


Dementia-Friendly Care Homes

Best practices in dementia care

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Executive Summary

An estimated 64% of residents in British Columbia's (B.C.) long-term care (LTC) homes live with dementia (Seniors Advocate of British Columbia, 2018), which indicates the importance of responsive staff care practices for optimizing the quality of life (QOL) of residents living with dementia, as part of any policy and program to improve care in LTC. To address this issue, BC Care Providers' Association (BCCPA) initiated a project with the aim to identify the best practices for people living with dementia living in care homes in two key areas: (i) physical environment of the setting, and (ii) education, training, staffing, and care practices. The project was conducted in partnership with the Department of Gerontology at Simon Fraser University and the Alzheimer Society of BC (Alzheimer Society) and in collaboration with other stakeholders. The synthesized set of guidelines sets the stage to explore, among various possibilities, the benefits and pitfalls of developing a designation program for Dementia Friendly Care Homes in British Columbia. The guidelines identified in this project would be of benefit to BCCPA members and other care providers in inspiring and informing

initiatives to create a more dementia friendly care home in terms of the quality of care interactions and the physical environment.

Forty grey literature sources (e.g., reports based on guidelines from health ministries, regional health authorities, regulatory agencies, care provider organizations, advocacy organizations, and research groups) were reviewed to examine relevant policies and programs in Canada, USA, UK, and Australia. The review of the grey literature was followed by community consultation at a forum with stakeholders from care homes, regional health authorities (RHAs) across British Columbia, and the B.C. Ministry of Health, and people living with dementia and caregivers. Findings from the literature synthesis were presented to the attendees of the forum, which informed discussions to identify initiatives for implementation in the short term, areas that need to be prioritized for support from RHAs or the Ministry of Health, and resources in B.C. that are necessary for the proposed initiatives.

Findings and Recommendations

- In the area of **Education and Training**, the literature suggests that:
  - (i) all staff groups should have a comprehensive understanding of the meaning of person-centred care (PCC).
  - (ii) family members should receive PCC education.
  - (iii) PCC training programs should be evidence-based.
  - (iv) PCC training should be customized to different staff roles and tailored to the issues and challenges they face.
  - (v) training should incorporate issues of family involvement and cultural competence.
  - (vi) sufficient time and resources must be provided to staff to translate training into practice, e.g., PCC facilitator to provide ongoing and follow-up training.
  - (vii) monitoring and performance evaluations should be conducted to ensure the practice of PCC values.
- In the area of **Staffing and Care Practices**, the literature suggests that:
  - (i) higher staff-to-resident ratios should be in place.
  - (ii) multiskilled workers should be hired.
  - (iii) care aides are part of the team and should be included in decision-making.
  - (iv) care aide assignments should reflect the importance of building strong relationships with residents.
  - (v) open communication should be employed to facilitate information sharing between staff.

For the **Physical Environment** in care homes, the literature suggests the following criteria:

- familiarity and homelikeness:
  - (i) care homes should have small households with separate dining and activity spaces.

(ii) décor and furnishings must reflect a familiar and homelike character.

(iii) private rooms should be in neutral colours to encourage residents to personalize their spaces.

(iv) the exterior of the care home should be less institutional and more homelike.

- physical accessibility, safety, and comfort:
  (i) bathrooms should be equipped with unobtrusive grab bars and spacious enough to accommodate care aides.

  (ii) brightly-coloured handrails should be provided in hallways to be supportive of mobility limitations.

  (iii) door frames should be in contrasting colour to be easily perceptible.

  (iv) outdoor spaces should be surrounded by a high fence camouflaged with landscaping.

  (v) seating should be provided at appropriate intervals along indoor/outdoor paths.

- orientation and wayfinding:
  (i) interior layouts should be legible with continuous pathways that don't end in dead-ends.

  (ii) landmarks should be provided at major decision points.

  (iii) memory boxes should be provided outside residents' rooms and activity spaces.

  (iv) signs with clear visual and textual information provided at appropriate locations.

  (v) outdoor areas should have single exit/entrance.

  (vi) outdoor paths should have a raised coloured edge.

- privacy and visual accessibility:
  (i) bedrooms should be single-occupancy with private bathrooms.

  (ii) common activity spaces and bathrooms should be visible from the hallway.

  (iii) all spaces should have clear views of the outdoors.

  (iv) storage cabinets should provide clear access of personal belongings and safe items.

  (v) staff workstations should be located near hallways.

  (vi) exit doors should be concealed behind artwork.

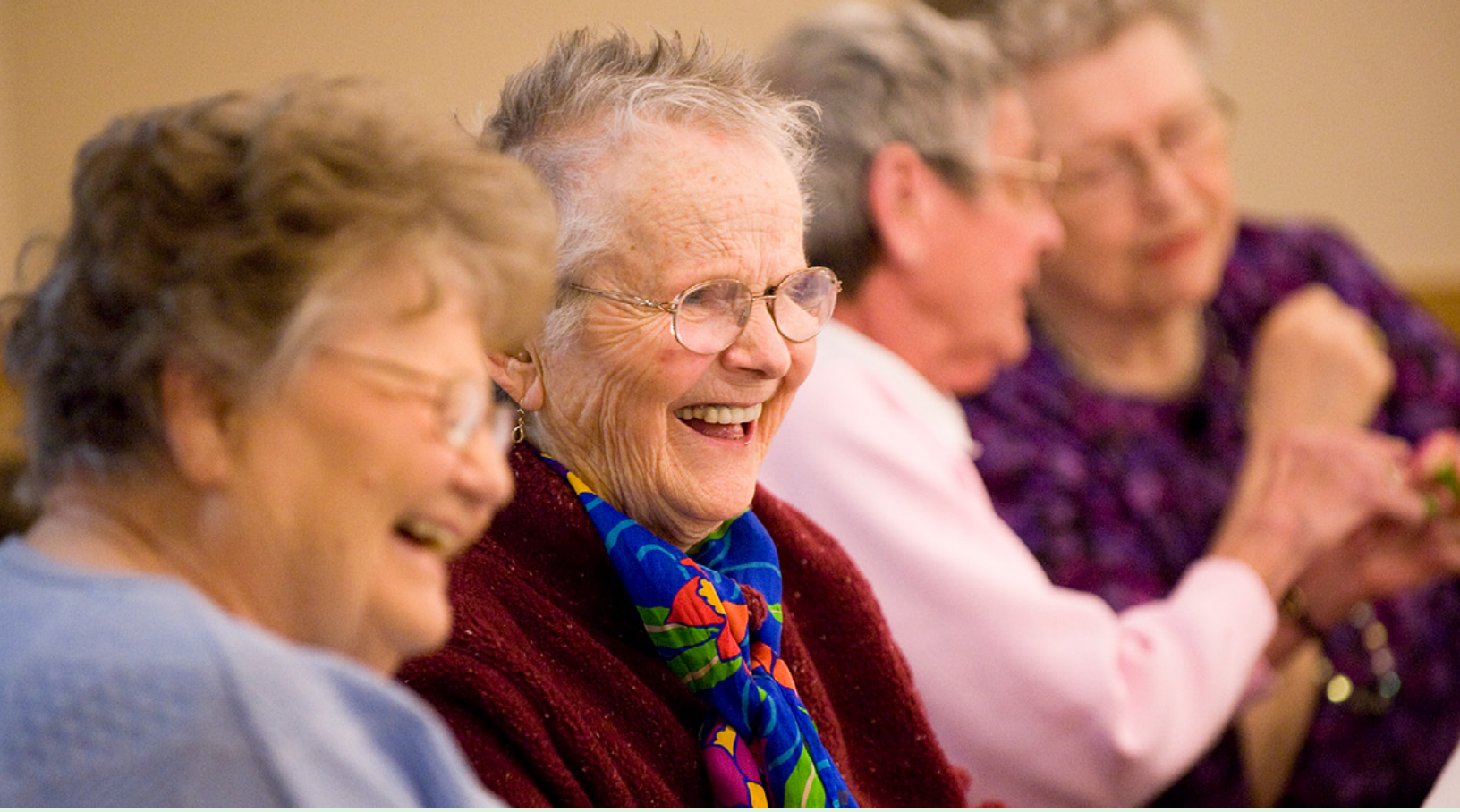
- appropriate sensory stimulation:
  (i) spaces should be provided with appropriate acoustic and visual stimulation.

  (ii) high-noise spaces should be located away from quiet spaces.

  (iii) wall-art should not contain real-life objects.

  (iv) floor finishes should be non-reflective without sharp colour or material differences.

  (v) lighting should be regulated to avoid hard shadows.



Introduction

According to the Alzheimer Society of Canada (2019), there are currently over 564,000 Canadians living with dementia, which is approximately 7.1% of all Canadian older adults (Public Health Agency of Canada, 2017), and this number is expected to rise to 937,000 in the next fifteen years. Providing services for older adults living with dementia has been earmarked as one of the B.C. Government's strategic priorities in healthcare. Dementia has become an important area of focus in LTC (British Columbia Ministry of Health, 2017). A 2018 report by the B.C. Seniors Advocate revealed that 64% of residents at B.C.'s care homes live with dementia (Seniors Advocate of British Columbia, 2018). It is important therefore to consider the QOL issues of residents living with dementia in care homes. New care models (e.g., Dementia Village, the Butterfly Care Model, and the Eden Alternative) serve as prime examples of culture change in LTC through physical environmental interventions, renewed staffing models, and PCC practices in order to improve resident and staff outcomes (BC Care Providers Association, 2017; SafeCare BC, 2015).

Research suggests that the physical environment of LTC can facilitate the achievement of a number of therapeutic goals (i.e., the desired relationship between the environment and residents living with dementia in LTC) which include (i) maximizing safety and security; (ii) maximizing awareness and orientation; (iii) supporting functional abilities; (iv) facilitating social contact; (v) providing privacy; (vi) providing opportunities for personal control; and (vii) regulating sensory stimulation (Chaudhury, Cooke, Cowie, & Razaghi, 2017). Besides the design of the physical environment, training, education, staffing, and care practices can also positively influence the quality of care (QOC) and residents' QOL. There are several provincial education and training programs that are offered to care-providers who work with residents living with dementia to better prepare them to deliver PCC for LTC residents, to improve the QOC and increase staff outcomes and safety (BC Care Providers Association, 2016; Canadian Institute for Health Information, 2018).

The "Dementia-Friendly Care Home" research project is a part of a British Columbia Care Providers Association (BCCPA) Strategic Plan Project and has been conducted in collaboration with the Department of Gerontology at Simon Fraser University and the Alzheimer Society of B.C. The aim of this research is to identify the best national and international practices implemented in care homes for people living with dementia in two key areas: (i) environmental design and physical infrastructure and (ii) education, training, staffing, and care practices. A review and synthesis of grey literature were conducted on these two topics to cover relevant policies and programs from various jurisdictions in Canada, including British Columbia, where the findings of this review are expected to be applied in, along with Alberta and Ontario, where several care organizations have adopted PCC in the past decade. Grey literature sources from USA, UK, and Australia are also reviewed as they have several national and regional policies and programs based on PCC.

This project will provide rationale for the project partners to work with the Ministry of Health, BCCPA members and health authorities to entrench dementia-friendly principles into B.C.'s care homes. As part of this endeavour, a 'dementia-friendly

care home' designation would be provided to care homes that have followed guidelines including, but not limited to, those referenced in this report, both in terms of environmental design and training, education, staffing, and care practices. Besides assembling a set of best practices, criteria, and design principles, this report also explores the challenges and benefits of establishing a dementia-friendly care home designation program in B.C. The findings from this project are also expected to support BCCPA's advocacy efforts through the Canadian Association of Long-Term Care (CALTC) to inform the priorities outlined in Canada's first National Strategy on Dementia. The objectives of this research align closely with the national objective to improve the QOL of people living with dementia and caregivers (Public Health Agency of Canada, 2019). This involves (i) providing holistic and culturally-appropriate care to individuals living with dementia; (ii) building the capacity of care providers to provide high-quality care by evaluating dementia care guidelines, best practices, and evidence; and (iii) enabling care providers to access requisite resources and training for delivering high-quality care (Public Health Agency of Canada, 2019). The findings from this report will address these goals and objectives by proposing recommendations and solutions to have real-world impact and improve the QOL of residents living with dementia in LTC.

Methods

To identify grey literature sources pertinent to the two key domains of this synthesis (i.e., (i) staffing, education, and training, and (ii) physical environment of LTC homes), an initial search was conducted on platforms including Google Search and the Canadian Electronic Library using combinations of keywords that include: "dementia," "staffing," "environment," "care home," "design," and "best practices." Location-specific searches were also conducted using the aforementioned keywords, followed by "USA," "UK," "Australia," "Canada," "Ontario," "Alberta," and "British Columbia." Selected professionals and administrators at the Regional Health Authorities in Ontario, Alberta, and British Columbia were also contacted to gain access to internal documents that were not available publicly. This process identified one-hundred-and-fifty-six (156) items. An initial scan of all the documents was conducted to select items with sufficient emphasis on dementia-specific programs or policies relating to staffing, education, and training, and/or physical environment for resident care. Through this process, one-hundred-and-thirteen (113) items were eliminated and

forty-three (43) grey literature sources were included for the final review. The final list of items includes national and provincial government policy documents, as well as organization-level reports on best practice guidelines. Twenty-eight (28) of these items focussed on staffing, education, and training, while fifteen (15) emphasised the physical environment for dementia care. Fifteen (15) out of the forty-three (43) items were national, provincial, and organization-level reports from Canada. The table below indicates the frequency of items by type under both domains. The sources reviewed here were not assessed for quality as this was not a systematic review.

Type	Staffing, Education, & Training	Physical Environment
Provincial - Canada	2	-
Government - US, UK, Australia, etc.	2	-
Regional Health Authority - Canada	5	
Health Authority - UK, Australia, etc.	-	2
Organizations - Research synthesis	2	-
Organizations - Evaluation	4	3
Organizations - Guidelines	10	9
Organizations - Summary	1	-
Articles in news media	2	1
Total	28	15

Findings on Staffing, Education and Training

1.1. Education & Training

Knowing how to engage with people living with dementia is essential to provide individualized, PCC. Looking beneath the surface of responsive behaviours and cultivating a nuanced understanding of the range of factors that might be contributing to this requires LTC staff to be adequately trained in person-centred dementia care, with special emphasis on issues such as social engagement, pain management, therapeutic fibbing, and involving residents in planning and carrying out their daily routines (Alzheimer's Association, 2006). PCC training equips LTC staff with the requisite skills to explore the meaning of certain behaviour from the person's standpoint, thereby facilitating better prevention, early intervention, and effective management of responsive behaviours (Alberta Health Services, 2014). By promoting a personalized care approach, PCC training could improve the overall QOC for residents living with dementia in LTC.

There are some examples of training programs focused on PCC that have been adopted by multiple provinces in Canada,

including Ontario, British Columbia and Alberta. These include:

(i) *Gentle Persuasive Approach* (GPA), which enables care staff to successfully apply communication strategies to diffuse responsive behaviours and ensure positive outcomes for people living with dementia and family members (Chappell, Bornstein, & Kean, 2014).

(ii) *P.I.E.C.E.S.* (Physical, Intellectual and Emotional health, maximizing the Capabilities of the individual, Environment and Social needs), which offers a systematic, individualized framework for detection, assessment, care planning, and identifying appropriate care strategies for older adults living with dementia (Alberta Health Services, 2014; British Columbia Ministry of Health, 2016).

(iii) Other examples of PCC training programs include *Supportive Pathways* in Alberta, which is focussed on issues such as collaborating with families, creating normal living environments, providing meaningful activities, supporting responsive behaviours, sexuality and intimacy as a part of a normalized life experience, and ensuring safety and security for the person, other residents and staff (Alberta Health Services, 2014). The *DementiAbility* program being adopted in Ontario, for example, trains staff to engage residents living with dementia in activities that maximize their abilities and interests (Ontario Long Term Care Association, 2018).

(iv) *Training for Dementia Care Mapping*, which is a tool that applies the PCC approach to assess the QOC in LTC, is provided in different countries by trainers and organizations affiliated with the University of Bradford (University of Bradford, 2019).

The following sections describe: (i) needs and challenges; (ii) outcomes; and (iii) recommendations for the training and education of LTC staff in dementia care.

1.1.1. Needs and challenges associated with staff education and training

a) Understanding Person-centred Care

The first and foremost step in providing PCC is facilitating adequate training to enable LTC staff to develop a **comprehensive understanding of the meaning of PCC**. An objective of PCC training is to encourage care staff to reflect upon their motivations to work with residents living with dementia (Bamford et al., 2009). Providing PCC training to all LTC staff members, including those who are not in direct caregiving roles (e.g., housekeepers, cooks, drivers), would ensure that there is consistent understanding of the

meaning of PCC across the LTC workforce, enabling any staff member to extend support to residents whenever needed (Alzheimer Society of Canada, 2011; Armstrong et al., 2019; Bamford et al., 2009; Vancouver Coastal Health, 2017). Without this training, it is evident that there will be varied and contradictory understandings of PCC among care staff. Inconsistent understandings deter care staff from realizing the full potential for implementing person-centred values in dementia care (Bamford et al., 2009). Framing the delivery of PCC as mandatory through stringent regulations that do not account for the delivery of appropriate and adequate training forces care homes to adopt PCC as a label, without care staff having clear and uniform understanding of what it means (Bamford et al., 2009). Therefore, it is necessary to institute **PCC training at the provincial level** with adequate **dedicated funding from the government** (Chappell et al., 2014; Dementia Initiative, 2013; Ministry of Health and Long-Term Care, 2016).

b) Contextualization of training

It has been found that the best practices learned through training and education differ significantly from care practices actually followed in LTC (Alzheimer Society of Canada, 2011). There is a need to bridge this gap and ensure that the content of training programs critically examines and corresponds to existing care practices, so that the training is **responsive to the specific issues faced by LTC staff** (Alzheimer's Society, 2007; Bamford et al., 2009). Understanding what staff members perceive as challenges is imperative to deliver training and education that is relevant to everyday care practice (Alzheimer's Society, 2007). An example of this is training LTC staff to **involve family members in the care routines** of their loved ones (Alzheimer's Society, 2007). Such awareness training will enable staff to understand family members' perspectives and better assess residents' care needs (Carers Trust, 2016). The planning and delivery of this training program need to be done in consultation with family members (Carers Trust, 2016).

Contextualizing PCC training includes responding to the need for **cultural competency** among LTC staff (Bamford et al., 2009; British Columbia Ministry of Health, 2016), including the needs of residents who are part of the LGBTQ2S+ community (Alzheimer's Society, 2007).

c) Applying training to practice

The success of staff training and education and positive outcomes are facilitated by a concurrent change in organizational ethos and care practices. A **shared ethos** that supports and reflects the PCC approach is necessary for the successful translation of PCC training into practice (Bamford et al., 2009). However, there are several factors that may challenge this process. For instance, it is generally agreed upon that dedicating **sufficient time** is integral to successfully apply lessons learned through training into everyday practice in LTC. However, giving the staff the necessary time to put what they have learned into practice is at odds with the notion of maximizing the time spent on caring for residents, which results in training being delivered in shorter periods of time (Chappell et al., 2014).

In a recent evaluation of dementia care training, care staff reported that an overload of information was covered in a shorter time frame (e.g., two days), instead of a more ideal, extended time frame (e.g., five days). Training offered as part of the induction program at care homes has been found to be incomprehensive and not supplemented with follow-up, in-depth training (Care Quality Commission, 2014). One-off training sessions usually result in staff returning to their usual practices soon after they have received training, which increases the need for **multiple follow-up sessions** (Alzheimer's Society, 2007). There is also a need for training outcomes to be duly evaluated so as to improve the impact of training on care practice. At present, there is a lack of routine monitoring to assess the impact of dementia care training on the QOC for residents living with dementia (Care Quality Commission, 2014). Ramping up post-training evaluation can inform the provision of tailored and individualized care routine and thus improve resident outcomes. **Supportive and effective leadership** is also necessary to facilitate the successful implementation of training and its translation into practice (Alzheimer's Society, 2007).

1.1.2. Outcomes of implementing staff education & training

a) Improved quality of care and resident outcomes

P.I.E.C.E.S. training helps direct care workers understand the value in taking the time to know residents better and provides a **systematic approach to identify risks, causes, and strategies** related to residents' responsive behaviour (McAiney, 2005; Vancouver Coastal Health, 2017). Effective training ensures care staff members know how to communicate with residents, which involves reading non-verbal signs and cues that may indicate residents' lack of understanding, embarrassment, discomfort, or pain, can help considerably improve resident outcomes, e.g., pain management (Alzheimer Society of Canada, 2011; Carers Trust, 2016; Department of Health, Social Services and Public Safety, 2015).

Training facilitates care staff's understanding of residents' responsive behaviour, which in turn **eliminates the administration of antipsychotic medication** to manage agitation and aggression (Chappell et al., 2014; Cognitive Decline Partnership Centre, 2016). Evaluation of GPA and P.I.E.C.E.S. training administered in six care homes in Vancouver (Dementia CARE Initiative) revealed positive behavioural outcomes for residents, decrease in the use of antipsychotic medications and physical restraints and increase in management of responsive behaviour (Vancouver Coastal Health, 2017).

Evaluation of P.I.E.C.E.S. training has also found an associated improvement of residents' QOL and dignity (Vancouver Coastal Health, 2017). PCC training also helps care staff **build trust and develop meaningful relationships** with residents (Alzheimer's Association, 2006). P.I.E.C.E.S. training has also been found to enable direct care workers in **recognizing the autonomy and choice of residents** living with dementia (Vancouver Coastal Health, 2017).

b) Improved staff outcomes

Dementia care training also improves staff outcomes (e.g., satisfaction, calm, feeling empowered) (Vancouver Coastal Health, 2017), which has been linked to **reduced staff turnover** (Alzheimer's Society, 2007). Evaluation of P.I.E.C.E.S. training in care homes in Ontario showed that training **increased staff members' confidence in their ability to assess** physical health, intellectual capacity, emotional and spiritual health, functional capabilities, and environmental, social, and cultural factors (McAiney, 2005).

GPA and P.I.E.C.E.S. training foster **group participation, open communication, and team building** (Alberta Health Services, 2014). P.I.E.C.E.S. training has been shown to promote team-work across different disciplines and hierarchies within and beyond the care home setting (McAiney, 2005). Dementia care training has been suggested as offering the opportunity for LTC staff members from different care homes to learn from each other's experiences and share lessons learned (Bamford et al., 2009).

1.1.3. Recommendations for staff education and training

a) Evidence-based training and education

Interdisciplinary dementia education and resources for health-care professionals (e.g., PCC training) should be **evidence-based** and supported by expert knowledge or data on resident outcomes (British Columbia Ministry of Health, 2016).

b) Tailoring training to job roles

Dementia care training may be more effective when it is **customized to the job role** of the care staff (Care Inspectorate, 2017). Covering general content on PCC with an approach targeted towards key staff groups may increase the likelihood of implementing PCC within the scope of one's job role (Bamford et al., 2009). This includes (i) offering accessible education to direct care workers and (ii) enhanced dementia curriculum for health-care providers, managers, and emerging professionals preparing to start practice (Ministry of Health and Long-Term Care, 2016). Additionally, providing dementia education in institutions of higher learning is expected to increase dementia care competency among future health-care professionals (British Columbia Ministry of Health, 2016).

Training staff members in multiple skills, e.g., to be care aides as well as activity aides (Canada Mortgage and Housing Corporation, 2015) may help reduce the number of staff workers in the care home and help achieve consistency in giving care (Alberta Health Services, 2014).

c) Educating family members

Providing **PCC education for family members** shortly after LTC staff have received training has been recommended for family members to better understand changes in care philosophy in the care home (Vancouver Coastal Health, 2017). PCC education for family members should also involve supporting them in dealing with feelings of grief and loss, navigating services, and accessing information on caregiving (Alberta Health Services, 2014).

d) Translating training into practice

Providing staff training as an ongoing process through **periodical refresher/ follow-up sessions** is recommended for successful application of training in practice (Alzheimer Society of Canada, 2011; Alzheimer's Society, 2007; Armstrong et al., 2019; Chappell et al., 2014; McAiney, 2005). Identifying a care worker as the **site GPA and/or P.I.E.C.E.S. facilitator** to provide training support on a day-to-day, as-needed basis could potentially ensure that training is ongoing and a part of the daily care routine (Vancouver Coastal Health, 2017). Other practice innovations that are recommended include training-in-practice, supervised practical work, and group debriefing, thereby integrating training into the therapeutic milieu and bridging the gap between training and practice (Bamford et al., 2009).

Regular **monitoring and performance evaluations** are recommended as a way of tracking the care staff's application of PCC training (Alzheimer's Society, 2007; Chappell et al., 2014). Evaluation results should then be used to make improvements to the QOC. It is recommended that care homes' leadership groups offer their support and commitment to improving QOC by integrating training and evaluation into care practice (Care Quality Commission, 2014). People in leadership positions at care homes should foster a training and learning environment that offers opportunities for "informal coaching and modelling of effective practices" (Dementia Initiative, 2013, p. 30; Ministry of Health and Long-Term Care, 2016).

1.2. Staffing & Care Practices

1.2.1. Needs and challenges associated with staffing and care practices

a) Culture change

Culture change initiatives that prioritize outcome-focussed rather than task-focussed care, as well as foster a 'can do' approach, involved leadership, open communication between staff members, and empowerment of direct care staff are essential to deliver high-quality PCC with improved resident outcomes (Age UK Gloucestershire, 2015; Alberta Health Services, 2014; Armstrong et al., 2019; Beynon & Wood, 2017; Care Inspectorate, 2017). Facilitating culture change also involves reconsidering traditional approaches to care and challenging conventional notions of caregiving (e.g., reconsidering organizational perceptions and attitudes related to risk and augmenting resident autonomy to boost participation in household activities, feel free to engage in the outdoors, and have enhanced QOL) (Armstrong et al., 2019).

Examples of culture change models in LTC include: (i) the Butterfly Household Model of Care, which originated in the UK and is now informing organizational culture change in care homes across Alberta and Ontario (CTV News, 2018); (ii) Eden Alternative, which is a PCC model

of culture change in LTC that originated in the US and is being adopted in Canada, involves empowering care staff, residents, and families to build care partnerships that afford residents and their families dignity, choice, and independence, while increasing job satisfaction among staff members (Eden Alternative, 2012); and (iii) the Green House project, which is another PCC-based culture change model in LTC in the US; and achieves personalized PCC through features such as a small-scale, homelike environment, advanced staff training, and high staff-to-client ratio (The Green House Project, 2019). However, the lack of resources and organizational support have been cited as barriers to the implementation of best practices in dementia care and culture change within care homes (Bamford et al., 2009; Care Quality Commission, 2014). Furthermore, there is a paucity of evidence on (i) the impacts of these culture change initiatives on resident's QOL and health-related outcomes and (ii) which specific interventions have the biggest impact on resident and staff outcomes, thus challenging the ability to draw clear conclusions from different culture change approaches (Armstrong et al., 2019).

b) Staffing level and consistency

Adopting the PCC paradigm is contingent on **having adequate staff**. Inadequate staffing levels tend to limit the scope of care delivery to risk management, thus posing a barrier to the delivery of PCC (Alzheimer's Society, 2007; Bamford et al., 2009). High staff turnover and the shortage of care workers are major barriers as they tend to disrupt the continuity of care and relationships built by staff with residents (Age UK Gloucestershire, 2015; Alzheimer's Society, 2007). Efforts should be taken by the leadership in care homes to ensure that staff members feel supported, encouraged, and fulfilled to stay in their jobs while having sufficient opportunity for professional growth and skill development (Alzheimer's Society, 2007).

Consistent assignment of direct care staff to residents is also integral to the success of PCC and continuity of care. Maintaining continuity with residents allows LTC staff to understand residents' preferences and needs and build trust and relationships (Bamford et al., 2009). This is linked to the need to have a good understanding of individual needs, capacities, and emotions, as part of the PCC approach (Armstrong et al., 2019). It is imperative

for staff working on different shifts to engage in clear and open communication at the time of hand-over for an enhanced understanding of residents' responses, which can be particularly important for staff members who are not familiar with a resident (Alberta Health Services, 2014). Frequent changes in staff's assignment to residents can result in confusion, which is detrimental to the staff's ability to deliver high-quality care (Care Quality Commission, 2014). Maintaining the stability of staff-resident relationships, which is key to delivering PCC, is also challenged by frequent absenteeism, turnover, and recruitment of untrained care staff (Chappell et al., 2014).

c) Staff and resident autonomy

Providing individualized care is also determined by the **direct care staff's capacity to make decisions** and whether they feel empowered in doing so. The involvement of direct care staff in care planning and decision-making helps improve resident outcomes (Alzheimer's Society, 2007). Good leadership is necessary to enable direct care staff to feel empowered to make the best decisions for residents (College of Licensed Practical Nurses of Alberta, 2015). A strictly top-down hierarchical structure is detrimental to the decision-making capacity of LTC staff (Eden Alternative, 2012).

It is also important to **empower residents and family members** to actively be involved in making decisions related to the care routine of persons living with dementia, thereby respecting their autonomy (Alberta Health Services, 2014; Dr. Robert Bree Collaborative, 2017; Eden Alternative, 2012, p. 6).

1.2.3. Recommendations for staffing and care practices

a) Increased resources and staffing levels

Previous research indicates the need to raise current staffing levels in order to maintain QOC and further raise levels to improve the QOC (Armstrong et al., 2019). Staff stability and continuity are recommended for the viability of PCC, thereby necessitating the elimination of factors that contribute to high staff turnover and redressal of operational and management issues (Alberta Health Services, 2014; Armstrong et al., 2019). It is recommended that direct care staff be provided with **adequate time for caregiving** and **commensurate equitable wages** in order to maximize the impact of PCC on the QOL of residents living with dementia (Alzheimer's Society, 2007; Armstrong et al., 2019; Beynon & Wood, 2017).

LTC staff should have **access to specialized dementia care staff** (e.g., dementia champions, dementia care specialist, mental health behavioural support consultant, and case managers) who can provide expertise and skills training as needed on a day-to-day basis (Alberta Health Services, 2014; Care Quality Commission, 2014; Healthwatch Norfolk, 2018; Vancouver Coastal Health, 2017). This staff member will be tasked with coordinating ongoing in-practice training,

prioritizing topics for training (or refreshers) in the future, and recommend social and environmental strategies to manage responsive behaviours (Alberta Health Services, 2014; Healthwatch Norfolk, 2018; Vancouver Coastal Health, 2017). In addition to providing on-site support, telehealth support is recommended for care homes in rural or remote locations (Alberta Health Services, 2014; Vancouver Coastal Health, 2017). Examples include:

- *The Regional Knowledge Coordinator for Complex Behaviours* (RKC-CB) at Interior Health, British Columbia, collaborates with care staff at different care homes on a referral basis to educate them on PCC and help them develop behavioural care plans for residents with responsive behaviours. A recent evaluation (Ward & Bader, 2018) of this program found that 88% of residents who received care based on the input of the RKC-CB had lower incidence of responsive behaviours. The majority of care managers (84%) reported their satisfaction with the services of the RKC-CB (Ward & Bader, 2018). The introduction of the RKC-CB (i) encouraged care staff to adopt a proactive approach and seek help earlierrather than delaying the process; (ii) made staff realize the need and value of care planning; and (iii) avoided visits to the emergency departments or hospital admissions of residents.
- *Behavioural Supports Ontario* (BSO), a provincial program in Ontario that hires and trains specialized staff teams to help reduce behavioural symptoms and improve QOL of residents living with dementia in care homes (Ontario Long Term Care Association, 2018). BSO teams support frontline staff at their designated care homes by offering dementia education, training, and problem-solving to manage challenging behaviours (Ontario Long Term Care Association, 2018). This training is known to help LTC staff feel "significantly more supported and capable of developing solutions" (Ontario Long Term Care Association, 2018, p. 7).
- *Challenging Behaviour Resource Consultants*, as part of the Challenging Behaviour Program in the province of Nova Scotia, provide consultation to LTC staff on "identifying biological, psychological, and social indicators of responsive behaviours and find solutions" for individual residents (Nova Scotia Department of Health and Wellness, 2013, p. 11).

Staffing levels should be increased with a **higher staff-to-resident ratio** so as to achieve the best outcomes of PCC (Alberta Health Services, 2014; Alzheimer's Society, 2007). Adopting innovative staffing models to improve staff autonomy is linked to the successful adoption of PCC and enhanced resident outcomes. The Green House project (The Green House Project, 2019) is an example of how decentralizing and reducing staff hierarchy without increasing overall staffing can facilitate the formation of separate self-managed teams of direct

care workers. Care aides and nursing staff members can consult with each other on an as-needed basis, thereby significantly improving the autonomy of care aides. Relationship-building between LTC staff and the resident can be promoted by **hiring multi-skilled workers** who can combine personal care with other activities (e.g., meal planning, recreation, and housekeeping) in order to spend more "unscheduled" time with residents (Alberta Health Services, 2014).

b) Consistent staffing

It is recommended that **care staff be assigned to the same residents** in order to maintain consistent care practices that are tailored to suit the needs and preferences of individual residents (Chappell et al., 2014). No more than eight personal care assistants should be assigned to a given resident within a one-month period (Chappell et al., 2014). Identifying certain staff members as the primary caregivers for a household/unit can further improve staffing consistency (Alberta Health Services, 2014).

c) Streamlined caregiving

When appropriate, the **use of slow-release medications** is recommended to reduce the frequency of medication administration and increase opportunities for LTC staff to spend uninterrupted time with residents (Alberta Health Services, 2014).

d) Monitoring staff performance

Both **informal and formal supervision** can contribute to a conducive management style for the sustenance of PCC practices (Bamford et al., 2009). With adequate monitoring, leadership must ensure that the staff are aware and equipped with the skills required to facilitate occupation and stimulation among residents (Alzheimer's Society, 2007).

e) Staff collaboration

Interdisciplinary care team meetings, staff case conferences, and **unit huddles** that involve leadership, as well as front-line staff (e.g., direct care staff, LPNs, RNs) are recommended to enable mutual learning, information-sharing, collaborative problem-solving, and brainstorm solutions that are tailored to residents' needs (Alberta Health Services, 2014; Bamford et al., 2009; Chappell et al., 2014; Vancouver Coastal Health, 2017). This recommendation stems from the need to promote flexibility, teamwork, and greater autonomy for front-line staff in decisions on caregiving (Armstrong et al., 2019). Interdisciplinary meetings are best supported by optimal staffing levels, good mix of skills among team members, and the practice of inclusive communication (Alberta Health Services, 2014; Ministry of Health and Long-Term Care, 2016). Collaboration and information-sharing between care homes have also been recommended in order to learn and exchange effective practices and approaches from similar and different care settings (Armstrong et al., 2019).

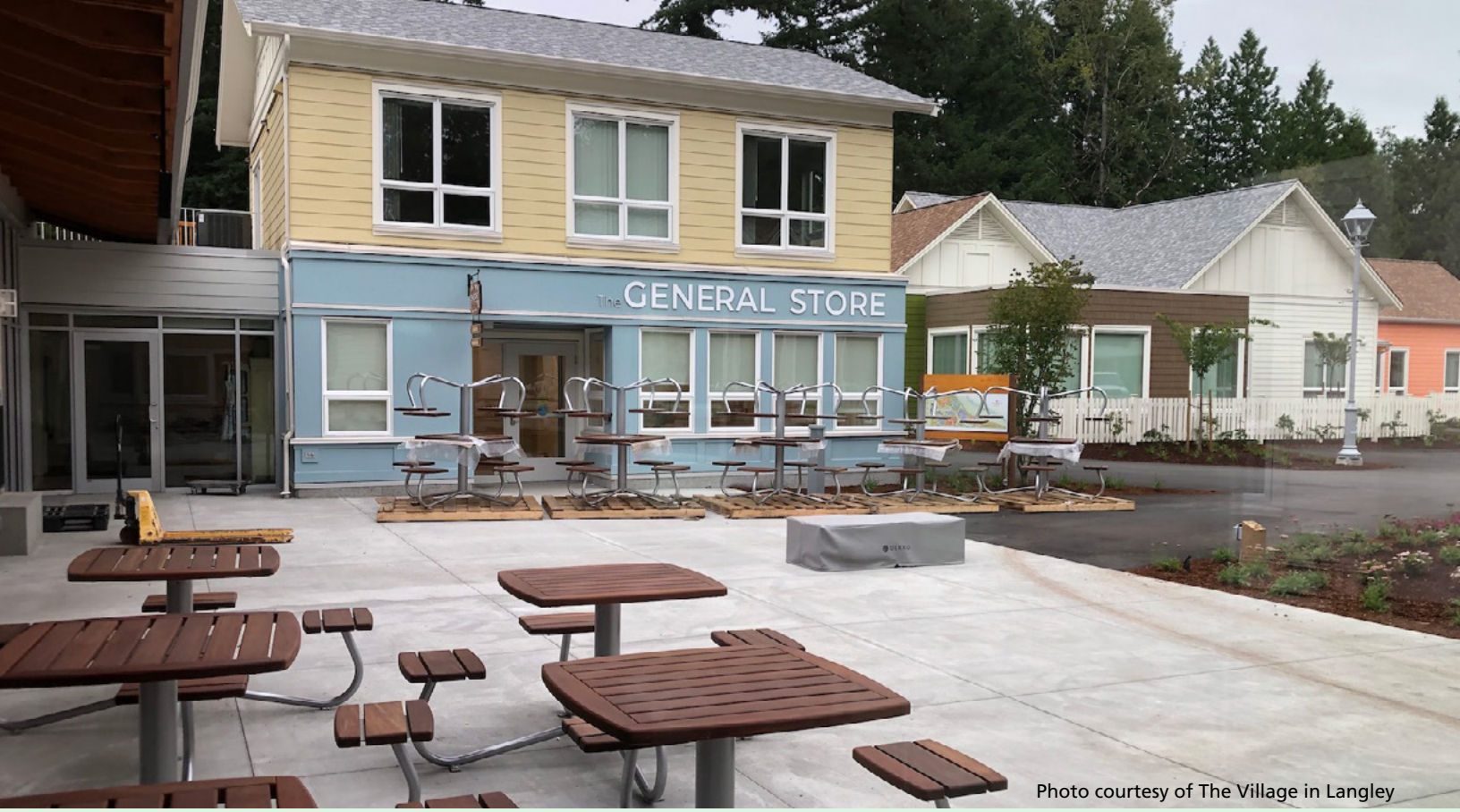


Photo courtesy of The Village in Langley

Findings on Physical Environment

This section consists of design recommendations for the physical environment of care homes. These recommendations are arranged according to the various spatial levels of the LTC environment and correspond to different therapeutic goals (Cohen & Weisman, 1991). These goals highlight the relationship between the residents with dementia and the LTC environment and serve as guiding principles for the design of a therapeutic physical environment. The therapeutic goals discussed here include: (i) Domestic scale; (ii) Orientation and wayfinding; (iii) Privacy and visual accessibility; (iv) Physical accessibility, safety, and comfort; (v) Appropriate sensory stimulation and minimizing perceptual distortion; and (vi) Familiarity and homelikeness.

2.1. Domestic scale

Care homes should have a **small scale** (number of spaces) in order to convey a familiar/domestic character, which in turn facilitates participation for residents, whereas larger scales are associated with high levels of agitation and confusion (Fleming & Bennett, 2017; Government of Alberta, 2014). Clusters of resident units

or **households should be small in size** to maximum residents' sense of control (Alzheimer's Australia, 2004; Ministry of Health, 2016). While households with eight to 12 residents are expected to preserve a domestic feel, household size should not exceed 15 residents (Alzheimer's Australia, 2004; Fleming & Bennett, 2017; Housing21, n.d.).

Households grouped and planned to resemble a village setting help create a **familiar community-like environment** with self-contained and/or shared common living spaces (Chmielewski, 2014). Examples of this include: (i) Dementia Village in Weesp, Netherlands, which consists of 23 small-scale group houses designed to resemble houses in the community, with streets, squares, gardens, parks, salons, music hall, supermarket, and restaurant; and (ii) Central Haven Special Care Home, a care home with about 60 residents, in Saskatoon, Canada, which resembles a small town with a chapel, café, childcare centre, art studio, educational spaces, green house, community garden, auditorium, gift shop, and community event spaces (Canada Mortgage and Housing Corporation, 2015).

2.2. Orientation and wayfinding

The floor plan should be based on a **simple layout** that is intuitive, can be easily remembered by the residents, and involves a minimal number of wayfinding choices (Alzheimer's Australia, 2004; Chmielewski, 2014; Fraser Health, 2018; Housing21, n.d.). Identical or mirrored floor plans should be avoided as they are likely to confuse and mislead residents (Chmielewski, 2014). **Circular, clutter-free hallways** are more conducive for wayfinding than long, narrow corridors (Centre for Excellence in Universal Design, 2015; Chappell et al., 2014).

Additionally, corridor lengths should be minimal so that residents do not have to travel long distances to access common spaces in the care home (Fraser Health, 2018). These paths must (i) **be without dead ends**; (ii) **end in destinations**, (iii) **away from residents' rooms**; and (iv) **pass alongside activity/social spaces**, thus enabling residents to preview and/or join the activity (Canada Mortgage and Housing Corporation, 2015; Chmielewski, 2014; Fraser Health, 2018; Housing21, n.d.; Ideas Institute, 2010).

Circular or looped paths should be supplemented with stop-off points to sit and rest, opportunities for social interaction, and stimulating features that promote activity and engagement (Fleming & Bennett, 2017; Housing21, n.d.; Ideas Institute, 2010). These paths should also offer uninterrupted **visual access to important areas** and entrances in the care home to promote wayfinding between spaces (Centre for Excellence in Universal Design, 2015; Chmielewski, 2014).

Cues that support orientation and wayfinding include: (i) **familiar and meaningful landmarks** at decision points (e.g., change in direction or level) (e.g., artwork that triggers memories, tapestries, sculptures; seating); and

(ii) changes in the colour/texture of surfaces (Alberta Health Services, 2014; Chmielewski, 2014; Department of Health, 2015; Fraser Health, 2018; Housing21, n.d.; Nova Scotia Department of Health, 2007; Study, n.d.). **Consistent colouring** of doors, signs, walls across spaces with similar functions in all units of the care home will help create the distinction between different spaces and promote identification (Housing21, n.d.; Study, n.d.).

The **position of cues** can be manipulated to guide residents, such as placing off-centre photos at the end of a hallway that are partially revealed may prompt a resident to turn in order to see the full photo (Study, n.d.). **Different types of cues** that highlight the meaning or function of a space should be provided to help residents with different cognitive abilities recognize an area. For example, to help residents recognize their bedroom, cues should be incorporated through furniture, wall colour, signs, etc. (Centre for Excellence in Universal Design, 2015; Department of Health, 2015; Fleming & Bennett, 2017, p. 21; Housing21, n.d.). The number of cues should be minimized so as to avoid visual clutter (Fleming & Bennett, 2017).

Memory boxes at the bedroom door containing meaningful objects (e.g., personal souvenirs, photos of loved ones, cherished mementos) could serve as wayfinding cues and help residents identify their respective rooms (Canada Mortgage and Housing Corporation, 2015; Centre for Excellence in Universal Design, 2015; Chmielewski, 2014; Fleming & Bennett, 2017; Fraser Health, 2018; Government of Alberta, 2014; Study, n.d.). In addition to providing memory boxes outside private spaces, function-specific memory stations (e.g., gardening or sports memorabilia and antique elements) at the entrance to common areas or group activity spaces could evoke familiarity and prompt recognition (Study, n.d.).

Signs should be **placed at an appropriate height** from the floor and closer to the floor to support residents whose line of vision is at a low-level (Department of Health, 2015; Fleming & Bennett, 2017; Hodges, Bridge, & Chaudhary, 2007). Signage should use a **combination of words and images** of an appropriate size that are linked to the function/activity in the space (Alzheimer's Australia, 2004; Chmielewski, 2014; Department of Health, 2015; Fraser Health, 2018, 2018; Nova Scotia Department of Health, 2007). Signs should not have non-reflective surfaces with high contrast against the background at different lighting levels (Centre for Excellence in Universal Design,

2015; Department of Health, 2015). The amount of information in the sign should be minimal to avoid cognitive overload (Department of Health, 2015).

Lighting can be employed to provide directional cues to attract residents towards common spaces and activity spaces (Canada Mortgage and Housing Corporation, 2015; Greasley-Adams, Bowes, Dawson, & McCabe, n.d.). Motion or sound-activated lights or pressure mats equipped with light sensors that automatically turn on lights have been recommended to lead the way for residents living with dementia wanting to go to the bathroom at night (Centre for Excellence in Universal Design, 2015; Greasley-Adams et al., n.d.).

Outdoor spaces and gardens should also be designed with orientation and wayfinding cues to afford residents a higher sense of control and confidence (Alzheimer's Australia, 2010; Canada Mortgage and Housing Corporation, 2015; Housing Learning & Improvement Network, 2013, 2013; McAdam & Williams, 2017). **Providing a single point of entry to the outdoor area** that is recognizable serves as a landmark for residents to use in finding their way back inside (Fleming & Bennett, 2017; Ministry of Health, 2016).

The paving of outdoor paths should be even and have **consistent colour without patterns and dark lines** and a **raised edge rendered in a contrasting colour** to help residents differentiate paving from green space and support wayfinding (Alzheimer's Australia, 2010; Fraser Health, 2018; McAdam & Williams, 2017). Similar to indoor hallways, outdoor paths should also be continuous loops lined with destination points and no dead ends, so as to avoid confusion and frustration (Chmielewski, 2014; Housing Learning & Improvement Network, 2013; McAdam & Williams, 2017). Multiple intersecting paths with varying lengths, as opposed to a single common path, should be incorporated into the outdoor space to promote variety and choice for people with different cognitive capacities and mobility challenges (Chmielewski, 2014; McAdam & Williams, 2017).

2.3. Privacy and visual accessibility

The LTC environment should offer residents **varying degrees of privacy** to support different functions, ranging from public (e.g., living room, dining room, kitchen) to private (e.g., bedroom) (Chmielewski, 2014; Fleming & Bennett, 2017; Housing21, n.d.).

To provide adequate privacy, bedrooms **should be single-occupancy with private en-suite bathrooms** and equipped to accommodate a spouse or a visiting family member, if need be (Alzheimer's Australia, 2004; Chmielewski, 2014; Department of Health, 2015; Fleming & Bennett, 2017; Ministry of Health, 2016). Providing private kitchen and dining space (in addition to a common kitchen and dining area) within residents' rooms could afford more flexibility for the timing and choice of meals (Canada Mortgage and Housing Corporation, 2015).

To promote acoustic privacy, rest, and relaxation, the **bedrooms should be sound-insulated**, so as to prevent sound from travelling into neighbouring rooms (Alzheimer's Association, 2006; Canada Mortgage and Housing Corporation, 2015; Fraser Health, 2018). While reducing ceiling heights helps improve the acoustic quality of spaces, noise transference between spaces may be reduced by using vinyl flooring, acoustic linoleum, or carpets for floor surfaces (Department of Health, 2015).

Common spaces (e.g., kitchen, dining, and activity areas) must be in **close proximity** and **clearly visible from hallways** to **increase opportunities for accessibility, social interaction, and participation** (Chmielewski, 2014; Department of Health, 2015; Fleming & Bennett, 2017). **Bathrooms should be proximate and visually accessible** from common spaces so that residents may be prompted to use it, when in need (Centre for Excellence in Universal Design, 2015; Fraser Health, 2018). Innovative design solutions should be employed to **modulate the accessibility of certain areas**, such as using double doors to enhance visual access to kitchens, while limiting physical access due to sanitary regulations (Chmielewski, 2014).

Providing sufficient unobtrusive storage space in rooms can help **minimize clutter** by enabling residents to store their belongings in an organized manner and **effectively manage their personal space** (Alzheimer's Australia, 2004). Personal **wardrobes should have glazed doors** to offer residents clear **visual access to their belongings** (Housing21, n.d.). Having **storage in shared spaces with clear visual access to safe objects** can support **residents' engagement in household activities**, such as open shelving or cabinets with glass doors in the kitchen that offer visual access to safe cooking equipment and ingredients and facilitate participation in meal preparation or serving (Alzheimer's Australia, 2004; Centre for Excellence in Universal Design, 2015; Greasley-Adams et al., n.d.; Housing21, n.d.).

Private and common spaces should **afford views of the outdoors** so as to enable residents to orient themselves to the time of day or season and encourage them to access the outdoors (Alzheimer's Australia, 2010; Centre for Excellence in Universal Design, 2015; Chmielewski, 2014; Fleming & Bennett, 2017; Housing Learning & Improvement Network, 2013; Housing21, n.d.; Ministry of Health, 2016). During poor weather conditions, **windows should be screened** to hide views of outdoor paths from plain sight (Chmielewski, 2014).

Design features, such as windows or wall openings that offer visual access between spaces may be used to support unobtrusive monitoring of residents by staff members (Chmielewski, 2014). Staff's visual access may also be enhanced by **locating staff workstations near circulation paths**, thus enabling them to not only monitor residents but also engage in informal interaction and participate in everyday activities (Chmielewski, 2014; Fraser Health, 2018).

Other environmental/technological strategies to facilitate unobtrusive monitoring include installing **door sensors, bed occupancy sensors, or floor sensors**, which can be useful to alert staff to an emergency or residents needing assistance (Canada Mortgage and Housing Corporation, 2015; Centre for Excellence in Universal Design, 2015; Housing21, n.d.).

Environmental strategies to curtail residents' exit-seeking behaviour include **concealing exit doors behind artwork** or colour-matching protection panels that match the finish of the surrounding walls and camouflaging door handles (Alzheimer's Australia, 2004; Centre for Excellence in Universal Design, 2015; Chmielewski, 2014; Department of Health, 2015; Fleming & Bennett, 2017; Fraser Health, 2018; Hodges et al., 2007). Exit doors should open into administrative areas where concerned staff members can guide residents who have exited the living environment back inside (Chmielewski, 2014).

2.4. Physical accessibility, safety, and comfort

Bedrooms should have ceiling lifts and beds set low to the floor with headboards facing the bathroom to provide residents easy access to the bathroom, which can be helpful especially at night (Canada Mortgage and Housing Corporation, 2015; Fraser Health, 2018). Bathrooms should also allow for the operation of ceiling lifts and be provided with **unobtrusive supports**, such as grab bars, and be spacious enough to accommodate care staff for bathing or toileting (Alzheimer's Australia, 2004; Fraser Health, 2018). The bathing space should be designed to provide a sense of calm and peace and eliminate anxiety (Fraser Health, 2018). Common toilets should be provided in **close proximity to activity spaces and circulation paths** with unobtrusive entry and maximum privacy (Alzheimer's Australia, 2004). Bathroom fixtures should be safe to use, conveniently located, and easily controlled by residents (Alzheimer's Australia, 2004). Vanity mirrors should have shutter doors that can be closed, as need be, to avoid confusion or distress when residents do not recognize or are not comfortable with their reflection (Centre for Excellence in Universal Design, 2015; Chmielewski, 2014; Government of Alberta, 2014). Using heated mirrors is recommended to avoid blurring of reflection (Centre for Excellence in Universal Design, 2015).

Residents living with dementia facing mobility challenges should be provided with **corridor handrails rendered in bright colours**; preferably red or yellow hues and not blue or green hues for maximum perception (Centre for Excellence in Universal Design, 2015; Department of Health, 2015; Fraser Health, 2018).

It is recommended to avoid doors that are not self-closing as they may pose as a hazard when left fully or partially open (Centre for Excellence in Universal Design, 2015). Threshold strips and border details at the doorway should be avoided as they pose barriers to residents'

movement (Department of Health, 2015). Edges of doors should be highlighted using **contrasting colours** to improve visibility and lower the risk of accidents (Centre for Excellence in Universal Design, 2015). Contrasting colours should be used to discern door handles so as to improve their identifiability and usability (Government of Alberta, 2014).

Furniture should be easy to handle and move in order to promote flexibility of arrangement for different functions and activities (Chmielewski, 2014; Department of Health, 2015). Furniture should be stable and not tip over and allows residents to easily sit and stand without obstruction (Department of Health, 2015).

Natural and artificial, glare-free lighting of optimal intensity should be evenly distributed, especially in transition areas, entrances, stairways, and outdoor spaces, to ensure maximum safety (Chmielewski, 2014; Dementia Initiative, 2013; Government of Alberta, 2014; Greasley-Adams et al., n.d.).

Unrestricted access should be provided to safe outdoor spaces, such as secure courtyard with a screened porch, sheltered garden on the same level as residents' rooms, so as to promote physical exercise and exposure to sunlight, which in turn help regulate residents' sleep cycle (Canada Mortgage and Housing Corporation, 2015; Chmielewski, 2014; Dementia Initiative, 2013, p. 30). **Seats should be provided at regular intervals** along outdoor paths to allow for rest and promote social interaction (Alzheimer's Australia, 2010; Housing Learning & Improvement Network, 2013; McAdam & Williams, 2017). Raised beds should be provided along these paths to enable residents who are unable to bend down to touch and feel plants (Housing Learning & Improvement Network, 2013). The outdoor area should be secured by a **fence that is at least six feet high and camouflaged by landscape design** so as to not look institutional and foreboding (Chmielewski, 2014; Fleming & Bennett, 2017). It is recommended that residents' **rooms be located on the ground level** to better **facilitate emergency access** or evacuation (Government of Alberta, 2014).

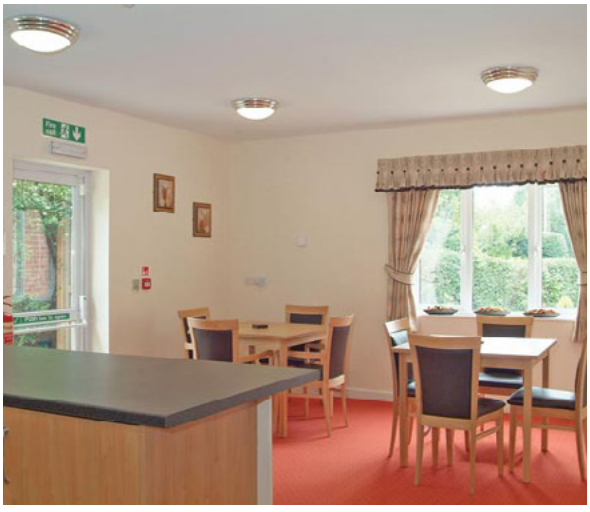
2.5. Appropriate sensory stimulation and minimizing perceptual distortion

Providing a **wide range of common spaces** that can accommodate different group sizes offers differing levels of visual and auditory stimulation that suit residents

with different cognitive capacities and preferences, such as a smaller dining room/nook flanking the main dining room for residents who prefer to dine in a quiet space or get overwhelmed by crowds or noise in a large dining area (Caringkind, 2017; Chmielewski, 2014; Fleming & Bennett, 2017). Providing appropriate levels of stimulation (e.g., noise level) minimizes agitation and confusion among residents (British Columbia Ministry of Health, 2016). The spaces within the care home should be laid out such that **spaces prone to higher noise levels are located away from quiet spaces** (Department of Health, 2015).

Wallpaper with pictures of real-life objects should be avoided as they may lead to confusion and upset residents living with dementia. For example, patterns with flowers may prompt residents to want to pluck them off the wall, resulting in frustration (Centre for Excellence in Universal Design, 2015). The **use of colour to highlight equipment** is recommended to improve perception and distinguishability, such as toilet seats when rendered in a bright and contrasting colour will be more easily identified by residents living with dementia (Alzheimer's Australia, 2004; Government of Alberta, 2014; Greasley-Adams et al., n.d.).

Using high-contrast coloured skirting is useful for residents living with dementia to distinguish between walls and floor (Centre for Excellence in Universal Design, 2015; Department of Health, 2015; Government of Alberta, 2014). Variations in floor finishes between adjacent activity spaces should be used in moderation and carefully designed so that the contrast between the finishes is not sharp, as it may be perceived as a step and lead to panic, causing residents to avoid spaces with confusing floor finishes (Centre for Excellence in Universal Design, 2015; Department of Health, 2015; Fleming & Bennett, 2017; Government of Alberta, 2014; McAdam & Williams, 2017). **Floor finishes should be matte**, not shiny and reflective, to avoid glare and be perceived as water, which can disrupt residents' mobility (Centre for Excellence in Universal Design, 2015). Similarly, outdoor furniture with polished surfaces should be avoided to prevent glare from sunlight that may be mistaken for slippery surfaces (Housing Learning & Improvement Network, 2013). Lighting must be accordingly designed to prevent shadows from creating bright or dark patches that may be misconstrued as barriers, such as holes or steps, which may lead to fear, loss of balance, and falls (Chmielewski, 2014).



2.6. Familiarity and homelikeness

Multi-purpose spaces should be avoided as they are likely to cause residents to become confused with changes in function within the space, thereby affecting their sense of familiarity with the environment (Chmielewski, 2014). Having **dedicated activity spaces** that are well-defined and enclosed with clearly assigned functions to satisfy different sized-groups, varied interests, and different levels of stimulation and comfort can promote recognition and familiarity (Alzheimer's Australia, 2004; Centre for Excellence in Universal Design, 2015; Chmielewski, 2014; Department of Health, 2015; Housing21, n.d.).

Furniture, appliances, and fittings should be easily identifiable using **familiar designs** that correspond to the activity in a given space, and have colours and shapes that improve their contrast with the floor (Alzheimer's Australia, 2014; Department of Health, 2015; Fleming & Bennett, 2017; Fraser Health, 2018; Greasley-Adams et al., n.d.; Housing21, n.d.). **Using warm colour schemes and material finishes** (e.g., carpeting, wood, upholstery) that are durable and easy to maintain is recommended to create homelike interiors (Chmielewski, 2014). **Using a neutral colour palette** in residents' bedrooms would encourage residents to personalize their space through the display of personal items (e.g., photos of family and friends), decorations, and furnishings (Alzheimer's Association, 2006; Chmielewski, 2014; Fleming & Bennett, 2017; Fraser Health, 2018).

The exterior façade of the care home should match the exterior of a house in the local community by using a familiar scale, detailing, materials, and finishes (Chmielewski, 2014).

Community Consultation

This section of the report presents the findings from a forum conducted on April 26, 2019, with 30 stakeholders from care homes and regional health authorities (RHAs) across British Columbia, as well as the B.C. Ministry of Health. People living with dementia and family caregivers also participated in this forum. The aim of the forum was to examine how the guidelines and recommendations that emerged from the synthesis of local and international grey literature on best practices in dementia care could be tailored to the British Columbia context.

This forum was designed as a World Café—an approach to large group discussions that produces shared and collective knowledge through conversations in an informal setting (Brown, Homer, & Isaacs, 2007). At the start of the forum, findings obtained from the literature synthesis (presented in previous sections of the report) were presented to the participants in a lecture format using a PowerPoint presentation. Participants were also given handouts with infographics (see Appendix A for infographic handout) that grouped and summarized these

findings into four themes: (i) Education and Training; (ii) Staffing and Care Practices; (iii) Familiarity and Accessibility in the Physical Environment; and (iv) Wayfinding, Privacy, and Stimulation in the Physical Environment.

Participants first sat at one of four tables (approximately six participants at each table) and discussed one of the four themes mentioned above. After a preliminary 40-minute discussion, participants moved to another table to discuss a different theme for the next 40 minutes (see Appendix B for the agenda). Three common questions were asked by the facilitator (researchers and community partners) at each table with regard to the guidelines and recommendations under each of the four themes: (i) Are there any initiatives that might be feasible to implement/apply in the short term, (i.e., are there any "low-hanging-fruits" that care homes could consider)?; (ii) Which implementation/application areas need to be prioritized for additional support from the health authority/ministry?; and (iii) What specific resources in the context of B.C. would help achieve the initiatives identified earlier?

Note-takers and audio recorders ensured that the discussions were captured at each table. At the end of both table discussions, representatives from each table summarized their table's conversation to all the attendees. During the forum, participants provided verbal consent to having their discussions audio recorded. Discussions from the forum were de-identified to protect the identities of participants.

The findings from the community consultation are presented in the following sections under the two focus areas of the study: (i) Staffing, Education and Training and (ii) Physical Environment.

3.1. Staffing, Education, and Training

3.1.1. Education and training

"It really comes from the top—the leadership.[1]"

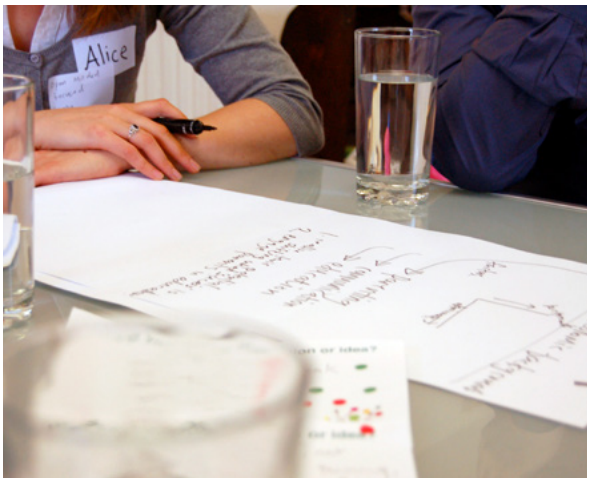
Participants agreed upon the importance of staff education and training, as well as the need for leadership and management to realize its necessity and be invested in offering education programs to care staff. Generating support and buy-in from leadership, as well as all hierarchies of care home staff was expected to impact the success of education and training programs. Participants also recommended that PCC education and training should be offered not only to care staff but also to leadership and management staff to ensure the culture of PCC is fostered, facilitated, and exemplified by leaders.

[1]The quotations used in this section are meant as illustrations of the direct input of the stakeholder participants at the Community Consultation event. Given the extensive experience in long-term care policy/practice, all stakeholders were considered equally important in terms of their contribution in the discussions. Hence, the quotations are not identified with specific individuals and/or their designations.

Having leaders, managers, and direct care workers attend PCC training sessions together was seen as a useful way of catalyzing culture change in a more holistic manner than having separate sessions for different staff roles.

It was recommended that PCC training be offered not only to care-aides but to all care staff. An example furnished by a participant highlighted the importance of educating registered nurses (RNs) and dietary manager to move away from a task-based approach, allow for more flexibility in daily meal routines in accordance with individual residents' needs and preferences, and be more accommodating of residents' pace and rhythm. Moreover, participants reported the need for caregiving roles to be blurred. Examples of this cited by participants included: (i) RNs receiving care-aide-specific training on treating residents like family, thereby facilitating more teamwork across different staff roles; (ii) engaging residents in recreational activities based on a special skill (e.g., playing the piano) that staff may have. PCC training was also recommended for non-care staff at the care home, such as housekeepers, so as to ensure that they spend unstructured time and have meaningful interactions with residents. Educating residents' families was also recommended as an important and useful catalyst for culture change in care homes.

Potential challenges reported by participants that would need to be tackled in order to ensure the smooth delivery and successful implementation of education and training included budgetary constraints associated with overtime costs for staff members attending training sessions, as well as the cost of appointing cover staff to fill in for them while they are training. Thus, the need to implement a comprehensive funding program around facilitating training and education for all care staff was felt necessary.



"Having a dedicated coach signals that PCC is a priority."

To improve the translation of education and training in care practice, participants recommended implementing effective mechanisms to provide monitoring, supervision, motivation, and encouragement to care staff to ensure they apply lessons learned through training and do not revert to habitual practices not aligned with the PCC philosophy. Participants reported that the supervision of the implementation of PCC values and techniques in care practices was primarily the responsibility

of managers in care homes. As a result, managers were forced to carve out time from their regular work in order to commit to the application of training initiatives into practice. Participants suggested that this could be remedied by appointing a dedicated "champion," "in-house coach," or "role model" from the staff workforce of the care home who would focus their efforts on promoting the PCC philosophy among care staff by providing refresher training sessions, ongoing education, and advice, as needed by care staff.

Having at least two such peer trainers during each shift was considered as an effective measure towards ensuring PCC goals were being translated into practice at the care home. This was seen as an important step in signalling the importance of culture change in LTC. Alternatively, participants suggested establishing a "regional coach model," wherein a PCC trainer would serve as a knowledge coordinator to help different care homes within a given region for a stipulated duration. The regional coach would then move to the next care home to provide tailored consultation to staff at different care homes and help develop behavioural care plans for residents. It was recommended to have a standardized referral process to provide the knowledge coordinators all the necessary information, questions, and concerns regarding residents' responsive behaviours and staff's application of PCC training and education at the care home in order to best support the staff.

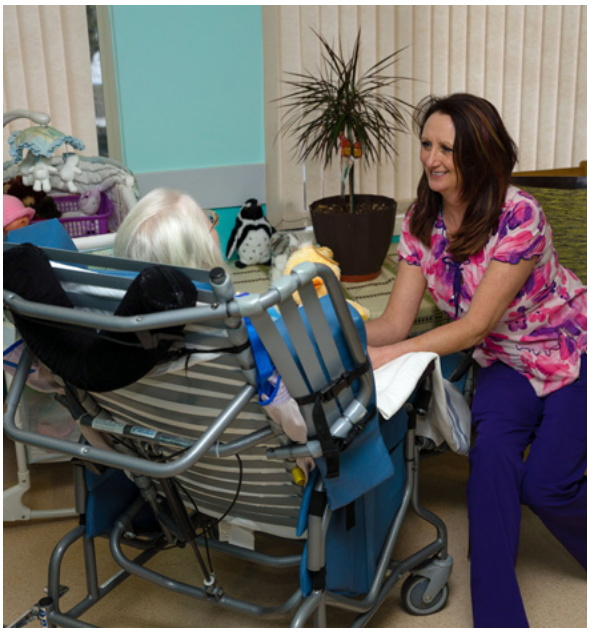
"You recognize what you measure."

Part of the discussion around monitoring and evaluation also revolved around the need to improve defining and measuring PCC, not only to estimate the effectiveness of culture change initiatives, but to make a compelling evidence-based argument for leaders and managers to adopt PCC in a more holistic way. Developing standardized measures that capture resident, family, and staff perception of PCC values was reported as a necessary first step towards evaluating the translation and implementation of PCC training. Participants also emphasized the need to standardize the PCC training for all care homes in the province. This would ensure that (i) different care homes adopt guidelines consistently and (ii) all RHAs follow similar policies and strategies under the Ministry of Health's overarching PCC policy.

With regard to post-secondary education on dementia care, participants also suggested that RHAs partner with local educational institutions to provide PCC education and training to students training to work in the LTC sector. The longer-term goal as part of this recommendation was to shift the system of education from one that is task-oriented to one that is rooted in the PCC philosophy.

3.1.2 Staffing and care practices

Participants felt that recruitment and retention was one of the staffing challenges that required immediate



attention. In particular, there is a need to eliminate the stigma surrounding the LTC sector and misrepresentation of caring for people living with dementia in LTC, and instead, highlight the opportunities and advantages working in care homes (e.g., the opportunity to build meaningful and lasting relationships with residents) to attract new skilled workers.

"We need to recognize the personhood and untapped talents of staff."

Acknowledging the personhood of care staff as individuals with passion and interests was also considered as an essential component of recruitment to ensure that staff roles closely aligned with individuals' skills, hobbies, and passions. In this regard, participants suggested that employers ask all job applicants questions that were pertinent to PCC during interviews, (e.g., "what do you like to during the day?" and "what is your hidden talent?"). One participant suggested enabling care workers who are close to retirement and do not prefer taking on intensive caregiving responsibilities, to be employed as multiskilled workers and to spend unstructured time with residents, including engaging them in recreational activities, such as reading a book or playing a game. This was expected to not only fulfil the needs of the resident but also allow older care workers to stay engaged in the LTC sector and potentially delay retirement. Participants also discussed the need to break out of the silos of "care staff" and "support staff" as part of a culture change and to involve non-care staff in conversations around residents' care experiences.

"There needs to be equity, transparency, consistency, and standardization"

It was noted that there was wide variation among care homes in terms of staff turnover and retention rates. Participants emphasized that measures should be taken to promote a culture of retention and to overcome poor workplace culture, burnout, and workplace injury to retain care staff. One participant suggested improving care staff wages to promote recruitment and retention. However, participants reported that organizations were unable to do so due to a lack of equitable, transparent, and standardized funding from the Ministry of Health to hire more workers who are paid equitable wages.

Participants also felt high turnover among leadership was a staffing issue that should be prioritized by RHAs and the Ministry

of Health. Consistent leadership was seen as a fundamental requisite for promoting and maintaining PCC values and practices in care homes. Participants suggested that re-classifying and improving the compensation for leaders to reflect the challenges of their position would help improve retention rates among leadership.

Uptake of new staffing models was said to be fraught with unintended consequences. Participants reported that shifting to a "neighbourhood" or household model of staffing, where certain staff members were specifically appointed to look after certain households, resulted in issues, such as care staff being unable to harness their collective knowledge or informally seek support from other care staff due to staff perceptions and apprehension around caring for residents outside their household. It was also reported that care workers were dissatisfied with changes to their schedule due to the shift to a different staffing model, which resulted in greater staff absenteeism and lower staff morale. This challenged the ability to provide consistent staffing for residents and appointed casual staff who were unfamiliar to the residents, to cover for absent workers. Participants suggested having a systematic and structured rotation of staff between two to three such households to help ensure all care workers are aware of all the residents living in those few households, not only the households they have been assigned to. This model would allow workers to step in and assist with caregiving of residents in the other households on their floor, if necessary. A participant recommended that culture change initiatives should be preceded by dialogue and deliberation with care worker unions to ensure their full buy-in was sought before making the transition to a PCC-based culture.

Participants considered clear and open communication across different care teams, roles, and shift-schedules critical to effectively transition into a PCC-based culture of care. Consistent and regular practice of safety huddles was recommended to help ensure staff members share critical information about residents that is pertinent to caregiving. Participants also emphasized the need for care staff to maintain communication and

positive engagement with families. It was suggested that having whiteboards at residents' doors for family members to communicate concerns or queries to staff members would help ease the communication between staff and family caregivers.

Participants reported the need to empower care aides to try innovative approaches in caregiving without fear of being reprimanded for straying from convention. While participants felt that it would be particularly challenging to ensure care aides are given the respect that they deserve, some strategies were suggested as ways of achieving this goal in small, incremental ways. One participant emphasized the need for post-secondary education and training to foster a "can-do" spirit and teach students how to be assertive and speak up for themselves in care homes. Another participant suggested training RNs to respect the voices of care aides. All participants agreed that it was imperative for all care staff, including support staff and allied health staff, to be included in conversations about the care of residents.

Participants emphasized the need for performance evaluation to be reflective and complementary to the goals of PCC. One participant explained that the care practices are contingent on the nature of metrics in use to evaluate the QOC. Moving towards more PCC-based and QOL-oriented metrics and systematically recognizing and rewarding positive PCC practices also indicated a culture shift. In addition to objective measures of staff performance, feedback from families on their perception of the care experience was cited as an important facilitator for achieving PCC values in practice.

To improve staff knowledge of residents' histories, personalities, likes, and dislikes, participants recommended incorporating pertinent information into memory boxes at the entrance to residents' rooms. This was expected to serve as a useful visual cue for different staff in the care home, including non-care staff who normally do not have access to this information about residents, to learn more about residents and identify ways of matching services to their needs and interests.

3.2. Physical Environment

"Being creative about the relevant use of space stems from the will of the people to connect with individuals and create opportunities for meaningful activities"

It was recommended that staff and leadership work together to find creative ways of building physical environments that foster a welcoming and innovative culture. This could mean ensuring staff in charge of the upkeep of the physical environment favour innovation over convention to provide an individualized and stimulating environment. Having a one-size-fits-all approach was not seen as a useful strategy. The need for the physical environment to maximize choice and flexibility by presenting residents with a wide range of options catering to different needs, abilities, and interests was emphasized. Participants also highlighted

the need for continuity in the physical environment that is familiar and homelike for residents. Additionally, participants mentioned that the physical environment ought to support and complement care staff in doing their job efficiently and not be at odds with care practices and work patterns.

"You don't need to have a complete renovation or a brand-new care home in order to get positive benefits."

Participants mentioned a wide range of aspects of the physical environment that could be modified relatively easily to make the care home dementia friendly:

(i) maximizing natural lighting in all spaces through the use of windows and skylights, avoiding the use of dark colours in the décor, and maintaining bushes outdoors at a low height to avoid blocking light from entering the space;

(ii) ensuring that there are appropriate levels of artificial lighting and avoiding dim or overly-bright lighting. This could include having a night light over the entrance to the bathroom that would help residents easily find their way from the bed to the bathroom, as needed;

(iii) creating niches or smaller corners within larger spaces using room dividers, wall partitions, and indoor plants to help create well-defined and homelike spaces that maximize residents' sense of control;

(iv) filling empty spaces with furniture that clearly denotes a function or purpose can help residents identify the nature of space and utilize it more effectively;

(v) promoting personalization by encouraging residents to furnish their rooms and other spaces in the care home with their own furniture and personal effects, thereby enhancing familiarity and comfort and creating a calming environment for the resident. LTC staff could also invest in inexpensive, store-bought décor and artefacts that are meaningful and reflect residents' hobbies, interests, or past and contribute towards personalization;

(vi) decorating spaces with artefacts that do not have the potential of being used as a weapon. This could include avoiding hard and heavy objects that could potentially hurt someone if mishandled, and temporarily stowing away potentially unsafe objects in storage;

(vii) arranging furniture so that residents are not facing walls but are rather oriented towards the activity happening in the space, thus maximizing preview and opportunity to engage in household activities;

(viii) having a range of choices in seating arrangements that are easily movable

(ix) using easily maintainable surface materials like rubber or vinyl with pleasing homelike colours and patterns;

(x) painting doors with bright colours to improve wayfinding;

(xi) having signage containing both textual as well as pictorial information;

(xii) ensuring that all spaces in the care home are wheelchair accessible.

Priority areas that participants felt would require additional support from RHAs or the Ministry of Health included: (i) renovation of the exterior of older care homes to resemble a homelike setting and feel less institutional; (ii) eliminating shared rooms and turning them into single occupancy rooms; and (iii) improving the acoustics of care homes by insulating all private spaces to ensure residents have ample quiet and quality rest; and (iv) reconsidering the requirement of providing a common tub room and instead having individual bathrooms within residents' bedrooms. Alternatively, tub rooms should be redesigned to resemble a spa, thereby appearing more therapeutic and less institutional. Citing the examples of care homes in Norway, Sweden, and the Netherlands, participants recommended creating spaces within the are home that could be extended to community use, (e.g., children's play area, daycare, so as to promote community integration). This was expected to offer residents in the care home opportunities for positive stimulation and meaningful engagement.

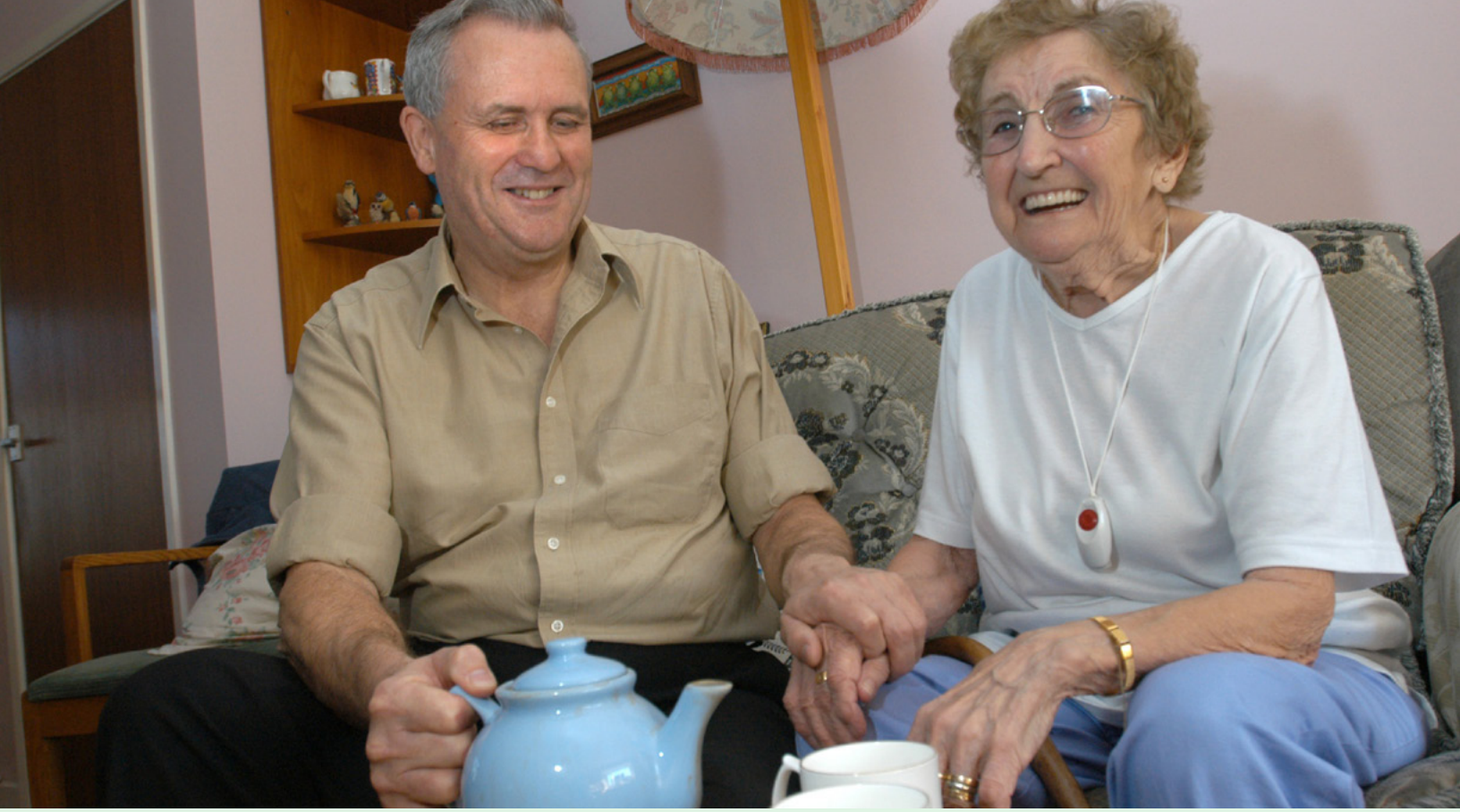
"Safety vs. autonomy and dignity: we need to pull licensing into our discussions"

Limitations due to safety regulations imposed by licensing bodies was the primary challenge care providers identified in relation to the design of the physical environment. Participants emphasized the need for a shift in philosophy, i.e., such as placing QOL, autonomy, and dignity before safety and protection against risk, in order for modifications in the physical environment to be made possible. It was also mentioned that design features that are stipulated by safety regulation bodies perpetuate an institutional appearance, making the physical environment feel intimidating and less inviting. The specific example cited by participants was the requirement to have sinks at regular

intervals along hallways for infection control, which can be a deterrent to creating homelike environments.

Participants called for a better balance between PCC and the demands of the safety regulatory bodies and the option to flexibly interpret licensing regulations. Moreover, it was mentioned that there were far too many inconsistencies between guidelines for new care home design and stipulations by licensing bodies. Participants recommended that the Ministry of Health prioritize the development of a standardized set of best practice design guidelines. The guidelines should be followed consistently across the province and sharing and exchange of best practices should take place across care homes through an accessible digital platform, where information on new builds and renovations in different care homes could be shared.

Participants also recommended that RHAs conduct environmental audits in care homes to explore deficiencies in the physical environment of care homes within their region and strategize steps for upgradation and improvement. Finally, participants highlighted the need for designers to consult with residents, families, and staff in the design or redesign of the care home, with the help of trained facilitators who are able to elicit meaningful input and suggestions from people with lived dementia experience.



Conclusion

There were several recommendations made in the review of grey literature that were corroborated by participants at the forum. Firstly, with regard to **education and training**, participants emphasized the importance of support from the leadership for the successful implementation of staff training and education. The literature similarly suggested that a care home's leadership should take the initiative to foster an environment of learning and training for care workers to ensure the success of these programs. Both the literature and findings from the forum suggest that all members of staff, across all hierarchies at the care home, should receive PCC training. Similarly, suggestions to train staff members in multiple skills, thereby blurring distinctions in job roles, were found in the review and also in the forum discussion. Both grey literature sources, as well as forum participants, suggested supervision and monitoring are needed for the application of training in practice. The suggestion made by forum participants for the provision of in-house peer trainers or a provincial training facilitator was also supported by a similar recommendation made in grey literature.

With regard to **staffing and care practices**, both the grey literature, as well as the forum participants, suggest that hiring multiskilled workers is essential to spending more unscheduled unstructured time with residents. Similarly, it was suggested by both sources to have open communication between staff members across hierarchies to engage in collaborative problem-solving through information-sharing. The empowerment of care aides to be involved in decision-making regarding residents' care routines was recommended in the grey literature, as well as by forum participants.

Under the domain of the **physical environment**, maximizing natural lighting was prioritized by both the grey literature, as well as forum participants. Both sources also mentioned the merits of creating homelike spaces with familiar décor and furnishings, as well as facilitating the personalization of residents' personal spaces. Doors painted in bright colours were acknowledged as a measure to promote wayfinding in care homes by both grey literature sources, as well as forum participants. Both sources also recommended the incorporation of signage with a balance of both pictorial and textual information to facilitate legibility and identification of spaces in the care home. Finally, both sources recommended residents living with dementia have single-occupancy rooms with private bathrooms, thereby eliminating multi-occupancy rooms from care homes.

These recommendations, when implemented in care homes, are expected to improve the quality of care and quality of life for residents, while improving staff competency, satisfaction, and health, as well as positive outcomes for family caregivers. This research demonstrates that for these positive outcomes to be achieved it is important to ensure that (i) staff are well-trained and educated in dementia care practices; (ii) person-centred care values are applied to everyday care practices; and (iii) the physical environment is familiar, homelike, accessible, safe, comfortable, and navigable. These recommendations align strongly with the priorities of Canada's National Strategy on Dementia. It is expected that the federal and provincial governments will provide adequate support to local ministries of health and regional health authorities to equip care homes with the tools they need to implement the necessary changes and ensure residents who are living with dementia have positive living and care experiences.

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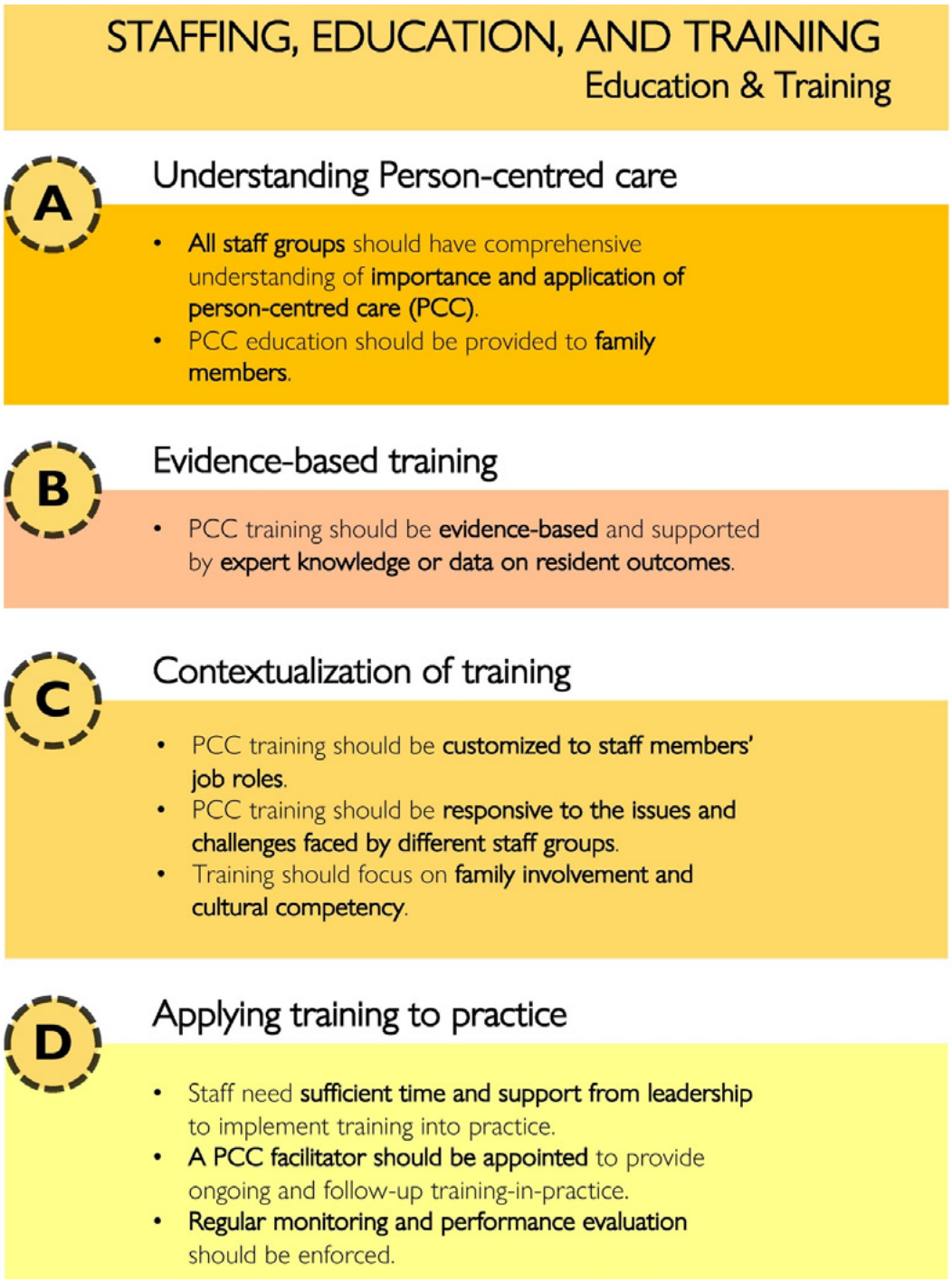
Appendix A: Infographic Handout



STAFFING, EDUCATION, AND TRAINING

Staffing & Care Practices

A Staffing levels and supports

- **Higher staff-to-resident ratio** and **adequate staffing levels** should be maintained
- **Multi-skilled workers** should be hired to combine personal care and other activities and spend unscheduled time with residents.
- **Direct care workers should be given adequate time** to deliver PCC and commensurate wages.
- Leadership should **empower care staff** to make/be involved in decisions regarding residents' care.
- Direct care workers should have access to specialized dementia care staff who can provide expertise and skills training-in-practice.

B Consistent staffing

- **Direct care workers** should be **consistently assigned** to the same residents.
- No more than eight direct care workers should be assigned to a resident in a given month

C Staff collaboration

- **Open and effective communication between staff members** should be maintained **for better information-sharing about resident needs and issues**.
- **Interdisciplinary care meetings** should be conducted with all staff groups to **foster collaborative problem solving**.

PHYSICAL ENVIRONMENT
Familiarity & Accessibility

A Familiarity and homelikeness

- Care homes should have **small, self-contained households with separate dining and activity spaces** to create a familiar, domestic character.
- **Well-defined activity spaces with clearly assigned, stable functions** should be provided.
- **Furniture** should have **familiar, identifiable designs**.
- **Warm colour** and **material schemes** should be applied.
- **Bedrooms** should have **neutral colour palettes** to support personalization.
- The **exterior of the care home** should be designed to **resemble a home** in the community.

B Physical accessibility, safety, and comfort

- **Bedrooms** should have **ceiling lifts** and **beds with headboards facing the toilet**.
- **Bathrooms** should be provided with **unobtrusive grab bars** and **spacious** enough to accommodate care staff.
- **Vanity mirrors** should have **shutter** to avoid confusion when residents don't recognize their reflection.
- **Brightly coloured handrails** should be provided along **hallway** to support residents with mobility challenges.
- **Doors should be self-closing** while **door frames** should be rendered in **contrasting colour**.
- **Chairs should be easy to move** and promote flexible arrangement.
- All spaces should have **optimal natural/artificial lighting**.
- **Outdoor spaces** should be flanked by a **high fence camouflaged with landscaping**.
- **Seating** should be provided at **appropriate intervals** along the **outdoor path**.

PHYSICAL ENVIRONMENT
Wayfinding, Privacy, & Stimulation

Orientation and wayfinding

- The unit's floor layout should be **legible**.
- **Hallways** should be **looped** and **free of clutter or dead-ends**.
- **Familiar landmarks** should be provided at **decision points**.
- There should be **memory boxes** or **personalization** outside residents' rooms and activity spaces.
- **Doors, signs, and walls** should be **consistently coloured**.
- **Signs** should have **visual and textual information** and placed at suitable heights.
- **Outdoor areas** should have a **single entrance/exit door**.
- **Outdoor paths** should have a **coloured raised edge**.

Privacy and visual accessibility

- **Bedrooms** should be **single-occupancy** and sound-insulated with **private bathrooms**.
- **Common activity spaces** and **common bathrooms** should be **visible from** the hallway.
- All spaces should have **clear views of the outdoors.**
- **Storage cabinets** should provide residents clear **visual access of personal belongings** or **safe objects**.
- Staff **workstations** should be **near common spaces**.
- **Exit doors** should be **concealed behind artwork**.

Appropriate sensory stimulation

- A **range of common spaces** should be provided with varying levels of **acoustic and visual stimulation**.
- **High-noise spaces** should be away from **quiet ones**.
- **Wall-art** should not contain **real-life objects**.
- **Floor-finishes** should be **non-reflective** without sharp colour or material differences.
- **Lighting** should be designed to **avoid hard shadows**.

Appendix B: Agenda of Community Forum

Time	Event	Lead
Noon to 1 p.m.	Registration and Lunch	Location: Large Board Room
1 to 1:05 p.m.	Welcome and Introduction	Co-host(s): Michael Kary (BCCPA) and Jennifer Stewart (Alzheimer Society of B.C.)
1:05 to 1:35 p.m.	Guest Speakers **Maria Howard**, CEO Alzheimer Society of B.C. **Daniel Fontaine**, CEO BCCPA **Jim Mann**, Alzheimer Advocate **Ellen Allen**, Alzheimer Advocate **Jas Gill**, Dementia Care Lead in Long-Term Care, Vancouver Coastal Health	Guest Speakers / Co-hosts
1:35 to 2:05 p.m.	Review of Paper and Literature	Presentation from SFU Gerontology (Dr. Habib Chaudhury and Kishore Seetharaman)
2:05 to 2:10 p.m.	Overview of Discussion Rounds	Co-hosts
2:10 to 2:50 p.m.	Discussion Round 1	Table Facilitators and Notetakers
2:50 to 3 p.m.	Break	N/A
3 to 3:40 p.m.	Discussion Round 2	Table Facilitators and Notetakers
3:40 to 4:15 p.m.	Summary of Findings	Forum Hosts / Notetakers and Table Facilitators
4:15 to 4:30 p.m.	General Discussion and Round-Up	Co-hosts / Daniel Fontaine

Notes:

BC Care Providers ASSOCIATION

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