff?"* If applicable, staff members were asked to rate *"in your cottage"* separately from *"in the facility as a whole"*.

At 4 months, 27 staff rated **morale in their cottage**. They gave an average score of 6.1 out of 10, with a range from 1 to 10. At 12 months, 30 staff members gave an average rating of 7.6. When comparing the two ratings, only the scores of 23 staff members who answered both times are examined. There was a significant improvement in the score at 12 months (7.7) compared to the score at 4 months (6.3).[12]

At 4 months, for the **facility as a whole**, the average rating of morale by the 43 staff was 4.9, with a range from 1 to 9. At 12 months, the range was from 2 to 10, with an average score of 5.7 (n=37). Among the 27 staff members who rated the morale at both time points, there was no significant improvement in their ratings (5.0 at 4 months and 5.4 at 12 months after the move).[13]

The emergence of a significant improvement when assessing morale in the cottage but not for the facility as a whole may reflect, in part, the team effort discussed above. Individuals working on a particular cottage may feel that the morale of their fellow cottage workers has improved but that morale on other cottages or the facility as a whole has not. One staff member commented:

[12] Based on pairwise t-tests, $p<.01$
[13] Based on pairwise t-tests, $p<.05$

> *…right now there's some pretty deep animosity going on between some staff. So it's not too happy in some cottages. My cottage, they're all happy..it's all personal conflicts, so how do you fix a personal conflict?*

Staff members were asked to identify **ways in which morale could be improved** in the facility. Their suggestions included:

- **Hiring more staff**
- **Rotating staff from cottage to cottage**
- **Increasing opportunities to interact with staff from other cottages**
- **Receiving recognition/positive reinforcement from administration**
- **Better communication at all levels.**

Examples of staff's comments included:

> *They have to hire some more staff. [laughs briefly] If they could fill – 'cause there's nothing more demoralizing than coming to work every day and you're short staffed and you're short staffed and you're short staffed.*

> *I think just more positive reinforcement… it seems they* [management/administration] *don't come around much…just to tell us what we're doing wrong. We don't see them so when they do come you're on the edge thinking what did we do now?...simply once in awhile say 'hey, we just came to tell you that you know we're really impressed with the way you've been working. We've heard good things'.*

Some staff members discussed the **need for a change in attitude among the staff**. As one stated, "*some people are born complainers*" while another commented:

> *Staff morale has to change among staff. It's the staff who has to change it themselves. And until they're happy at their job, that isn't going to happen.*

The extent to which individuals would **recommend their workplace** as a place of employment to a friend also illustrates their views about their work. Staff members were asked *"Would you recommend working at this facility to a friend?",* on a scale of 1 (low) to 10 (high). At 4 months, the 50 staff members' responses ranged from 1 to 10, with an average of 6.9. About one-quarter (25%) scored it 5 or less, 30% gave a 6 or 7, 36% were at an 8 or 9 and 10% were a 10. At

12 months, the average score for the 49 staff members was 7.3, with a range from 2 to 10. The distribution was as follows: 20% at 5 or less, 16% at 6 or 7, 53% at 8 or 9, and 10% at 10. Again this suggests that at least some staff have adapted to their new roles and responsibilities in a new environment. At the same time, some individuals continue to be unhappy in their worklife.

Summary

Overall, staff faced a number of challenges in adapting to the changing physical and social/care environments. Changes in the **workload and work demands** as well as the lack of a staff room as noted earlier were areas of concern for **staff**. Over time, however, there were some improvements. When examining the views of HCAs only, their satisfaction with **coworkers** increased over time. Satisfaction levels with **rewards** significantly improved, reflecting a province-wide salary increase. Overall satisfaction with **workload** did not change but there were some improvements in the rating of care given to residents and the support when doing their job. It appears that, by 12 months, some staff members have adapted to new work demands, have new routines, and developed ways to obtain the necessary support for their work.

Staff morale was problematic prior to the move but showed some improvements by 12 months. This improvement was particularly noticeable when assessing morale in the cottage rather than in the facility as a whole. **Suggestions to improve morale** included hiring more staff, rotating staff from cottage to cottage, increasing opportunities to interact with staff from other cottages, receiving recognition/positive reinforcement from administration, and better communication at all levels.

In general, the staff situation saw some improvements from prior to the move to 12 months after the move. The need to allow for a transition/settling in period was evident. Staff was dealing with changing job responsibilities and roles. Some of these changes were necessitated by the new environment while other changes would have been implemented irrespective of the move to a new facility.

CONCLUSIONS

This study has focused on the relocation of the Vegreville Care Centre that occurred in May 2008 and its impact on residents, family caregivers, and staff. The relocation involved a change in the **physical environment** from an old, institutional-style facility to a new purpose-built, cottage-style facility. It also involved changes in the **social/care environment**. Some of these changes were necessitated and/or facilitated by the new building design while other changes reflected province- or region-wide system changes, including the move from a medical model of care to a social model of care.

In general, the move itself was viewed as a success. However, the experience highlights that **advance preparation** is critical and needs to take many forms to alleviate concerns and to make different constituencies feel like their perspectives are being taken into account. Perceived/real threats related to **changing established patterns/practices** need to be addressed. For example, concerns about the Care Centre moving from being physically **attached to an acute care hospital** to a central downtown neighbourhood location approximately two kilometres from the hospital were evident prior to the move and at 4 months. It was only at the 12 month interviews that most family caregivers and staff did not view the location as problematic.

The change in the **physical environment** to cottages of 12 residents generally was viewed **positively** although areas for improvement were identified. The new environment was more likely to be rated as **homelike** than the old institutional environment. The **private rooms** and **bathrooms** drew favourable comments. The **kitchen** was rated highly, particularly by family caregivers. At the same time, the lack of a **staff room** in the new facility was a major source of discontent for staff. For many individuals, this discontent remained 12 months after the move.

Several changes in the **social/care environment** occurred prior to and after the relocation, including the adoption of the Eden Alternative as the philosophy of care and changing staff roles and responsibilities. The success of implementing the **Eden Alternative** that emphasizes flexibility and personal choice by the residents clearly requires buy-in from staff members and to a lesser extent residents and family members. While the physical environment is the same across the five cottages as are the rules/regulations that govern the social/care environment, each cottage is distinct and appears to have its own **character**. The residents, the family caregivers, and the staff all make a difference to that character.

The **interplay of the physical and social/care environment** has to be taken into account. The shift in the philosophy of care to the Eden Alternative was enhanced by the new physical design but, as one key informant explained, "*Eden is not the building*". The cottage-style design required **increased staffing** at a time when there was a shortage of staff province-wide. An intended benefit

of the design was the opportunity for **consistent staffing** with a small number of residents. This was perceived to allow residents, family caregivers and staff to know each other better. The extent to which this has occurred is difficult to determine. On the one hand, some **residents experienced changes** such as increased independence in bathing and some had an increase in close relationships. On the other hand, there was an increase in the number of pressure sores and some residents had an increase in unsettled relationships that may, in part, reflect the changed environment. Some **family caregivers** expressed concern about the involvement of the RNs/LPNs who were not as visible as they had been in the old facility when nursing stations were located in the centre of each unit. The work demands and the skill level of the HCAs, coupled with the reduced day-to-day involvement of the RNs/LPNs, may have lead to some instances where care needs were overlooked or misinterpreted to some extent.

The importance of **time both to prepare for the move and to adjust** to the new physical location, the changes in the social/care environment, and the ongoing care of the residents was apparent as was the **need for open communication.** Communication problems were identified between family caregivers and management, between staff and management, and between staff members. Some of these problems occurred early in the planning process while some emerged as the roles and responsibilities of staff in a new environment were developing. All parties share a responsibility to provide information in a timely and appropriate manner, and to express concerns constructively. The physical design necessitates the need for and delivery of **consistent facility-wide and cottage-specific communication.**

Relocation poses **challenges**, and the relocation of the Vegreville Care Centre had its challenges. At the same time, the high percentage of family caregivers who would recommend this facility to others can be interpreted as a vote of confidence for the Care Centre. It must be recognized that the experiences of the relocation of this Care Centre are embedded within its own history and in the community within which it is located. The extent to which some of these experiences would emerge in other settings is open to speculation. As well, the focus of the study was on residents, family caregivers, and staff members who were involved in the Care Centre both prior to and after the move. New residents, family caregivers, and staff members may bring difference expectations and have different experiences than the individuals who participated in the study. Further research is needed to better understand new environmental designs and their impact on the lives of residents, family caregivers, and staff.

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APPENDIX A

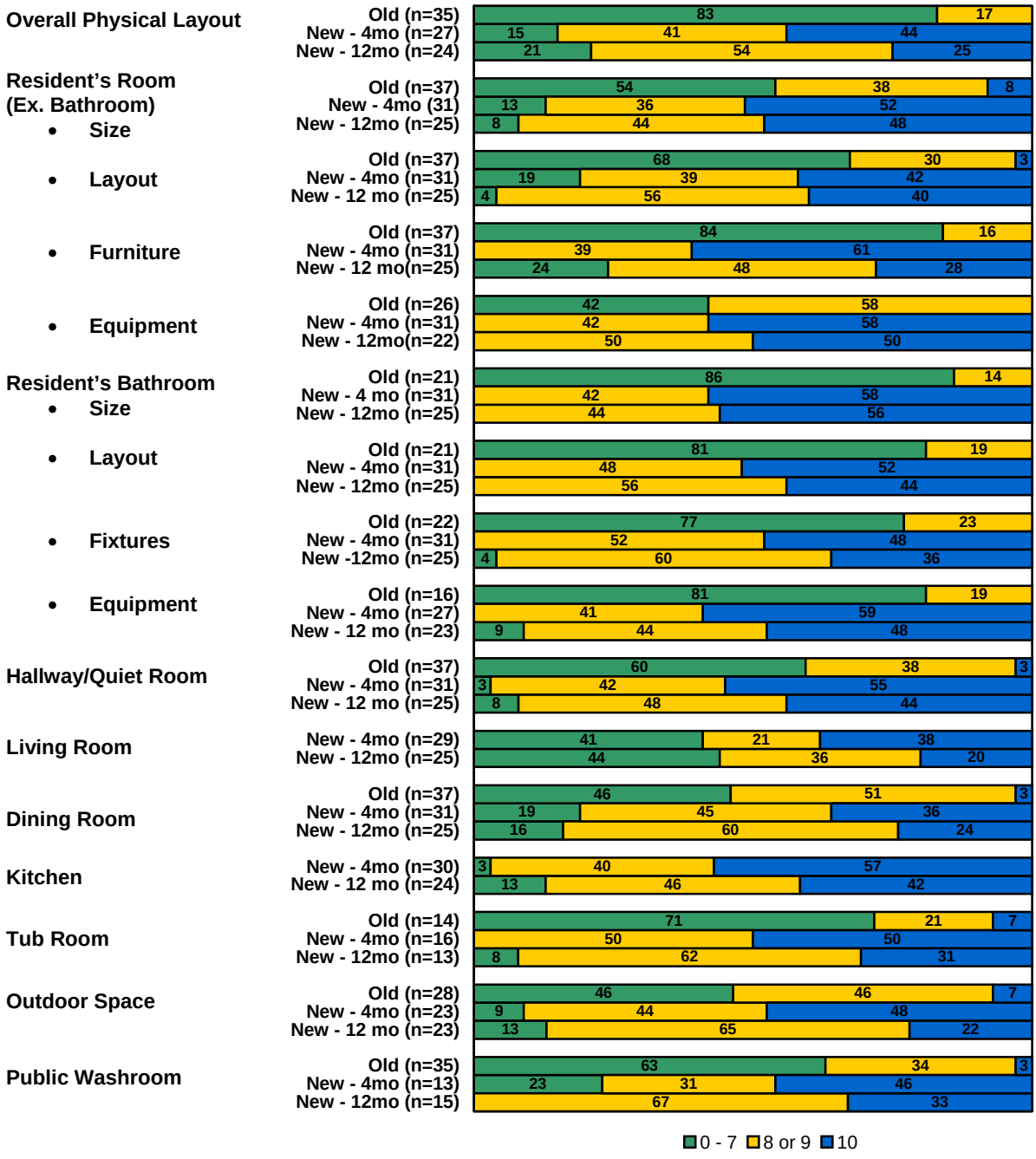
Table A-1. Therapeutic Environment Screening Survey for Nursing Homes (TESS-NH)

Domains (Range)	Items	Scoring of Individual Items
Maintenance (0-8)	Maintenance of social spaces Maintenance of halls Maintenance of residents' rooms Maintenance of residents' bathrooms	0 = In need of extensive repairs 1 = In need of some repairs 2 = Well maintained
Cleanliness (0-12)	Cleanliness of social spaces Cleanliness of halls Cleanliness of residents' rooms Cleanliness of residents' bathrooms Bodily excretion odour in public areas Bodily excretion odour in residents' rooms	0 = Poor level of cleanliness 1 = Moderately clean 2 = Very clean OR 0 = Odours noticeable throughout 1 = Odours noticeable in some areas 2 = Odours rare or not at all
Safety (0-12)	Floor surface in social spaces Floor surface in halls Floor surface in residents' rooms Floor surface in residents' bathrooms Handrails in hallways Handrails in bathrooms	0 = Slippery and/or uneven surfaces 1 = Mostly free of slippery and/or uneven surfaces 2 = No slippery and/or uneven surfaces OR 0 = Little or none 1 = Somewhat 2 = Extensive
Lighting (0-8)	Light intensity in hallways Light intensity in activity areas Light intensity in residents' rooms Glare in hallways Glare in activity areas Glare in residents' rooms Light evenness in hallways Light evenness in activity areas Light evenness in residents' rooms	0 = Barely adequate/inadequate light intensity 1 = Good light intensity 2 = Ample light intensity OR 0 = Glare in many areas 1 = Glare in a few areas 2 = Glare in little or no areas OR 0 = Light uneven; many shadows throughout 1 = Light mostly uneven 2 = Light even throughout area
Stimulation (0-12)	Bedrooms with a view of courtyard/open vista Public areas with a view of courtyard/open vista Tactile stimulation opportunities Visual stimulation opportunities	0 = 24% or less of rooms/areas have view 1 = 25-49% 2 = 50-74% 3 = 75% or more OR 0 = None (no source of stimulation) 1 = Somewhat (only in a specific program area) 2 = Quite a bit (at least one stimulation program in halls and program areas) 3 = Extensively (several stimulation programs in halls and program areas)

Domains (Range)	Items	Scoring of Individual Items
Noise (0-18)	Status of television in main activity area Resident screaming/calling out Staff screaming/calling out TV/radio noise Loud speaker/intercom noise Alarm/call bell noise Other machine noise	0 = TV on all of the time 1 = TV on some of the time 2 = TV off all of the time 6 = TV was on all the time for an activity OR 0 = Constantly or high intensity 1 = Sometime 2 = Not at all
Familiarity/ Homelikeness (0-13)	Public areas homelike Kitchen on unit (availability to families and residents) Pictures/mementos in residents' rooms Non-institutional furniture in residents' rooms Resident appearance	0 = Not homelike 1 = Somewhat homelike 2 = Moderately homelike 3 = Very homelike OR 0 = No access to kitchen appliances 1 = Selected kitchen appliances available for use 2 = Kitchen available for use OR 0 = Less than 25% have at least 3 different personal pictures/mementos 1 = 25 – 49% 2 = 50 – 49% 3 = 75% or more OR 0 = Less than 25% have at non-institutional furniture 1 = 25 – 49% 2 = 50 – 74% 3 = 75% or more OR 0 = Less than 25% are well groomed 1 = 25-74% 2 = 75% or more
SCUEQS (Overall) (0 – 38)	Maintenance of social spaces Maintenance of halls Maintenance of residents' rooms Maintenance of residents' bathrooms Cleanliness of social spaces Cleanliness of halls Bodily excretion odour in public areas Bodily excretion odour in residents' rooms Floor surface in halls Light intensity in residents' rooms Visual stimulation opportunities Loud speaker/intercom noise Public areas homelike Kitchen on unit (availability to families and residents) Pictures/mementos in residents' rooms Resident appearance Current/old picture of resident near door	

APPENDIX B

Figure B-1. Environmental Features of Old Facility and New Facility (12 Months): Family Caregivers



Family caregivers were asked *"All facilities have features that one may like or dislike. For each feature I mention, how would you rate the feature using any number between 0 and 10, where 10 is the worst possible and 10 is the best possible."* Responses were grouped 0-7, 8-9 and 10; a score of 10 can be considered as the gold standard. The number of caregivers (n=) includes only caregivers who answered the question and varies for the old versus new facility as some caregivers were only interviewed regarding the old facility and some were only able to provide a response for certain features.

Table B-1. A Comparison of Environmental Features of the Old Facility and the New Facility (12 Months): Family Ratings

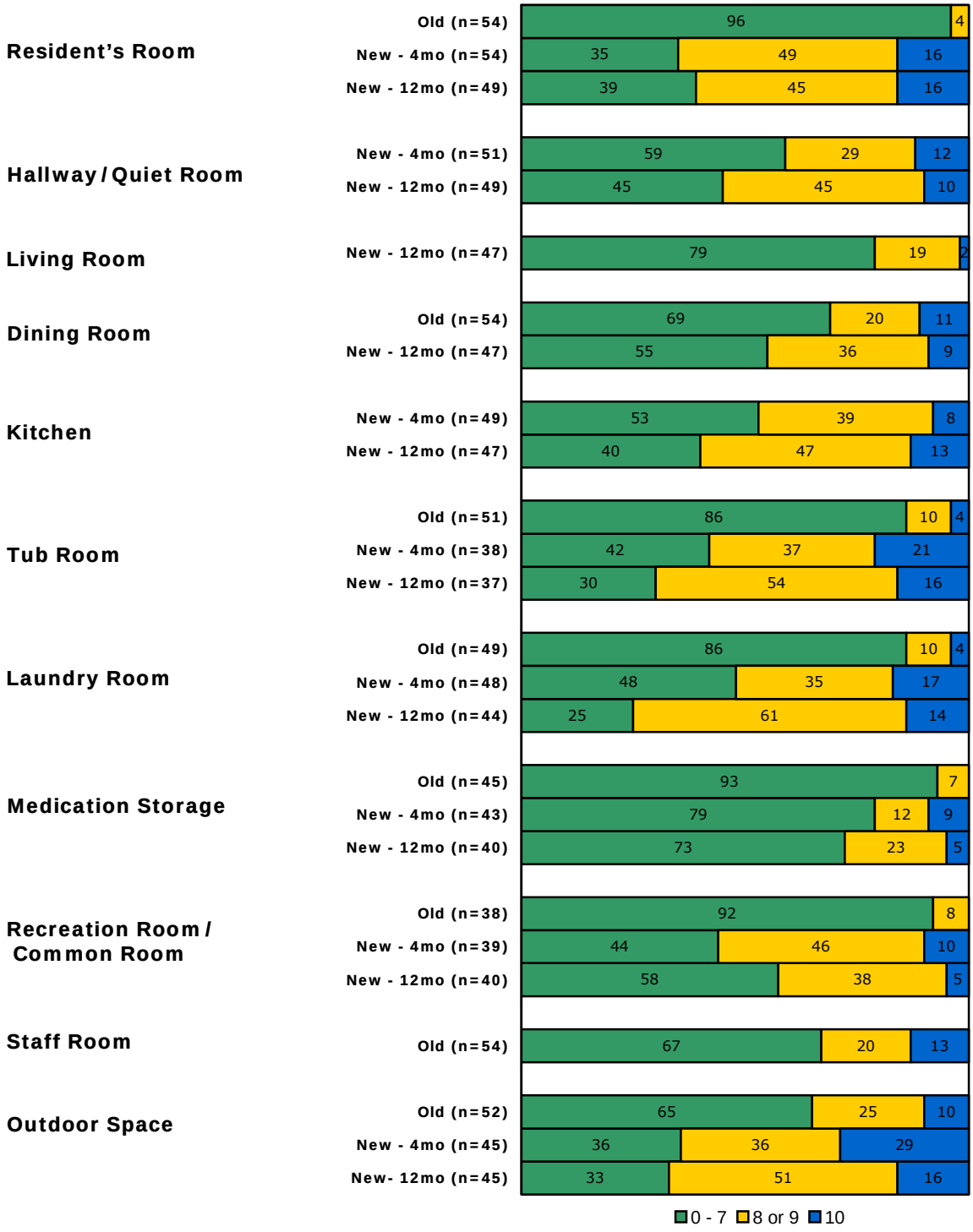
Feature	Range[1]		Mean Score[2]			Change in Score[3]		
	Old	New	Old	New	N	Lower	Same	Higher
Overall Physical Layout	2-9	0-10	6.2	8.5***	22	5%	14%	82%
Resident's Room (Ex. Bathroom)								
• **Size**	0-10	7-10	6.8	9.1***	25	16%	24%	60%
• **Layout**	0-10	6-10	6.1	9.2***	25	8%	16%	76%
• **Furniture**	0-9	5-10	5.3	8.4***	25	8%	12%	80%
• **Equipment**	1-9	8-10	6.8	9.5***	17	0%	12%	88%
Resident's Bathroom								
• **Size**	0-9	9-10	3.5	9.5***	13	0%	8%	92%
• **Layout**	0-9	8-10	4.0	9.1***	13	0%	8%	92%
• **Fixtures**	0-9	6-10	4.8	8.9***	12	0%	8%	92%
• **Equipment**	0-9	5-10	---	---	9	0%	11%	89%
Hallway / Quiet Room	2-10	1-10	7.2	8.9***	25	4%	20%	76%
Living Room	N/A	5-10	---	7.9	25	N/A	N/A	N/A
Dining Room	4-10	1-10	7.1	8.5**	25	8%	24%	68%
Kitchen	2-9	4-10	---	---	6	---	---	---
Tub Room	0-10	6-10	---	---	5	---	---	---
Outdoor Space	3-10	4-10	6.8	8.3**	18	17%	17%	67%
Public Washroom	0-10	8-10	6.9	9.1***	14	0%	21%	79%

[1] Family caregivers were asked *"All facilities have features that one may like or dislike. For each feature I mention, how would you rate the feature using any number between 0 and 10, where 0 is the worst possible and 10 is the best possible?"* Possible scores ranged from 0 – 10. N/A = not applicable as the feature did not exist within the facility.

[2] Possible scores ranged from 0 – 10. Only the scores of family caregivers who answered the question for the old facility and the new facility (12 months) were included; --- indicate scores were available for less than 10 caregivers at both times and statistical testing was not undertaken. Differences between the scores for the old and new facility (12 months) were analysed using paired t-tests. * denote statistically significant differences (* p<.05; ** p<.01, *** p<.001); n indicates the number of family caregivers whose scores were examined .

[3] Change was calculated as follows: score for new facility (12 months) – score of old facility. A higher score indicates that the score for the new facility was ≥ 1 point higher than the score for the old facility. --- indicate a change in score was not calculated as less than 10 caregivers responded at both times.

Figure B-2. Environmental Features of Old Facility and New Facility (12 Months): Staff Ratings



Staff members were asked *"How would you rate the feature using any number between 0 and 10, where 10 is the worst possible and 10 is the best possible?"* Responses were grouped 0-7, 8-9 and 10; a score of 10 can be considered as the gold standard. The number of staff (n=) includes only staff who answered the question and varies for the old versus new facility and for some features.

Table B-2. A Comparison of Environmental Features of the Old Facility and the New Facility (12 Months): Staff Ratings

Feature	Range[1]		Mean Score[2]			Change in Score[3]		
	Old	New	Old	New	N	Lower	Same	Higher
Resident's Room	0-9	4-10	3.2	7.7***	39	---	3%	97%
Hallway/Quiet Room	N/A							
Living Room	N/A	1-10	N/A	6.2	47	N/A	N/A	N/A
Dining Room	1-10	0-10	6.7	6.5	39	31%	26%	44%
Kitchen	N/A	3-10	N/A	7.5	47	N/A	N/A	N/A
Tub Room	0-10	4-10	4.7	7.9***	33	3%	9%	88%
Laundry Room	1-10	0-10	5.0	7.3***	33	15%	3%	82%
Medication Storage	0-9	1-10	4.7	5.9**	32	22%	13%	65%
Recreation Room/Common Room	1-9	2-10	4.8	7.0***	25	8%	12%	80%
Staff Room	3-10	N/A	6.7	N/A	54	N/A	N/A	N/A
Outdoor Space	0-10	2-10	6.4	7.5*	34	24%	18%	58%

[1] Possible scores ranged from 0 – 10. N/A = not applicable as the feature did not exist within the facility; in the old facility, the kitchen was located in the acute care hospital. There was no designated staff room in the new facility.
[2] Possible scores ranged from 0 – 10. Only the scores of staff who answered the question for the old facility and the new facility (12 months) were included. Differences between the scores for the old and new facility (12 months) were analysed using paired t-tests. * denote statistically significant differences (* p<.05; ** p<.01, *** p<.001); n indicates the number of staff members whose scores were examined.
[3] Change was calculated as follows: score for new facility (12 months) – score of old facility. A higher score indicates that the score for the new facility was ≥ 1 point higher than the score for the old facility.

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