A Pilot Study of a Video-Feedback Intervention to Enhance Long-Term Care Aides' Person-Centred Dementia Communication

by

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Abstract

Problem: With the dawning of the person-centred care movement within the long-term care and dementia care settings, the facilitation of person-centred communication strategies and enhancement of relationships between care providers and residents has drawn increasing attention. One evident requisite in these transformative efforts is the ability to offer self-reflective learning opportunities for providers that impact their internal caregiver values and ultimately influence their outward person-centred behaviours. Thus, the primary aim of this research is to pilot test the effectiveness of a novel communication intervention incorporating a video-feedback component on the person-centred dementia communication skills of long-term care aides. The secondary aim is to investigate the acceptability, utility and feasibility of the intervention in a long-term care setting.

Methods: A quasi-experimental single group pre-test/post-test design was employed in this pilot study. The use of language-based and person-centred dementia communication skills was measured using video-recorded observations of usual care interactions. Outcomes of self-reflection, relationship closeness with the resident and confidence in communicating with individuals with dementia were measured using self-report questionnaires. Focus groups and interviews with health care aides and nursing leadership were held to explore the feasibility of the intervention.

Results: Eleven health care aide-resident dyads participated in the study. There was a significant increase in the use of language-based reciprocity and continuity skills, as well as language-based and person-centred statements overall. Individual analysis of each dyad's pre-

and post-intervention videos also revealed at least one enhancement in communication behaviour based on self-established improvement goals. Global reports of self-reflection at work and relationship closeness with the resident, as well as interaction comfort increased significantly. Themes from the focus groups and interviews indicate the intervention was highly acceptable and relevant. The key feasibility challenges included resistance to the video-recording component and time/resource challenges to implement the intervention.

Conclusion: The communication intervention with a video-feedback component showed promise as an acceptable, effective approach to enhance person-centred dementia communication behaviours in health care aides. These results support undertaking a larger trial to more fulsomely examine the intervention's effectiveness and feasibility enablers in the context of long-term care and dementia care.

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Lastly, I would like to acknowledge the personal care home's leadership team and the health care aides and residents/families who agreed to participate in the study, as without their dedication and interest in improving the quality of life and care for residents, this study would not have been possible.

Dedication

To Celeste who always embodied the essence of person-centredness.

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Chapter 1: Introduction

Statement of the Problem

Person-centred care (PCCare) is a concept that has gained a moral authority as the right thing to do (Duggan, Geller, Cooper & Beach, 2006) and has been described as a new ethic of care (Rushton & Edvardsson, 2017) in respect to the philosophical underpinnings of health care and service delivery. This person-centered approach has also been promoted widely as the gold standard of care for older adults (Kogan, Wilber, & Mosqueda, 2016). Person-centredness in long-term care (LTC) refers to a philosophy that emphasizes relationship and interdependency as well as the concepts of individualism, holism, respect and empowerment of those that live, work or are otherwise a part of a LTC community (Harding, Wait, & Scutton, 2015; Li & Porock, 2014).

The term culture change has been used in the LTC literature to reflect a conscious shift from a care and service philosophy that focuses on a traditional bio-medical, task-oriented model to one that fosters a more holistic, person-centred approach. The goal of this cultural transformation is to nurture the development of LTC settings that are more desirable places to live and work (Li & Porock, 2014). Over the past two decades, a number of commercialized models (e.g. Eden Alternative, Green House/Small House models, Pioneer Network, etc.) and non-commercialized approaches have emerged to support person-centred culture change in LTC (Petriwskyj, Parker, Wilson, & Gibson, 2015). Although it has been recognized that a standard recipe or cookie-cutter approach to culture change does not exist, it is acknowledged that various dimensions of LTC culture must be addressed for successful adoption of this philosophy. The first involves altering the clinical culture, with emphasis on the development and enhancement of

the clinical knowledge and skills of all staff akin to the increasing complexity and acuity of LTC residents. The second addresses the need to change the work/organization culture through empowerment of staff and fostering collaboration and communication between individuals, teams and leadership. The third aspect is changing the caring culture by paying attention to residents' relational needs in addition to their physical care needs, promoting an individualized approach to care and service and providing opportunities to enhance the nature and quality of personal relationships between staff and residents/families. The final dimension is transformation of the residential culture where aspects of the physical environment are enhanced to reflect a home or residence as opposed to an institution (Li & Porock, 2014; Stone, 2003).

In relation to the third element, changing the caring culture, the central attributes of a person-centred philosophy, namely relationship, individualism, holism, respect and empowerment, are fundamentally integrated into the care milieu through day-to-day communication and interactions between health care providers and residents (McCormack & McCance, 2006; Nolan, Davies & Brown, 2006; O'Connell, Ostasziewicz, Sukkar & Plymat, 2008). The benefits of person-centred communication (PCCommunication) has been supported by research that indicates residents in LTC react more positively (Savundranayagam, Sibalija, & Scotchmer, 2016), experience enhanced mood and affect (McGilton, Sidiani, Boscart, Guruge, & Brown, 2012b) and report higher levels of well-being (Custers, Kuin, Risken-Walraven, & Westerhof, 2011) when healthcare providers (HCPs) demonstrated effective relational behaviours during interactions. Conversely, it has been suggested that missed opportunities for person-centred communication in LTC threaten the provider–resident relationship by increasing the potential for responsive behaviours, such as resistiveness to care and aggression

(Savundranayagam et al., 2016). In addition to impacting the quality of life for the resident, exposure to such responsive behaviours can add stress to the provider's work-life (Chamberlain et al., 2017). Furthermore, resident responsive behaviours as a reaction to a lack of PCCommunication approaches may act as a source of negative feedback to the provider about their care and communication skills and abilities. An unfavourable response or refusal from a resident may be interpreted by the provider as a sign of their inability to provide good care (Savundranayagam et al., 2016).

Despite the cited benefits of PCCommunication approaches, for HCPs working within a demanding LTC environment with time limitations, recognizing and responding to residents' relational needs are often missed (Savundranayagam, 2014) or sacrificed in exchange for expediency and efficiency (Knopp-Sihota, Niehaus, Squires, Norton, & Estabrooks, 2015). The resultant focus on instrumental or task-based communication is evident in LTC HCP behaviour as research suggests up to 80% of communication with persons with dementia is task-focused (Wilson, Rochon, Leonard, & Mihailidis, 2013). While some task-based communication is necessary within caring relationships, excessive or exclusive communication in this manner diminishes the opportunity to acknowledge the unique value and contribution of the person as a communication partner (Williams, 2013). It has been recognized that there is a need to augment HCPs' communication skills to promote interactions of a relational nature in concert with person-centred principles (Carpiac-Claver & Levy-Storms, 2007). As such, an opportunity exists to enhance the quality of interaction between HCPs and residents by embedding relational communication strategies in daily care activities (Vasse, Vernooij-Dassen, Spijker, Rikkert, & Koopmans, 2010).

Interventions to enhance PCCommunication skills in HCPs have begun to emerge in the LTC literature. Some approaches have used unidimensional, cognitive-only interventions (e.g. didactic educational training/workshops, case study conversation analysis), while others have incorporated additional behavioural (e.g. role playing, real-world training) and psychological (e.g. mentorship, individualized follow-up and support) enhancements (McGilton et al., 2009). A significant limitation of all these strategies to date relates to the lack of attention to the self-reflective aspect of learning. As research in person-centred culture change has suggested (Nolan, Davies, Ryan, & Keady, 2008; Viau-Guay, 2013), facilitation of outward person-centred behaviour requires a turning inward to reflect upon personal beliefs and values about one's caregiving philosophy.

A promising self-reflective technique that has potential to improve PCCommunication skills across a variety of healthcare settings and HCPs is video-feedback (VF) (Finlay, Antaki, &Walton, 2008; Fukkink, Trienekens, & Kramer, 2011). VF is described as a procedure in which participants watch video-recorded examples of their own performance in a real-world or simulated encounter (Williams & Gallinat, 2011). Although only one instance was found as to its use to promote person-centred approaches in LTC (Coleman & Medvene, 2013), emerging evidence within the intellectual disability literature suggests VF has an ability to enhance person-centred values and behavioural transformation in staff. Research suggests VF can improve individualized care approaches with residents (Embregts, 2002; Zijlmans, Embregts, Gerits, & Derksen, 2011), promote a shift in perspective-taking that allows an individual to understand and imagine a resident's viewpoint, and facilitate values-based changes in staff performance through

self-reflection (James, Hall, Phillipson, McCrossan, & Falck, 2012; James, Hall, Lombardo, & McGovern, 2016).

Additional implications to this research setting and thesis research include consideration of who works and lives in LTC. The majority of personal care in Canadian LTC homes is provided by health care aides (HCAs) (Berta, Laporte, Deber, Baumann, & Gamble, 2013; Estabrooks, Squires, Carleton, Cummings, & Norton, 2015). Therefore, fostering learning and self-reflective opportunities to enhance the nature and quality of relationships between HCAs and residents is paramount to the integration of person-centred approaches into the daily fabric of LTC life. Concerning the current resident population, Canadian national data indicates that nearly half of the residents in LTC experience limited or no social engagement (Canadian Institute for Health Information, 2019), suggesting an opportunity for HCAs to regularly engage residents on a relational basis in an effort to enhance quality of life and personhood. Communication with individuals who experience dementia can pose additional challenges and requires a specific skill set and approach (Downs & Collins, 2015). As approximately 62% of Canadian LTC residents have a diagnosis of dementia (Canadian Institute for Health Information, 2019), this is an important consideration in the education and communication skills development of HCAs working in LTC. As such, this thesis research aimed to foster change in the caring culture of LTC through enhancement of the quality of the relationship and communication between HCAs and residents with dementia.

Purpose of the Study and Research Questions

The primary aim of this research was to pilot test the effectiveness of an intervention incorporating VF on HCA person-centred dementia communication (PCDC) behaviours and

perceived quality of relationship with residents who have mild to moderate dementia. The secondary aim was to investigate the acceptability, utility and feasibility of a communication intervention with video-feedback in a LTC setting. The study methodology used was a quasi-experimental single group pre-test/post-test design to observe for within-participant differences in response to the intervention. The single group pre-test/post-test design was chosen as it is deemed to be an acceptable approach to pilot test the feasibility and potential positive effects of a novel health intervention or program prior to a larger study. It is also employed when the risk of intervention contamination is high within an organization/facility and when randomization is neither possible nor feasible (Shadish, Cook, & Campbell, 2002; Tappen, 2011). Focus groups and interviews were also conducted to obtain qualitative data in relation to the feasibility, acceptability and utility of the intervention.

Primary research question: Is a PCCommunication intervention that includes an educational and video-feedback component an effective and feasible method to enhance person-centred communication and relationships between HCAs and residents with dementia in LTC?

Specific research questions:

1. Does the communication intervention improve the linguistic (i.e. language-based) elements of PCDC behaviour of HCAs?
2. Does the communication intervention improve the relational (i.e. person-centred) elements of PCDC behaviour of HCAs?
3. What is the effect of the communication intervention on HCA perceived competence and confidence in relation to communicating with residents with dementia?

4. What is the effect of the communication intervention on HCA ratings of relationship satisfaction and relationship closeness with residents?
5. What are the acceptability, utility and feasibility of implementing the communication intervention in a LTC setting from the perspective of the HCAs and residents in the study, as well as the nursing leadership?

Definitions

Person-centred care. Although a commonly accepted definition has not been established across research and care domains, a consensus definition pertaining to PCCare in older adults has been put forth by the American Geriatrics Society (2016) and will provide a contextual background for this study:

> "*Person-centred care* (original emphasis) means that the individuals' values and preferences are elicited and, once expressed, guide all aspects of their health care, supporting their realistic health and life goals. Person-centred care is achieved through a dynamic relationship among individuals, others who are important to them, and all relevant providers. This collaboration informs decision-making to the extent that the individual desires." (2016, p. 16)

Person-centred communication. A key component of PCCare is the ability for staff to communicate in a way that allows understanding of the person's (resident/patient/client) needs and preferences (McGilton et al., 2012c). PCCommunication is defined as communication approaches that support the overarching principles of person-centred care, namely value and respect for the person, promotion of an individualized approach to care and understanding of the person's perspective within the context of relationship (Brooker, 2004; 2007; Kitwood, 1997).

Person-centred dementia communication. PCDC specifically refers to PCCommunication approaches for individuals with dementia. For the purposes of the study, PCDC is defined as consisting of both linguistic (language-based) and relational (person-centred) communication strategies (Kitwood, 1997; Ryan, Byrne, Spykermam, & Orange, 2005; Savundrananyagam & Moore-Nielsen, 2015).

Video-feedback. In relation to this study, VF is defined as a self-reflective learning technique in which study participants watch video-recorded examples of their own performance in a real-world encounter with a resident in their care (Williams & Gallinat, 2011). Within this research context, VF will be employed within a one-on-one setting involving the participant and a facilitator.

Health care aides. HCAs are unregulated health care workers who provide direct care to residents in LTC homes. These care activities include assisting residents with activities of daily living (e.g. bathing, dressing, oral care, continence, meal-time assistance, mobility and ambulation support), as well as answering requests for assistance and transportation to activities within/outside the home (Berta et al., 2013).

Study Context: Personal Care Homes in Winnipeg

Definition of personal care home. In Manitoba, the term personal care home (PCH) is used to describe residential facilities that provide 24-hour professional nursing care and supervision in a protective, supportive environment for people who have complex care needs and can no longer be cared for in their own homes (Francoo et al., 2013). As of March 31, 2018, there were 9,725 licensed PCH beds in 125 facilities across Manitoba (Manitoba Health, Seniors and Active Living, 2018), with a majority of those in Winnipeg (5,548 licensed beds in 39

facilities) (Long Term and Continuing Care Association of Manitoba, 2019). To be admitted to a PCH, an application form must be completed by medical and nursing/social work professionals and then reviewed by a panel which determines whether the person meets the program criteria. PCHs may be devolved (owned/operated directly by a regional health authority), proprietary (for profit) or non-proprietary (not for profit). Non-proprietary PCHs may further be categorized as faith-based or ethno-cultural (i.e. associated with a particular religious faith or language other than English), as well as either freestanding or connected to an acute care facility (Francoo et al., 2013).

Funding of personal care homes. PCHs in Manitoba are partially funded by public monies for insured health services. PCHs may be funded by the provincial (provincial PCHs) or federal (federal PCHs) government. Funding for provincial PCHs flows from the provincial government's global health funding to the regional health authorities (RHAs) who distribute funds to the individual PCHs and other programs/sites based upon annual operating budgets (Office of the Auditor General-Manitoba, 2009). A daily per diem fee is also paid by PCH residents to offset the cost of their accommodation, and is based on individual or family taxable income. The daily rate ranges from $38.75 to $90.65 and is collected directly by the PCH (Manitoba Health, Seniors and Active Living, 2019b). As per provincial guidelines, PCHs are required to provide 3.6 paid hours of nursing care per resident per day. More specifically, for PCHs greater than or equal to 80 beds, this equates to a mandated staffing ratio of 30% professional nurses (i.e. Registered Nurse, Registered Psychiatric Nurse, or Licensed Practical Nurse) and 70% unregulated care staff (i.e. Health Care Aides). For PCHs less than 80 beds,

the ratio is 35% professional nurses and 65% unregulated care staff (H. Forbes, personal communication, February 20, 2018).

Regulation of personal care homes. The Manitoba Health, Seniors and Active Living (MHSAL) governmental department oversees both the licensing and standards regulation of PCHs in the province. PCHs are to operate in compliance with the *Personal Care Homes Standards Regulation* (2005) as set out under *The Health Services Insurance Act C.C.S.M. c. H35* (2015). Twenty-six standards outline quality expectations in relation to care and services, record-keeping, resident safety, staff development and risk management. Compliance to the standards is assessed in each PCH by an MHSAL-led survey team on a biennial and as needed basis (MHSAL, 2018).

Characteristics of residents in personal care homes in Winnipeg. Individuals living in most LTC homes in Canada are clinically evaluated on a regular (i.e. 3-month) basis using a standardized assessment tool entitled the Resident Assessment Instrument-Minimum Data Set Version 2.0 (RAI-MDS 2.0). The Canadian Institute of Health Information (CIHI) publishes an annual summary of the data entered into the RAI-MDS data set from all reporting Canadian provinces and territories. As currently only Winnipeg PCHs are reporting RAI-MDS data to CIHI, this summary can be used to highlight characteristics of residents within the study setting of interest (CIHI, 2019).

For the fiscal year 2018-2019, residents in Winnipeg PCHs were an average of 85 years of age with 57.7% of the population being 85 or older. The majority of residents was female (69.5%) and many individuals had been admitted to the PCH from an acute care facility (49.7%). This data also provides context in relation to the acuity and complex care needs of

residents in Winnipeg PCHs. Forty-five percent of individuals had some indication of health instability. The most common medical diagnoses reported included dementia (59.5%), hypertension (57.6%), arthritis (33.0%), depression (30.1%), diabetes (23.2%) and cerebral vascular accident (19.3%). Additionally, other clinical syndromes and conditions were also prevalent and included urinary incontinence (66.8%), bowel incontinence (48.3%), aggressive behaviour (43.9%), severe cognitive impairment (27.3%) and daily pain (8.3%). Seventeen percent of residents had had a fall within the last 30 days. In relation to care needs, 70% of residents required either extensive assistance or were completely dependent on staff to complete activities of daily living (ADLs). Fifteen percent required special nursing care and treatments, such as monitoring an acute condition, ostomy care, or oxygen therapy. Half of the residents (49.6%) experienced low or no social engagement (CIHI, 2019).

In Manitoba, residents' care needs are also assessed using a level system. Level 2 indicates lower care needs, while Levels 3 and 4 specify higher care needs and heaver staff dependency. In the 2017/2018 fiscal year, 75% of residents in Winnipeg PCHs were assessed at Level 3 or higher. In the same timeframe, the overall median length of stay in Winnipeg PCHs was two years (MHSAL, 2019a). These data paint a poignant portrait of the individuals living within the Winnipeg LTC system who exhibit a complex mélange of medical, cognitive, behavourial and functional impairments and require in-depth physical and emotional support from staff. This overview is comparable to the profile of LTC residents identified during a review of RAI-MDS data from a sample of 30 urban LTC homes across the three prairie provinces (Estabrooks et al., 2013).

Characteristics of residents with dementia. Dementia is an umbrella term used to describe a major progressive neurocognitive disorder that leads to the irreversible destruction of brain cells. Dementia manifests as a cognitive decline from a previous level of performance in one or more of the following areas: learning and memory, language, executive function, complex attention, perceptual-motor, and social cognition function. These cognitive impairments interfere with independent daily function (American Psychiatric Association, 2013). In 2014, the estimated number of Canadians over the age of 65 living with dementia was 514,000 with this number expected to nearly double by 2033 (The Alzheimer Society of Canada, 2016).

As dementia is a progressive condition, worsening changes in cognition, language, function, mood and behaviour occur over the course of the disease. On average, individuals with dementia live for approximately eight to ten years after the initial presentation of symptoms. As dementia progresses, the individual will require additional assistance and support from caregivers. Although each person's journey with dementia is unique, it is often viewed as a progression through a series of three stages: mild, moderate, and late dementia (Alzheimer's Society, 2015).

Mild (early) dementia, manifests with minor changes in the person's abilities or behaviour, with memory loss of recent events and conversation being a common early symptom. They may experience difficulty when exposed to new learning opportunities or unfamiliar environments. In terms of language and conversation, individuals with mild dementia may exhibit word-finding difficulties or lose focus during a conversation. Perceptual difficulties may also present creating challenges with depth perception or seeing objects in

three dimensions (e.g. navigating stairs). Common mood changes include depressed affect, irritability and anxiety (Alzheimer's Society, 2015).

In moderate (middle) dementia, cognitive, functional and behavioural changes become more pronounced requiring additional physical and emotional support. Due to advancing short- and long-term memory loss, individuals may need frequent reminders or assistance to complete ADLs or re-orient them to their surroundings. Behavioural changes tend to be most common from the moderate stage of dementia onwards. Some individuals with moderate dementia become easily upset, angry or aggressive, often due to the fact that they are frustrated about their impairments or have interpreted a situation incorrectly (Alzheimer's Society, 2015).

Severe (late) dementia is characterized by increasing impairments and gradual dependence on others to complete all ADLs. Long-term memory loss can become extremely pronounced, with the person unable to recognize familiar objects, surroundings or people, including close family members. Physical changes often include advancing muscle weakness causing ambulation and balance issues, swallowing difficulties leading to poor intake and weight loss, incontinence and eventual loss of speech. Behavioural expressions in severe dementia can include restlessness, anxiety, anger or aggression, often manifesting in resistance to care attempts (Alzheimer's Society, 2015).

The stages of dementia have also been linked to standard measures of cognitive performance. RAI-MDS information collected regarding an individual's cognitive status is used to calculate the Cognitive Performance Scale (CPS), a hierarchical seven-category scale that reflects the severity of cognitive impairment (Morris et al., 1994). The scale is scored from 0-6 in which 0 represents no cognitive impairment and a score of 6 indicates very severe

cognitive impairment (Table 1) (CIHI, 2013). The CPS has also been validated against other standard measures of cognitive performance, such as the Mini-Mental Status Exam and the Test for Severe Impairment (Morris et al., 1994). In 2018-2019, CIHI data for the Winnipeg PCHs indicated that 16.2% of residents had mild cognitive impairment (score of 2), 31.9% had moderate cognitive impairment (score of 3) and 32.8% had severe cognitive impairment (score of 4, 5 or 6) (CIHI, 2019).

Table 1 – Cognitive Performance Scale Scoring

CPS Score	Description	Mini-Mental Status Exam (MMSE) Equivalent Score	CPS scores of Winnipeg PCH Residents (%) (2017-18)
0	Intact	25	10.5
1	Borderline intact	22	15.0
2	Mild impairment	19	15.8
3	Moderate impairment	15	31.9
4	Moderate/severe impairment	7	6.5
5	Severe impairment	5	11.1
6	Very severe impairment	1	9.2

(Canadian Institute for Health Information, 2013; 2018)

In summary, the clinical data available indicates that dementia is a prevalent condition among residents in Winnipeg PCHs and nearly half experience low or no social engagement. Information on the cognitive status of residents notes that more than half have moderate to severe levels of cognitive impairment suggesting heavily reliance on LTC staff to meet their physical, behavioural, emotional and relational needs.

Summary

This introductory chapter has outlined a statement of the problem the researcher aimed to address, along with the study's purpose and research questions. Definitions relevant to the study have been provided, as well as contextual considerations in relation to the Winnipeg LTC sector. The benefits of a person-centred approach to communication between HCAs and residents with dementia have been outlined and rationale provided for the use of VF as a self-reflective technique to improve the PCDC skills of HCAs.

Canadian data indicates that many residents in LTC experience limited or no social engagement opportunities, and these challenges become increasingly prominent within the context of dementia. The absence of a person-centred, relational approach to communication and caring may have profoundly negative effects on the social and relational experiences of residents in LTC settings; thus, the education and communication skills development of LTC providers is paramount. As HCAs provide the majority of direct care, they have opportunities to engage with residents in a relational way that may act to enhance empirically-supported outcomes such as quality of life, personhood and the experience of living in LTC. Integration of person-centred principles into the care milieu through daily communication and interactions between HCAs and residents requires an inward examination of one's own caring philosophies and beliefs. The researcher aimed to address a gap in the person-centred literature by developing and pilot testing a novel self-reflective technique for HCAs within the dementia communication context and gathering preliminary data to inform a larger study where more rigorous testing of the intervention effect on HCA, resident/family and system outcomes will occur. Based on its positive linkage with resident quality of life indicators (e.g., mood/affect

and overall well-being), PCCommunication needs to be incorporated into daily care and interactions. The following chapter will provide a review of the literature used to inform the thesis research and provide additional expansion and theoretical support for the study's rationale.

Chapter 2: Review of the Literature

This chapter will provide an overview of the literature that was examined to inform this thesis research. As person-centred dementia care (PCDC) is grounded within a person-centred approach, theoretical work relevant to PCCare will be initially highlighted. Second, theory-based strategies and evidence pertaining to the instrumental aspects of effective dementia communication will be presented. This will be followed by a summation of research to-date on theoretical perspectives used to study person-centred communication (PCCommunication) and PCDC, along with relevant interventions and outcomes. As video-feedback (VF) will be the focal and novel intervention of this pilot study, literature pertaining to its use in improving communication and interactions between health care providers (HCP) and patients/clients/residents will be presented. As this study will engage health care aides (HCA) working in long-term care (LTC), literature describing aspects of their education/training, work life and care approaches will be examined. Ethical considerations when engaging both HCAs and residents with dementia in research in LTC will also be addressed within the literature review.

Person-Centred Approaches in Dementia

Person-centred care theoretical perspectives. The review of the extant theoretical literature reveals a scholarly evolution of the articulation of person-centred and relational care. An overview of these theoretical perspectives in order of their appearance in the literature is provided in Appendix A. Seminal thought in relation to PCCare began with broader philosophical and conceptual works (i.e. Brooker, 2004; 2007; Buber, 1958; 2000; Kitwood, 1993; 1997; Kitwood and Bredin, 1992) and expanded to further development of more refined

theory and action-oriented models (i.e. McCormack & McCance, 2006; McGilton et al., 2012a; Nolan, Davies, Brown, & Keady, 2004; O'Connell et al., 2008; Røsvik et al., 2011) to guide implementation of person-centred principles into care and practice. In overall consideration of these theoretical perspectives, some consistencies and divergences are noted in respect to their key elements, assumptions and outcomes. In regards to the commonalities, all perspectives are based upon the assumption that our human experience, purpose and value are grounded in social relationships. Further, meaningful relationships between individuals and providers support PCCare by promoting an emotional connection, reciprocity and mutual benefit. Aligned key elements of the theoretical perspectives include respect and value for the person and their personhood, as well as supporting an individualized approach to the identification and provision of care needs by knowing the person. Most of the theoretical perspectives address outcomes at individual, staff and system levels. Common individual outcomes include enhanced psychological well-being and quality of life, and satisfaction with all care needs, including emotional and relational, being met. Theorized staff outcomes include enhanced relationships with those in care, increased knowledge and skills in PCCare and increased work satisfaction. All perspectives anticipate system-level improvements that support a positive transformation to a therapeutic PCCare culture. Although only three pertain specifically to person-centred dementia care (i.e. Kitwood's philosophy, the VIPS framework and the VIPS Practice Model), all appear applicable to the study of PCCare in dementia and LTC.

In view of the inconsistencies between perspectives, some language and conceptual differences are evident. The historical development of person-centred theoretical work in the dementia care/LTC setting reveals the use of different terminology, beginning with person-

centred care (Kitwood, 1997, Brooker, 2004), with later works referencing relationship-centred care (Nolan et al., 2004) and partnership-centred care (O'Connell et al., 2008). Additionally, due to the evolution of the concept over time, earlier theoretical perspectives focused mainly on the person-provider relationship, whereas subsequent works have expanded upon the original intent to include other relationships within the care environment. Lastly, not all of the theoretical perspectives address contextual facilitators of PCCare. However, those that recognize the need to provide a supportive relational environment note that necessary facilitators include a supportive leadership and work culture, evidence-informed knowledge and competencies of PCCare and interpersonal processes enacted during care.

In final consideration of the collective PCCare theoretical perspectives, some limitations are evident. First, due to the relative infancy of this field of theoretical development, with the exception of the Person-Centred Nursing Framework (McCormack & McCance, 2006) the majority of the perspectives have not yet been fulsomely tested or used to underpin empirical work. Second, although some dementia-related outcomes are offered within a few of the theoretical perspectives, appropriate measurement approaches for certain indicators need further elaboration for this population, e.g. satisfaction with care and meeting psychosocial needs in persons with dementia. Finally, most of these theoretical perspectives do not offer a specific theoretical linkage to person-centred communication in dementia. As Kitwood's person-centred dementia care philosophy (1997) appears to be the exception (Ennis, Mansell, McEvoy & Tai, 2019), his theoretical writings will be examined in further detail.

Kitwood's person-centred care philosophy. Tom Kitwood (1937-1998), a British academic psychologist, began to articulate his ground-breaking philosophy in personhood and

person-centred dementia care in the early 1990's (Kitwood, 1993; Kitwood & Bredin, 1992). Radical to the thinking at the time, his work sought to bring the elements of dementia-related neuropsychology and social psychology together into a single frame (Kitwood, 1997). This sparked a reconsideration of our understanding and perceptions of dementia that began over two decades ago and continues to represent the current ideal for quality dementia care services (Brooker, 2004; 2007; Mitchell & Agnelli, 2015). His work has also provided a platform from which subsequent PCCare theoretical works have been launched (Mitchell & Agnelli, 2015).

The central unifying assumption in Kitwood's PCCare is in relation to the concept of *personhood* and its preservation within the context of dementia. Kitwood believed that individuals with dementia are at risk for loss of their personhood based on a biomedical perspective of dementia that suggests parts of the self are lost as cognitive and functional impairments manifest. Drawing from a combination of transcendent, ethical and social discourses, he defined personhood as "a standing or status that is bestowed upon one human being by others, in the context of relationship and social being" (Kitwood, 1997, p. 8). Thus, the second major assumption of Kitwood's philosophy is that recognition and respect for personhood takes place within the context of social relationships and, as such, he establishes a linkage to Buber's I-It/I-Thou philosophy (Appendix A) (Buber, 1958; 2000). As such, if we depersonalize an individual with dementia by viewing them as a partial-person and a product of their condition, this propagates an I-It relationship in which a person is not considered a whole being, and a fulsome satisfying relationship is not possible. Conversely, I-Thou relations provide the pathway to realizing joy and fulfillment through human relationships where each person is valued as a unique and whole individual. It is from this relational perspective that Kitwood believed

personhood must be viewed to understand dementia and care (Kitwood, 1997). A further assumption of Kitwood's work involved the negative influence of *malignant social psychology*, referring to actions and attitudes of other people that function to undermine personhood. Alternately, to enhance personhood, he described *positive person work* that highlights various types of *affirming interactions* that aim to promote positive feelings, provide healing, or nurture ability (Table 2). Five of these indicators, namely recognition, negotiation, validation, facilitation and collaboration are specifically applicable to PCCommunication and will be discussed in further detail below. Furthering Kitwood's original work, Brooker (2004, 2007) has provided additional conceptual clarification and expressed the major elements of the philosophy via the VIPS acronym (Table 3).

The desired PCCare outcomes of Kitwood's philosophy have individual-, care provider- and system-level impacts. For the individual with dementia, it is hypothesized that their personal well-being is enhanced and psychosocial needs are addressed in that they are treated as a unique and whole individual, capable of fulfilling social roles and engaging in relationships with others. Thus, person-centred outcomes in dementia care include meeting physical/clinical needs as well as relational ones (Kitwood, 1997). Within Kitwood's approach, the care providers (formal and informal) are also valued and respected as people with unique needs and feelings (Brooker, 2004; 2007) and, additionally may benefit from the richness of an open, accepting relationship that is borne from human interconnectedness. From a system-level perspective, Kitwood's PCCare promotes a cultural transformation away from a paradigm that is disease-oriented and

Table 2 - Kitwood's Positive Person Work (Affirming Interactions)

Interactions	Definition
Recognition*	A person is recognized by preferred name and acknowledged as a person with unique thoughts, feelings and preferences.
Negotiation*	A person is consulted about their choices and preferences in care and daily life. When possible, a person is supported to be an active participant in the decision-making process.
Collaboration*	Two or more people work together to complete an activity or meet a goal, for example, care is not 'done to' a person in a passive sense but 'with' the person.
Play	The provision of an activity for the purposes of enjoyment and self-expression.
Timilation	A form of interaction that stimulates the senses, for example aromatherapy or massage.
Celebration	Life moments are celebrated when they arise, not just at important landmarks such as birthdays and holidays.
Relaxation	A low level of intensity and recognition in which a person may wish to relax in solitude or in the company of others.
Validation*	Accepting the reality of another even if it is a result of hallucinations or misperceptions.
Holding	Providing a safe psychological space to enable a person to truly express themselves.
Facilitation*	Aligning closely with collaboration, a person is enabled or supported to do what otherwise they would be unable to do.
Creation	Encouraging a person to be creative and spontaneous, as this can be therapeutic.
Giving	In the spirit of an I-Thou relationship, one accepts whatever expressions of kindness a person with dementia gives.

* Affirming interactions pertinent to PCCommunication

(Kitwood, 1997; Ryan et al., 2005; Savundrananyagam & Moore-Nielsen, 2015)

Table 3 - VIPS Framework

Element	Definition
Value (V)	**Value people with dementia and those who care for them:** Promote citizenship rights and entitlements regardless of age or cognitive impairment and eliminate discriminatory practice.
Individual (I)	**Treat people as unique individuals and provide an individualized approach:** Appreciate that all people have a unique history and personality, physical and mental health, and social and economic resources, and that these will affect their response to dementia.
Perspective (P)	**Look at the world from the perspective of the person with dementia:** Recognize that each person's experience has its own psychological validity, that people with dementia act from this perspective, and that empathy with this perspective has its own therapeutic potential.
Social Environment (S)	**Provide a supportive social environment:** Recognize that all human life is grounded in relationships and that people with dementia need an enriched social environment that compensates for their impairment and fosters opportunities for growth.

(Brooker, 2004, 2007)

fragmented to one that is collaborative, relationship-focused and encompasses the entirety of a person's needs and preferences (American Geriatric Society, 2016; McCance, McCormack, & Dewing, 2011).

Kitwood's work has also been used to support strategies to enhance PCCommunication outcomes between care providers and with persons with dementia. In a study employing discourse analysis of conversations between a LTC resident with dementia and health care aides, Ryan and colleagues (2005) aimed to identify the communication and language strategies used during positive care interactions as defined by Kitwood. Four of Kitwood's affirming interactions were chosen based on their applicability to communication with persons with dementia: recognition, negotiation, validation and facilitation, the latter also encompassing collaboration (Table 2). Ryan et al's qualitative analysis found that these four strategies were evident in staffs' positive interactions with residents. They concluded that these strategies have the potential to improve meaningful interaction in LTC by implementing a communication approach based on the enhancement of personhood (Ryan et al., 2005). In a study by Savundranayagam and Moore-Nielsen (2015) that set out to investigate if effective language–based communication strategies for people with dementia (Table 4) were also person-centred, further support of the linkages between Kitwood's affirming interactions and effective communication in dementia was found. Staff-resident dyads were audio-recorded during actual care encounters within a LTC home and analyzed for the presence of overlap between language-based communication strategies and the same four PCCare affirming interactions as indicated in the earlier study. Overall, 29% of the total utterances were coded as language-based *and* person-centred suggesting that the promotion of effective communication in dementia

Table 4 – Linguistic (Language-based) Dementia Communication Categories and Coding System

Linguistic Strategy	Examples
Communication Goal: Reciprocity	
1. Greeting	"Good morning, Sarah."
2. Completion of turns; giving time for the person to respond; do not interrupt	Pauses in conversation to allow time to respond.
3. Open-ended questions that rely on semantic memory, not episodic memory	"How are you feeling now?" "What do you like about the children's singing?"
4. Choice questions that rely on semantic memory, not episodic memory	"What sandwich would you like, beef or egg salad?"
5. Yes/No questions that rely on semantic memory, not episodic memory	"Are you hungry?"
6. Affirmation: statements that indicate agreement, acknowledge feelings or are used with requests/instructions	"Yes", "Mm-hmm", "I understand." "I know you don't like it when (other resident) is calling out for help. Just hold on a bit as the staff are helping her now."
7. Politeness to address resistiveness	"Please don't hit my hand when I try to help you. Do you hurt anywhere right now?"
Communication Goal: Clarity/Coherence	
8. Announce intent clearly; inform about a topic change	"Now let's talk about…"
9. Confirm understanding through restating what the resident said, summary of prior talk	"Let me see if I understand (paraphrase what resident said)…"
10. Confirm understanding by asking for clarification	"Are you saying that you would like to…?"
11. Statements that inform what is misunderstood	"I don't understand what ___ means."
12. Rephrase to add clarity to a statement	Staff: "Would you like to go listen to the school choir?" Resident: "The what?" Staff: "Would you like to go listen to the children sing?"
13. Verbatim repetition	Repeating the same verbal statement
14. Ask the other person to repeat what they said	"Pardon me?" "Can you repeat that?"
15. Right-branching sentences; avoid left-branching sentences	Right-branching: "You need to put on your coat before going outside." Left-branching: "Before going outside, you need to put on your coat."
16. Place modifiers after nouns	"Do you want juice, apple or orange?"
17. Place modifiers after verbs	"Walk slowly with me."

Linguistic Strategy	Examples
Communication Goal: Continuity	
18. Unfinished sentences that the resident is encouraged to complete	"Your favorite TV show is _____?"
19. Matching comment **20. Matching association; offer one's opinion or information about a personal experience**	Resident: "I like the Family Feud." Staff: "You like The Family Feud? (matching comment) My favorite game show has always been The Price is Right. I remember watching Bob Barker as host when I was a kid (matching association)."
21. Newsmarks: emphasis on the noteworthiness of the resident's prior statement	"Really?" "Wow, that's great!" "Oh my!"

(Adapted from Savundranayagam & Moore-Nielsen , 2015)

encompasses both linguistic and person-centred approaches (Savundranayagam & Moore-Nielsen, 2015).

In summary, the theoretical literature base pertaining to PCCare has grown exponentially over the past two decades, enabling refinement of our ability to define, implement and measure the outcomes of person-centred approaches in dementia care. However, this body of literature does not offer the fulsome detail needed in relation to the instrumental communication strategies in dementia to ground a study on PCDC. The following section will examine the literature on effective dementia communication strategies to provide further grounding to this thesis research.

Communication Strategies in Dementia

Definition of communication. Communication is defined as a complex process where information is exchanged (given and received) between two or more individuals. Effective transfer of information relies upon both verbal and non-verbal communication skills (Downs & Collins, 2015). Communication is a fundamental aspect of human social life as a means of expressing information, thoughts and feelings, and engaging socially with others for enjoyment. It has also been long-recognized as an essential aspect of optimal health care delivery and outcomes (Ryan, Meredith, MacLean, & Orange, 1995).

Communication competence relies on multiple areas of cognitive and social functioning. Expressive verbal communication is a function of our ability to understand language, plan and formulate speech, and then physically create the correct sounds and words. Receptive communication skills requires the ability to hear, see and process information, while recognizing and understanding speech and other non-verbal cues. As much of our attitudes and emotional

responses are communicated non-verbally, cues such as facial expression, eye contact, body language and tone of voice provide context and clarity to words that are spoken (Downs & Collins, 2015). Research has also suggested that non-verbal behaviours can play a relational role within a caregiving context. An earlier study by Caris-Verhallen, Kerkstra, and Bensing (1999) found that non-verbal behaviours such as eye contact, head nodding and smiling were used by nurses to establish good rapport and relations with elderly persons living in LTC and community settings.

Impact of dementia on communication. As a complex cognitive and social process, it follows that impairment to any area of the brain may have a significant impact on a person's expressive or receptive communication abilities. Due to the progressive neurodegenerative nature of dementia, individuals may experience numerous and varied language and communication difficulties depending upon the subtype and severity of dementia and presence of other sensory impairments (Downs & Collins, 2015; Lanzi, Burshnic, & Bourgeois, 2017; Williams, 2013). Research into language impairments exhibited in persons with dementia has noted difficulties in communication participation, specifically greeting, initiation, and attention to a topic of conversation. Changes in verbal communication included difficulties with language comprehension, word-finding, responding to open questions, and presenting new information. Non-verbal communication was affected to a lesser extent but difficulty was evident in the realms of affective expression and adapting to feedback (Rousseaux, Seve, Vallet, Pasquier, & Mackowiak-Cordoliani, 2010). Socially inappropriate and repetitive or disruptive vocalizations have also been documented as a dementia-related consequence in some individuals (Ryan et al., 2005).

Of importance to note, individuals with dementia retain many communication abilities and continue attempts to communicate with others both verbally and non-verbally as their condition progresses. Thus, viewing dementia-related communication changes from a deficits-based pathological framework is problematic and reductionist, as it can serve to further impede interaction opportunities and abilities (Savundranayagam & Moore-Nielsen, 2015). To promote a person-centred philosophy, enhancing communication in dementia care should support a strengths-based approach in which the abilities and needs of the person are considered within in an individualized and dynamic context (Downs & Collins, 2015; Lanzi et al., 2017).

Dementia communication strategies. Much attention has focused on examining the effectiveness of various dementia communication strategies for formal and informal caregivers. Evidence-informed guidelines (e.g. Harwood et al., 2012), toolkits (e.g. Kolher, 2004) and other online resources (e.g. Murray Alzheimer Research and Education Program, Alzheimer Society of Canada, etc.) have been developed with the aim to enhance interactions and communication between caregivers and persons with dementia. Over the past decade, six systematic reviews have been published that highlight effective caregiver dementia communication strategies, approaches and methods for translation of this knowledge to the practice setting, and resultant outcomes for individuals with dementia (Appendix B). Literature and review findings pertaining to these areas will be summarized below.

Effective communication strategies. Communication approaches in dementia can be categorized as general, verbal (language-based), paralinguistic and non-verbal strategies. General communication strategies in dementia relate to overall approaches that aim to establish and maintain a positive communication atmosphere. These include gaining the attention of the

person during conversation, being at eye level with the individual, reducing background noise, using active listening skills, addressing any sensory impairment that may impact conversation ability, and using visual cues/choices to promote understanding (Downs & Collins, 2015). The communication partner should also be respectful and aware of any stereotypical beliefs related to older adults or dementia that could impact the communication process. Elderspeak, an example of disrespectful or patronizing speech, can be exhibited by using a style of simplified speech and vocabulary (e.g. only using short words), diminutive terms (e.g. 'honey', 'dear'), and/or an exaggerated or inappropriate tone of voice (e.g. unusual emphasis or high pitched, as when speaking to a baby or young child) (Harwood et al., 2012). Research has documented the negative effect of elderspeak on residents in LTC. A study by Williams and colleagues' (2009) noted that residents with dementia were more than twice as likely to resist care or respond with aggression when providers used elderspeak communication compared to normal talk.

Theory-based verbal dementia communication strategies have been extensively discussed and reviewed in the literature (Downs & Collins, 2015; Harwood et al., 2012; Levy-Storms, 2008; Machiels, Metzelthin, Hamers, & Zwakhalen, 2017). These linguistic strategies have been summarized in Savundranayagam and Moore-Nielsen's work (2015) in examining effective language-based and person-centred dementia communication between care aides and residents in LTC (Table 4). Verbal strategies employ the use of language-based techniques to promote conversation reciprocity (e.g. taking turns, pausing to allow response, using choice questions), clarity (e.g. rephrasing, verbatim repetition) and continuity (e.g. encouragement to complete statements) (Harwood et al., 2012; Savundranayagam & Moore-Nielsen, 2015). Some review evidence exists for the effectiveness of certain verbal dementia communication strategies, i.e. use

of positive statements, one-step instructions, open-ended questions to promote information topics, validation/affirmation, and agreement (Levy-Storms, 2008). However, a recent review by Machiels and colleagues (2017) notes that, although several theory-informed verbal communication strategies exist, it is difficult to compare the impact of specific strategies on communication outcomes due to the methodical approaches and quality of research to date.

Paralinguistic dementia communication strategies concern how language is spoken and words are said within the context of conversation. It is noted that individuals with dementia retain their ability to process and understand tone of voice; therefore, it is recommended to use a soft, calm and positive tone during interactions (Harwood et al., 2012). Also, due to slower cognitive processing and reduced working memory, excessively slow speech should be avoided as the person with dementia may not have the ability to retain information long enough to comprehend the entire message (Harwood et al., 2012; Williams, 2013). Also, it is suggested that speech be clear and concise and the communication partner be aware of the presence of an accent or dialect that may impact comprehension on the part of the person with dementia (Downs & Collins, 2015). Despite the implied importance of paralinguistic strategies in dementia communication, none of the reviews conducted to date discussed evidence for these approaches specifically.

Aspects of non-verbal communication in dementia have also been an area of interest in the theoretical and interventional literature. Non-verbal communication can encompass eye contact, facial expression, body language and posture, gestures and use of space (Harwood et al., 2012). Evidence to support the use of certain non-verbal strategies within the context of

dementia communication has been documented. These include head nodding (Caris-Verhallen et al., 1999), affective touch (Levy-Storms, 2008), eye contact, and smiling (Caris-Verhallen et al., 1999; Levy-Storms, 2007).

Knowledge translation approaches for dementia communication. Communication training in dementia is felt to be an essential component of the education and competency development of direct care providers in LTC (Williams, 2013). To this end, four of the reviews pertaining to effective dementia communication strategies (Appendix B) addressed evidence surrounding the best approaches and interventions to translate this knowledge into direct care providers' practice. Regarding approaches for care providers, McGilton and colleagues' review (2009) suggested that an effective communication intervention should include three components: 1) cognitive, or teaching about communication approaches; 2) behavioural, encompassing the opportunity to practice the new skills and behaviour; and 3) psychological, the provision of ongoing support and encouragement. Vasse and colleagues' review (2010) provided further support for these educational components in that findings revealed the most effective training included active participation and individual attention with follow-up through a mentoring approach. A third review by Eggenberger and colleagues (2013), noted a multiplicity of dementia communication training methods and content. The authors also concluded that educational interventions were more effective and sustainable if combined with supportive measures, such as establishing an organizational culture supportive of communication (Eggenberger et al., 2013).

Two reviews investigated the effectiveness of specific dementia communication approaches and activities directed towards residents. Vasse and colleague's review (2010) found that the most effective communication with residents with dementia occurred during activities of *daily care* enacted by care providers or during *set-times* with a single-task intervention (e.g. one-on-one conversation, life review). Further, a review that sought to determine the effectiveness of methods to improve the verbal communication of individuals with Alzheimer dementia with their caregivers found that activity-based programs (e.g. breakfast/coffee clubs) and the use of memory books to stimulate topic conversation had the highest rated evidence of effectiveness (Egan, Berube, Racine, Leonard, & Rochon, 2010).

Outcomes of effective dementia communication. Most of the reviews pertaining to effective dementia communication interventions describe positive outcomes for both care providers and residents. From the perspective of the care provider, the most significant and consistent outcome was an increase in knowledge and demonstration of verbal and non-verbal dementia communication skills (Eggenberger et al., 2013; Machiels et al., 2017; McGilton et al., 2009; Vasse et al., 2010). Other positive outcomes for care providers included:

- Increased displays of warmth (McGilton et al., 2009);
- Less patronizing speech (McGilton et al., 2009):
- Increased involvement with the resident (McGilton et al., 2009; Vasse et al., 2010);
- Increased provider-resident cooperation (Vasse et al., 2010); and
- Increased satisfaction with the ability to communicate with individuals with dementia (Eggenberger et al., 2013).

Positive outcomes for residents were also noted from the dementia communication systematic reviews. These included improved topic maintenance during conversation (Egan et al., 2010), an increased responsiveness to the care provider (McGilton et al., 2009; Vasse et al., 2010), a positive effect on resident mood and affect (Vasse et al., 2010), and a decrease in behavioural responses related to anger and aggression (McGilton et al., 2009).

To review, this section highlights the impact of dementia on communication and the potential negative social and emotional consequences of impaired interaction and connection between LTC residents with dementia and care providers. The literature in this area describes a number of effective verbal and non-verbal dementia communication strategies and education approaches that can be referenced in the development of an evidence-informed communication intervention. However, of interest to this thesis project, none of the systematic reviews referenced in this section addressed the person-centred or relational aspects of effective dementia communication. Thus, the following discussion will aim to amalgamate aspects of these two bodies of literature to provide theoretical support for a study pertaining to person-centred dementia communication.

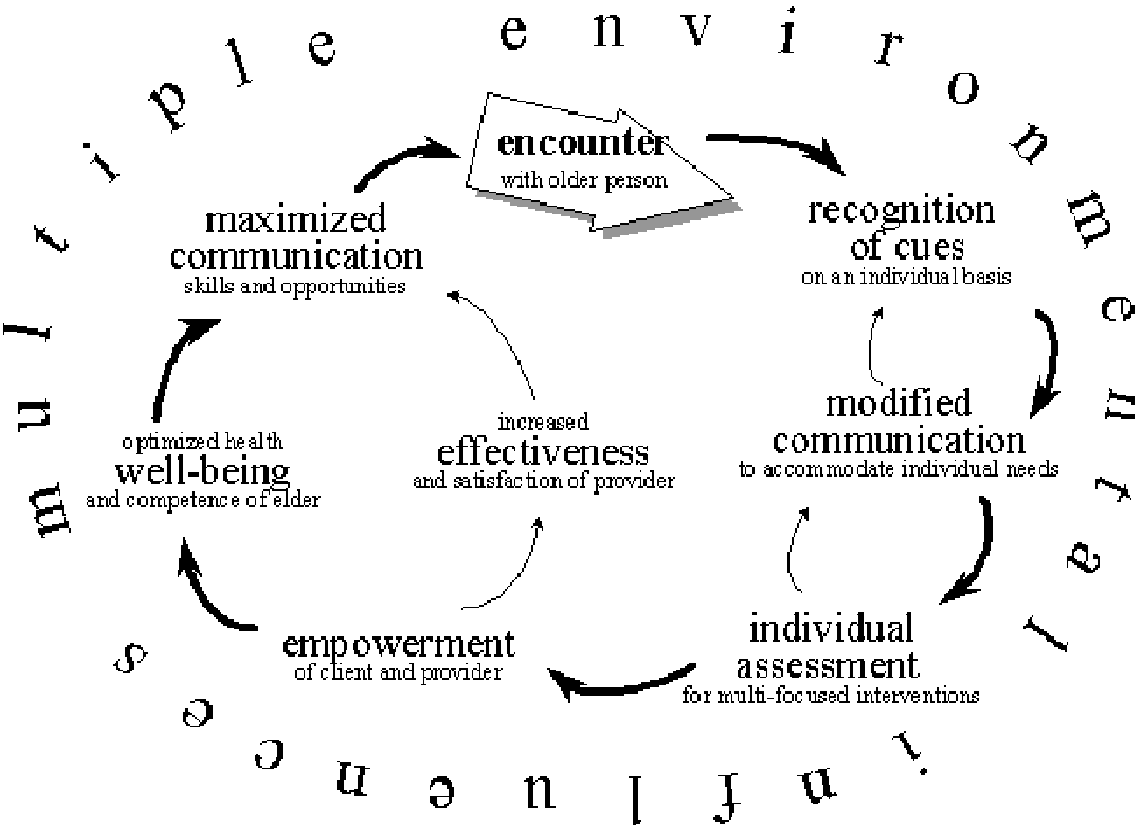
Person-Centred Dementia Communication

Components of person-centred dementia communication. Defining the characteristics of PCDC involves merging ideas and concepts from the PCCare and the dementia communication bodies of literature. As PCDC is felt to be a necessary operational component of person-centred dementia care (Brooker, 2007; Downs & Collins, 2015; Kitwood, 1997), efforts have been made by researchers to clarify the elements of PCCommunication within older adult

and dementia care contexts. Ryan and colleagues (1995), through their theoretical work on the Communication Enhancement Model (Figure 1), posited that, via an enhanced awareness of ageing and use of individualized assessment skills, HCPs appropriately modify their communication approaches using *socio-linguistic* accommodation strategies to match older adults' communicative abilities. Subsequently, a study conducted by Ryan and colleagues (2005) found that certain *relational elements* of person-centredness pertaining to communication, as defined by Kitwood's (1997) positive person work (Table 2), were evident in HCPs' affirming interactions with residents in long-term care (LTC). Savundrananyagam and Moore-Nielsen (2015) provided additional depth to this discourse by demonstrating effective communication in dementia consisted of an overlapping of *both* person-centred (relational) and language-based (linguistic) strategies. As such, it is theoretically surmised that the elemental components of PCDC can be described as a combination of linguistic strategies *and* relational approaches.

As discussed in the previous section, the linguistic elements of PCDC are defined as language-based strategies that promote goals of reciprocity, clarity/coherence and continuity when communicating with individuals who experience dementia (Table 4) (Savundrananyagam and Moore-Nielsen, 2015). Relational PCDC strategies are those that go beyond the functional aspects of communication to address personhood, inclusive of the individual's life history, values and preferences. Based on Kitwood's philosophy (1997), five of the ten indicators of positive person work (i.e. recognition, negotiation, validation, facilitation/collaboration) (Table 2) have been deemed relevant to person-centred conversation between staff and residents (Ryan et al., 2005; Savundrananyagam and Moore-Nielsen, 2015).

Figure 1 – Communication Enhancement Model



Ryan, E. B., Meredith, S. D., MacLean, M. J., Orange, J. B. (1995). Changing the way we talk with elders: Promoting health using the communication enhancement model. *International Journal of Aging and Human Development*, *41*(2), 89–107.

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Theoretical perspectives in person-centred communication. In consideration of extant theory that has been used to study PCCommunication in general, five theoretical perspectives emerged as relevant to this field of study. A summary of these perspectives based on the progression of theoretical work and thought is presented in Appendix C. Early theory offered a broad lens to study effective interpersonal communication between individuals from a socio-linguistic perspective (i.e. Coupland, Coupland, Giles, & Henwood, 1988). Subsequent developments have provided further theoretical refinements focused on describing effective communication between HCPs and specific populations of health service users, such as individuals experiencing aphasia (i.e. Kagan et al., 2008) and older adults (i.e. Dewar & Nolan, 2013; Ryan, Giles, Bartolucci, & Henwood, 1986; Ryan et al., 1995). The theoretical perspectives that have been used to study PCCommunication within a healthcare context imbue a collective assumption that effective and respectful communication is beneficial to both parties as it promotes quality interpersonal relations and excellence in care (Dewar & Nolan, 2013; Kagan et al., 2008; Ryan et al., 1986; Ryan et al, 1995). Conversely, ineffective and disrespectful communication can have negative individual consequences, such as loss of skills, abilities and confidence in relation to communication opportunities, as well as impact the potential to build meaningful relationships. Many of the theories share common outcomes including improved psychological well-being, increased opportunities for interaction and empowerment at the individual level. Healthcare provider outcomes include increased knowledge and skills in communication, a decrease in patronizing speech towards an older person, improved emotional response and increased work satisfaction. Shared system-level impacts include the creation of a positive communication climate and transformative efforts to reduce ageist views within

workplaces and society. As these theoretical perspectives were not originally intended to study PCCommunication within dementia specifically, they will be examined in further detail as to their contribution and applicability to this area of inquiry.

Theoretical perspectives in person-centred dementia communication. As described above, research suggests that quality PCDC encompasses both linguistic (language-based) communication strategies, as well as relational (person-centred) approaches (Kitwood, 1997; Ryan et al., 2005; Savundrananyagam and Moore-Nielsen, 2015). In critical review of the theories utilized to study PCCommunication within the healthcare context, a comprehensive theoretical approach that can sufficiently and concurrently address both elements of PCDC is lacking. To illustrate, each of the theoretical perspectives will be examined from this viewpoint.

The Aphasia Framework for Outcome Measurement (A-FROM) (Kagan et al., 2008), was developed to offer a broad, non-prescriptive organizing structure for the measurement of outcomes related to the experience of individuals with aphasia. Although the A-FROM allows for the inclusion of diffuse aphasia outcomes, such as communication participation, quality of life and psychosocial experiences, it does not have a strong linkage to a PCCare theoretical perspective. This would prove limiting in the ability to discern if effective staff-resident communication was deemed to be person-centred. Additionally, the A-FROM is focused on the experience of the individual and not the broader relational context, which is essential to a person-centred approach (Brooker, 2004, 2007; Kitwood, 1997).

Conversely, the Caring Conversations model (Dewar & Nolan, 2013) aims to articulate the interpersonal practices that support compassionate care and communication and focuses on

relational dimensions on conversation between HCP and individuals in care. Although this model has strong linkages to PCCare theory and the relational aspects of communication, it does not provide any theoretical support for linguistic communication strategies in dementia.

In consideration of Coupland and colleagues' work (1988), the Communication Accommodation Theory (CAT) assumes that communicators modify, or adjust their speech and non-verbal behaviours to each other based on individual values, perceptions and motivations. In other words, speakers *accommodate* their approaches based on *their belief* of the other persons' communicative capabilities (Coupland et al., 1988). Due to its duel socio-linguistic nature, CAT has the potential to serve a combined purpose of supporting both effective linguistic accommodation strategies, as well as the relational interactions required within PCCommunication. However, it lacks sufficient detail to distinguish between specific forms and strategies of linguistic and psychological accommodation (Farzadnia & Giles, 2015), particularly in the context of dementia.

Inspired by CAT, the Communication Predicaments of Aging Model (CPAM) (Ryan et al., 1986) asserts that the natural tendency for HCPs to accommodate their speech when conversing with older adults can be based on distorted perspectives of dependency and incompetence. Although the CPAM creates a mechanism to identify and create awareness of the communication predicaments associated with aging, it does not provide any theoretical or practical guidance as to how to break or reverse the cycle. It also neglects to address the broader environment or contextual considerations in which interactions and relationships occur; thus, does not offer insight regarding impacts on system- or policy-level changes to promote PCDC.

The Communication Enhancement Model (CEM) (Ryan et al., 1995) was introduced to address the communication predicaments and negative health outcomes outlined in the CPAM (Figure 1). Embedded within an action-oriented health promotion framework, the CEM aims to direct change at both the individual and system levels (Ryan et al, 1995). The model has also been positioned to provide a theoretical basis for enhancing communication strategies between HCPs and persons with dementia (Orange, et al., 1995). Establishing a link to person-centred dementia care and communication, the model promotes individualized assessment and knowledge of the person and their strengths. Therefore, individuals with cognitive impairment and diminished verbal communication abilities can also experience the benefits of positive, meaningful interactions (Orange et al., 1995).

In summary, the CEM appears to be best positioned to underpin a study examining HCA-resident communication research in LTC, as it has the potential to support successful linguistic *and* relational aspects of PCDC within a context of a supportive environment. This is evidenced through recent grounded theory research in LTC by Wolf (2017) that indicated when HCAs perceived the resident as a respected person with whom they had a relationship, they used communication enhancement strategies to meet individual physical and psychosocial needs. The only limitation noted is that the specific relational aspects of PCCommunication are not overtly evident in the CEM which would help guide the measurement and interpretation of communication interactions and outcomes. However, this limitation could be addressed by integrating the affirming interactions of Kitwood's PCCare found to be associated with PCCommunication (i.e. recognition, negotiation, validation and facilitation/collaboration) into the CEM. An expansion of this theoretical approach will be presented in further detail below.

Person-centred communication interventions. Despite the number of systematic reviews on the effectiveness of dementia communication interventions and strategies conducted over the past decade (Appendix B), none have addressed *person-centred* communication strategies specifically. However, interventions pertaining to PCCommunication and PCDC have begun to emerge in the literature over the past decade. Based upon McGilton and colleagues' (2009) taxonomy relative to the recommended components of communication education/interventions for HCPs in residential care settings (i.e. cognitive, behavioural and psychological), PCCommunication interventions from the recent literature will be examined as to their fidelity and effectiveness.

Single-component approaches. Existing examples of cognitive-style PCCommunication interventions most commonly include didactic communication training in the form of a workshop or series of training sessions that provide information on linguistic and relational aspects of PCCommunication. The VIPS communication skills training (Passalacqua & Harwood, 2012), based on the VIPS elements of PCCare (Table 4) (Brooker, 2007), and the Changing Talk communication training intervention (Coleman, Fanning, & Williams, 2015; Williams, Perkhounkova, & Bossen, 2016), are examples of a cognitive-only approach with the goal to enhance the PCDC skills of providers in LTC. These programs often use learning methods such as group-viewing of educational videos and analysis of communication breakdowns in video vignettes (of others) to enhance learning of instrumental and language-based strategies (Eggenberger et al., 2013; Levy-Storms, Harris, & Chen, 2016). Although it appears a cognitive-style approach to HCP communication skills training would be the most feasible, positive effects in relation to resident outcomes and staff behaviour change are mixed,

and review findings suggest education interventions are more effective and sustainable when combined with additional supportive measures (Eggenberger et al., 2013).

Multi-component approaches. In response to this limitation, other PCCommunication interventions have employed a multi-pronged approach. For example, an intervention that included a behavioural component to enhance learning and integration of PCCommunication skills added role playing to the didactic training (Grosch, Medvene, & Wolcott, 2008); whereas another approach addressed the psychological aspect by incorporating a supportive stress management component to the training program (Barbosa, Marques, Sousa, Nolan, & Figueiredo, 2016). Outcomes from these studies are also mixed with results ranging from some improvement in provider communication skills (Barbosa et al., 2016) to no differences post-intervention (Grosch et al., 2008).

Perhaps the most comprehensive PCCommunication intervention to-date is the patient-centred communication intervention (PCCI). The PCCI has been piloted (McGilton et al., 2010) and then employed within a larger study (McGilton et al., 2017) in a complex continuing care environment with individuals experiencing aphasia post-stroke. It has also been piloted in a LTC setting within the context of dementia care (McGilton et al., 2016). The PCCI is a multi-faceted intervention consisting of the development of individual communication plans, HCP education on individualized communication needs and theory-based PCCommunication strategies (cognitive component), and ongoing mentoring to support practice in the clinical setting (behavioural and psychological components) (McGilton et al., 2010; McGilton et al., 2017).

Results from the pilot projects and larger study suggest that the PCCI has a positive impact on both individual and staff outcomes.

Outcomes of person-centred dementia communication interventions. Despite the infancy of PCCommunication and PCDC interventional research, some positive outcomes have been realized in studies to date. The individual- (resident/patient), provider- and system-level outcomes of this growing knowledge base are summarized in Table 5. In alignment with the components of PCDC, these interventions appear to have an impact on both relational *and* communication outcomes for individuals within the caring dyad. Of interest at the individual level, research suggests that enhancing the PCCommunication skills of providers can improve a resident's quality of life (McGilton et al., 2016; McGilton et al., 2017), as well as their communication ability (McGilton et al., 2010) and confidence in their own communication skills (McGilton et al., 2017). Staff outcomes of note are enhanced learning (McGilton et al., 2010; Passalacqua & Harwood, 2010) and use of effective accommodation and communication strategies (Barbosa et al., 2016; Passalacqua & Harwood, 2010), as well as the potential to positively influence work-life factors, such as stress and burnout (McGilton et al., 2016). Preliminary evidence also suggests that a PCCommunication intervention holds promise of supporting PCCare at the system level through integration of person-centred principles and learning into daily practice (Grosch et al., 2008).

Table 5 – Outcomes of Person-Centred Communication Interventions

Individual (Resident)-Level	Provider-Level	System-Level
Relational Outcomes		
Enhanced psychological well-being/quality of life (McGilton et al., 2016; McGilton et al., 2017 **Less depressive symptoms** (McGilton et al., 2017 **Increased satisfaction with care** (Grosch et al., 2008; McGilton et al., 2017) **Improved quality of and satisfaction with provider relationships** (McGilton et al., 2010)	**Increased relational care/responses** (McGilton et al., 2010) **Reduction in depersonalization of residents** (Passalacqua & Harwood, 2010) **Increased hope for residents with dementia** (Passalacqua & Harwood, 2010) **Decreased work-life burden/strain** (McGilton et al., 2016)	**Integration of person-centred principles and learning into daily practice** (Grosch et al., 2008)
Communication Outcomes		
Increase in communication abilities (McGilton et al., 2010) **Increase in satisfaction with communication abilities** (McGilton et al, 2017)	**Increased knowledge about communication strategies** (McGilton et al., 2010; Passalacqua & Harwood, 2010) **Increased adherence to communication care plan** (McGilton, 2016) **Increased use of verbal communication strategies** (Barbosa et al., 2016; Passalacqua & Harwood, 2010) **Improved use of non-verbal communication strategies** (Barbosa et al., 2016; Passalacqua & Harwood, 2010) **Improved attitude towards communication with residents** (McGilton et al, 2010; McGilton et al., 2016)	

Limitations and gaps in the intervention literature. A question that arises when reviewing the interventional research to-date relates to deciphering the *most* effective method to teach and enhance PCCommunication and PCDC skills and approaches. It would seem that providing a multi-faceted approach to enhancing provider PCCommunication would produce stronger outcomes. However, the complexity as a result of multi-component interventions creates challenges in determining the effectiveness of the elements in comparison to, or in synergy with each other (Machiels et al., 2017). Most likely due to the fact that this is an emerging field of research, there have not been any comparison trials to test the effects of one PCCommunication strategy against another.

In review of the components and approaches of the PCCommunication interventions to-date, a significant limitation involves attention to the self-reflective aspect of learning person-centred approaches. As discussed above, promotion of person-centred behaviour or actions is facilitated through examining and reflecting upon personal beliefs and values about one's caregiving philosophy (Nolan et al., 2008; Viau-Guay, 2013). Although many of the prevailing PCCommunication interventions include analysis and critique of other's behaviours, it is unlikely that this technique allows for the self-reflective depth of one's own experiences required to facilitate deep knowledge transfer (Williams & Gallinat, 2011) and sustain behaviour change (Mann et al., 2009). Thus, it is hypothesized that an effective PCCommunication or PCDC intervention should include a mechanism to stimulate self-reflection on one's own interactions and behaviour. One such technique, video-feedback (VF), will be discussed in detail below.

Video-Feedback Technique

In consideration of the potential impact of VF techniques on improving PCDC outcomes, it is necessary to first examine the impact of audit and feedback techniques on HCP learning and behaviour change in general. The contextual and fundamental elements of VF and PCCommunication will then be explored and a linkage established between the two to offer support for use of this approach to enhance PCDC skills.

Audit and feedback strategies. Audit and feedback is a commonly employed strategy used to improve knowledge or performance. The process involves measurement, or *audit*, of an individual's performance and comparison to professional standards or a particular target. The results of the audit (i.e. *feedback*), are then provided to the individual in an effort to *close the gap* between current and desired performance (Hattie & Timperley, 2007; Ivers et al., 2012). The theorized underlying mechanisms of the audit and feedback approach in HCPs include; increasing recipient self-awareness and beliefs about current practice and subsequent clinical outcomes, improving self-efficacy and confidence in their ability to succeed, and changing perceived social norms by challenging the status quo and role modelling best-practice behaviours. It is assumed that through these means, HCPs become motivated to change their behaviour. A meta-analysis of the overall effect of audit and feedback on the professional practice of physicians, nurses and pharmacists indicated that the approach had a small but clinically significant increase in desired practice behaviours as evidenced by a 1.3% median increase for continuous outcomes and a 4.3% median increase for dichotomous variables. The review also found that feedback was most effective when HCP baseline performance was low

and when the feedback was provided by a supervisor or peer, more than once, and delivered in both written and verbal formats. Improved health outcomes for individuals seeking health services (e.g. improved management of chronic conditions, satisfaction with care) was also noted as a result of audit and feedback interventions directed towards the practitioners, with a median increase of 17% for continuous variables (Ivers et al., 2012).

Video as a feedback mechanism. VF arose from a marriage between the use of video medium in research, and education applications where video came to be used as a *feedback intervention* with the goal to improve the behaviours and skills of participants. It has been used in a variety of social and HCP education programs to improve holistic approaches, such as sensitivity and caring, or specific skills, such as interviewing and communication (Fukkink et al., 2011). VF is described as a procedure in which participants watch video-recorded examples of their *own* performance in a real-world or simulated encounter (Williams & Gallinat, 2011). Within the research context, VF is mostly enacted within a one-on-one setting between the participant and a facilitator (e.g. van Vonderen, Didden & Beeking, 2012). However, it has also been employed within a group context (e.g. Zijlmans, Embregts, Gerits, Bossman, & Derksen, 2011) and in a web-based format for self-review and critique (e.g.Van Weert, Jansen, Spreeuwenberg, van Dulmen, & Bensing, 2011). Some study protocols requested participants to conduct a specific task, for example completing a checklist or categorizing observations within a framework while watching the video to encourage focus on targeted behaviours or actions (Caris-Verhallen, Kerkstra, Bensing, & Grypdonck, 2000; Colemen & Medvene, 2013; Van Weert et al., 2011).

VF has demonstrated a significant positive effect in regard to improving professionals' communication skills with patients/clients/students. A meta-analysis of observational data conducted by Fukkink and colleagues (2011) found that VF had a medium aggregate effect size (0.40, $p<0.05$) on professionals' overall interaction skills. Their findings demonstrated that VF has a comprehensive impact on verbal (e.g. the content of what is said), paralingual (e.g. intonation, volume and speed of speech) and non-verbal (e.g. eye contact, body posture) aspects of communication with aggregate effect sizes of 0.42, 0.39 and 0.35 respectively. Additionally, VF was also found to have a positive influence on relational communication skills (e.g. displaying empathy and interest in the other's experiences) with an effect size of 0.35 (Fukkink, et al., 2011).

Of interest, many of the HCP-related VF studies to date lack theoretical grounding. However, a popular methodology of European origin entitled Video Interaction Guidance (VIG) that focuses on improving relationships through attunement to interaction, is based upon change theories that explain learning and behaviour transformation through self-awareness and empowerment, and theories of intersubjectivity that focus on interaction and relationships between individuals (Cross & Kennedy, 2011). These theoretical insights will be woven throughout the discussion below and highlighted using empirical examples.

Video-feedback and person-centred dementia communication. To highlight the foundational aspects of a person-centred approach, the VIPS mnemonic (Brooker 2004; 2007) (Table 3) will be used as an organizing framework to outline how VF can improve the relational aspects of PCCommunication. To address the linguistic component of PCCommunication, the

ability of VF to support language-based strategies will also be discussed. Examples will be drawn from the extant empirical literature on VF to support these arguments.

Of importance to note at this juncture, upon review of the literature pertaining to HCP-oriented outcomes of VF, very few studies have been conducted in LTC, and only one descriptive study was located that addressed the use of VF in HCPs caring for people with dementia (e.g. Hansebo & Kihlgren, 2001). However, there appears to be growing body of literature examining the use of VF to enhance the communication skills of HCPs working with individuals with intellectual disabilities (ID). To provide empirical support for application of VF within the context of dementia care, numerous parallels can be drawn between these two populations. First, both are considered vulnerable groups due to cognitive support needs (Romanchuk, 2008), and care of this nature requires effective PCCommunication approaches (Coleman & Medvene, 2013). Second, often research and care conducted for both groups occurs within a residential setting where similar organizational cultures and power relationships exist between residents, staff and management, creating the potential to impact care and relational outcomes (Stanyon, Griffiths, Thomas, & Gordon, 2016). And lastly, the desire to adopt a person-centred approach is evident within both the ID and dementia care milieux (Harding et al., 2015; James, Hall, Lombardo, & McGovern, 2016).

Relational communication strategies.

V - Value the person. Value for each person regardless of age, cognitive ability or condition is a fundamental tenet of person-centred philosophy (Brooker, 2007). Within the context of dementia, this translates into recognizing and emphasizing the *person* first, not the

dementia. A PCCare approach has been described as paying attention to individuals' holistic needs, including relational and emotional aspects in addition to physical care needs (Kitwood, 1997). Although research does indicate affective and relational strategies are present in HCP communication, they are less frequent (Wilson et al., 2013) and lack the depth to offer adequate emotional support and foster the development of relationships. Thus, it has been recognized that there is a need to augment HCPs' communication skills and shift from a limited affective approach to one of a relational nature in concert with person-centred principles (Carpiac-Claver & Levy-Storms, 2007). As such, an opportunity exists to enhance the quality of interaction between HCPs and persons with dementia by embedding relational communication strategies in daily care activities (Vasse, Vernooij-Dassen, Spijker, Rikkert, & Koopmans, 2010).

Transforming communication from a task-based approach to a relational person-centred exchange requires the acquisition of knowledge and skills to support changes in caregiving approaches and behaviours. However, it has been suggested that education and training alone is insufficient to realize change in HCP behaviour (Berkout, Boumans, Mur & Nijhuis, 2009; Eggenberger et al., 2013; Nolan et al., 2008). For a person-centred intervention to be effective in changing behaviour, it must also influence an individual's core values and deeply embedded paradigms (Finlay et al., 2008). Research that examined the transfer of PCCare into LTC practice found that the philosophy's principles were in conflict with some HCPs' personal beliefs and values. Thus, in addition to education, transformation strategies must also include a values-based approach in which HCPs have an opportunity to reflect and act upon their current beliefs and values about care provision (Viau-Guay et al., 2013).

Emerging evidence from the literature provides support for VF to create a values-based change in HCPs who are exposed to this approach. A qualitative exploratory study that examined autism care providers' response to a VF intervention found that staff members exuded an increased awareness of person-centredness that extended beyond functional communication skills into their core beliefs and perspectives about the individual as a person. The staff reported that this heightened awareness had led to changes in their behaviour and practice in both specific and generalized situations (James, Hall, Phillipson, McCrossan, & Falck, 2012). Additionally, a follow-up longitudinal study by James and colleagues (2016) within the same study population provides further support in that participants displayed a change over time in regard to their perceptions of the clients. Pre-VF themes suggested staff viewed the individual as characterized by autism (i.e. by their behaviours or triggers), while post-VF interviews reflected seeing the individual as a person, "just like themselves" (James, et al., 2016, p. 118). Participants indicated that these new insights would stimulate positive future behaviour change (James et al., 2016).

The next logical question to entertain is *how* VF enacts a values-based change. To this end, it is theorized that VF can stimulate effective self-reflection and reflective practice (Strathie, Strathie, & Kennedy, 2011). Reflection has been described as "purposeful critical analysis of knowledge and experience in order to achieve deeper meaning and understanding" (Mann et al., 2009, p. 597). Self-reflection involves an internalized focus where an individual evaluates their own thoughts and behaviours against a standard and a judgement is made as to any discrepancies that exist (Gerace, Day, Casey, & Mohr, 2017). Reflective practice involves using reflection as a tool for examining experiences with the purposes of learning and to improve current or future practice and outcomes. The mechanism of reflection is based upon four theoretical

assumptions: 1) learning from one's experiences is crucial in the development and maintenance of professional competence; 2) development of professional competency also involves understanding and integration of one's person attitudes, beliefs and values; 3) building a professional knowledge base involves active approaches to learning; and 4) these capabilities will result in a professional who is self-aware and able to undertake self-assessment and correction (Mann et al., 2009). Evidence suggests that HCPs use reflection as a tool to self-assess and improve practice (Ivers et al., 2012), and reflective practice is a skill that can be learned and developed (Mann et al., 2009).

In relation to these above assumptions, is believed that VF's ability to create a culture of reflective learning is enacted in several ways. First, self-video enables the participant to direct attention toward themselves and raise awareness to allow a comparison between the perceived self and qualities associated with an ideal self (Cross & Kennedy, 2011). This perspective offers a more generalized interpretation of a situation, revealing subtleties within interaction and tacit ways of being that otherwise may go unnoticed as a function of routines and unquestioned social norms (Bickerton, Procter, Johnson, & Medina, 2011; Fukkink et al., 2011). Mounting evidence suggests that VF has this *awareness-raising* effect on HCPs (Hansebo & Kihlgren, 2001; James et al., 2016; Marita, Leena, & Tarja, 1999) and that all HCPs, regardless of role and education level, are able to engage in reflection (James et al., 2016). This has relevance in relation to the use of VF within the study setting, as the majority of unregulated LTC aides providing care for residents with dementia have limited formal education (Estabrooks, Squires, Carleton, Cummings, & Norton, 2015). Second, in regards to the impact of VF on personal values and emotions, study participants have reported that the intervention caused them to become more

aware of their inner feelings toward the individuals they were caring for and ultimately influenced their own caring philosophy to one of respect and value for the person (Hansebo & Kihlgren, 2001; James et al., 2016). Third, VF builds on the principles of adult learning in that it promotes an active, reflective, and self-directed approach to professional and personal development (Strathie et al., 2011). And lastly, there is growing evidence to suggest that VF promotes critical self-assessment of HCP practice and communication skills (Caris-Verhallen et al., 2000; Hansebo & Kihlgren, 2001; James et al., 2016).

The value-based element of a person-centred philosophy extends beyond the individual with dementia to also acknowledge the HCP as one to respect and value within the context of dementia care (Brooker, 2007; Kitwood, 1997). Thus, it is important to consider if VF has an effect on HCP work life indicators. Because of heightened awareness and relational efficacy, it has been hypothesized that participation in a VF approach would result in increased work life satisfaction and feelings of well-being for HCPs (Cross & Kennedy, 2011; James et al., 2016). Although evidence is limited in relation to actual workforce development, there is some indication that VF has a positive impact in this area. As an example, it is theorized that positive VF experiences are an effective means to enact change by bolstering self-efficacy and empowering HCPs through enhancement of their interaction skills, affording more opportunities for successful encounters within the workplace (Cross & Kennedy, 2011; Fukkink et al., 2011). To this point, a recent qualitative study by Hall and colleagues (2016) that examined the effect of a VF implementation within an autism care organization, found evidence of staff empowerment as an outcome. The VF intervention contributed towards empowering individual HCPs within their role; however, the empowerment effects reached beyond the personal level resulting in peer

advocacy for the intervention within the organization. Findings also indicated that the principles gleaned from the VF approach had diffused into other interactions within the organization (i.e. with peers and managers) (Hall, Finch, Kolehmainen, & James, 2016). Also, LTC HCP reports indicate that VF allowed for an understanding of the value and importance of their work to vulnerable residents, which in turn enhanced feelings of work life satisfaction and happiness (Hansebo & Kihlgren, 2001). Thus, it appears that VF may have the capacity to promote the person-centred principles of *value* and *respect* from the perspective of the HCPs.

I - Individual approach and care. Treating a person with dementia as a unique individual with distinct needs and recognizing that this will impact their response to dementia and care, is the next element to consider within the PCCare framework (Brooker, 2007). In review of relevant VF literature, a potential linkage to support individualized dementia care is noted in relation to enhancing HCP understanding and reaction to responsive behaviours. As the impairment of verbal communication skills accompanies the progression of dementia, individuals often communicate their needs via outward behaviours and non-verbal actions (Downs & Collins, 2015; Lanzi et al., 2017). Effective PCCommunication approaches are essential in HCPs' ability to recognize and respond to communication attempts in this form (Brooker, 2007; Kitwood, 1997).

In studies within the ID population, it is suggested that VF is effective in this behavioural context in that it allows an opportunity for the person to be viewed as an individual who is capable of communicating, which gives rise to a deeper understanding of the physical and relational aspects that underpin behaviours (James et al., 2016). An empirical example involves

a study by Embregts (2002) who investigated the effect of a VF training program for children and HCPs within a residential ID care setting. Study findings indicated that staff training with VF resulted in a decrease in the number of responsive behaviours exhibited by some children, and increased the mean percentage of appropriate HCP responses to behaviour from approximately 17% to 39% (Embregts, 2002). Additionally, an experimental study conducted by Zijlmans and colleagues (2011) found favourable outcomes in relation to enhancement of residential ID HCPs' emotional intelligence (EQ) as a result of an intervention combining EQ training with VF group sessions. The authors suggest that this finding is relevant to behavioural care in that as HCPs become more aware of their own EQ and how their interactions affect the residents, they become more understanding as to the underlying cause of responsive behaviours and less controlling in their actions (Zijlmans et al., 2011).

A study by Gerritsen and colleagues (2018) that utilized a video-feedback at home (VFH) intervention to improve the well-being of informal caregivers and persons with dementia by training the caregiver to communicate effectively also suggests some positive findings in respect to the reduction of responsive behaviours. As measured by the Cohen-Mansfield Agitation Inventory (CMAI), compared to pre-intervention measurement responsive behaviours decreased significantly (total CMAI score and the restlessness subscale score) after the caregivers were exposed to the VFH communication training intervention (Gerritsen, Koopmans, Walravens, & van Vliet, 2018)

P – Perspective of the person with dementia. The ability to understand the perspective of the person with dementia and acknowledge their reality is the third person-centred element to

consider in respect to VF and relational aspects of PCCommunication (Brooker, 2007). To effectively see the world through the eyes of the person with dementia, HCPs must be able to place themselves in the position of the person and to consider decisions and actions from their point of view (Brooker, 2007; Kitwood, 1997). As VF offers a new vantage point from which to view an interaction, it provides the time and space to consider a different outlook. As such, the potential impact of VF to enhance empathy and the empathic responses of HCPs will be examined in relation to PCCommunication.

Empathy is a complex concept that has been the subject of great interest and debate within the psychology and health-related disciplines. An antithesis to the human tendency toward egocentrism, it is said to offer a bridge between the entities of self and other as it "involves the transformation of the observed external experiences of another person into a response within the self" (Davis & Begovie, 2014, p111). Empathy has been described as an imaginary process of entering into another person's world, or walking in another's shoes. It is viewed within the context of relations between individuals and involves an objective, non-judgemental psychological process (Lobchuk, 2006). Empathy is also felt to be multidimensional in nature, consisting of cognitive, affective and behavioural elements (Devoldre, Davis, Verhofstadt, & Buysse, 2010). It is considered a cognitive phenomenon in that a person undergoes a mental process in an attempt to understand another person's thoughts and feelings. The term perspective-taking (or role-taking) is often used to describe this cognitive empathic process (Lobchuk et al., 2016). It has also been acknowledged that empathy consists of an affective element in which the observer may experience an emotional reaction in response to the event or experience that is similar to the other person. The behavioural aspects of empathy

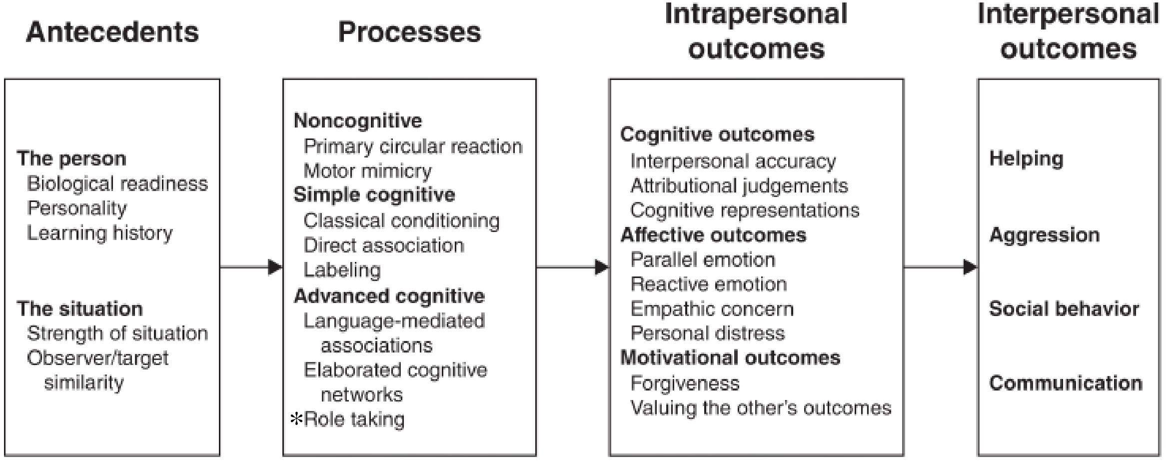
are the outward social behaviours or outcomes that occur in response to the cognitive and affective processes. These responses may be positive and include actions such as supportive helping behaviours or enhanced communication. Conversely, the result of the empathic process could entail negative behaviours such as aggression or conflict (Devoldre et al., 2010).

To enhance conceptual clarity, Davis (1994) and Davis & Begovie, (2014) have offered a model that outlines the constructs believed to influence how this empathic transformation occurs (Figure 2). Antecedents describe the characteristics of the person and the situation that influence the empathic episode. Processes refer to the specific mediums in which empathic outcomes are produced, i.e. non-cognitive, simple cognitive, and advanced cognitive mechanisms, the latter inclusive of perspective-taking. In the model, outcomes of an empathic response are delineated into intrapersonal and interpersonal categories. Intrapersonal outcomes may include cognitive indicators such as empathic accuracy, affective responses including empathic concern or compassion, and/or motivational outcomes, an example being forgiveness towards a transgressor (Davis, 1994; Davis & Begovie, 2014).

In turning to the VF-enhanced communication literature, it is noted that empathy or perspective-taking were mentioned in three of the studies reviewed (i.e. James et al., 2016; James et al, 2012; van Weert et al., 2011). These findings were discussed as an outcome of the VF intervention without a linkage to empathy theory or discussion as to the process which enabled the empathic response to occur. In consideration of the potential theoretical alignment between the linguistic and relational aspects of PCCommunication outlined above, and the cognitive,

affective and behavioural dimensions of empathy, findings in the VF literature will be reviewed in further depth in relation to these domains.

Figure 2 – Davis' Model of Empathy-Related Phenomenon



* Role-taking is synonymous with the term perspective-taking

Davis, M. H., & Begovic, E. (2014). Empathy-related interventions. In A.C. Parks, & S.M. Schueller (Eds.), *The Wiley Blackwell Handbook of Positive Psychological Interventions* (1st ed., pp. 111–134). John Wiley & Sons, Ltd.

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Perspective-taking is felt to be the most complex of the empathy-related cognitive processes as it involves attempts by an individual to understand and imagine the other's perspective of an experience (Davis & Begovie, 2014). Perspective-taking requires a sequence of psychological steps: 1) recognition of one's own viewpoint in response to the situation; 2) a deliberate effort to control one's viewpoint from impacting on inferences about the other's perspective 3) imagination of the other's perspective (inference); and 4) validation of one's inference (Lobchuk, 2006). Perspective-taking is a mental process that results in empathic

outcomes such as an accurate understanding of another's perspective, or meeting communication goals (Davis & Begovie, 2014; Lobchuk, 2006). In turning to the ID literature, preliminary evidence suggests a shift in perspective-taking, in which HCPs were able to recognize and integrate the other person's perspective as a result of VF. James and colleagues (2012) interviewed HCPs about their experiences following a VF intervention and participants reported that the technique caused them to consider how the other person might be thinking and feeling during interactions. This suggests a process of cognitive empathy (perspective-taking); however, the authors did not identify it as such or provide any insight as to how this occurred within the HCPs' thought processes. A follow-up longitudinal study by James and colleagues (2016) that compared themes in HCP interviews pre- and post-VF (Video Interaction Guidance) noted that the biggest impact of the intervention was an increase in client perspective-taking by the providers. Again, additional clarification of the cognitive process or linkage to empathy literature or theory was not offered. However, the authors suggest that an increase in perspective-taking would lead to a deeper understanding of the relational aspects that underpin a person's behaviour, suggesting this cognitive process gives rise to empathic behavioural outcomes (James et al., 2016).

Affective empathy or the study of emotional empathic responses relative to VF or communication interventions is an area that is not well developed in the literature. The study by Zijlmans and colleagues (2011) that employed EQ training followed by group VF sessions provides some preliminary insight into the potential effects of VF on the dimension of affective empathy. Although the study did not examine affective mechanisms or specific intrapersonal outcomes, such as parallel emotions or empathic concern, analysis of the EQ subscale scores

revealed a significant reduction in the stress management capability indicators (Zijlmans et al., 2011). This suggests a potential relationship between the intervention and reduction of personal distress (e.g. anxiety or tension) that is cited as a self-oriented negative emotional response that HCPs may experience as a result of witnessing the suffering of another person in their care (Davis & Begovie, 2014; Lobchuk, 2006). Also of research interest within in this context may be exploration of a connection between HCPs' increased awareness of their EQ and its impact on their own and other's behaviour (Zijlmans et al., 2010) and additional affective intrapersonal outcomes, such as parallel emotions and empathic concern (compassion), and interpersonal outcomes such as the linguistic and relational aspects of effective communication.

In the ID literature, there is some indication as to the influences of VF on behavioural empathy, or empathic interpersonal and communication outcomes. Specific behavioural improvements through understanding the person's perspective included a better appreciation of the nuances of verbal and non-verbal communication efforts (James et al., 2012), recognition of individual preferences (Finlay et al., 2008), an understanding of the meaning behind behavioural responses (James et al., 2016), and reflection as to how the HCP might adjust their behaviour in the future (James et al., 2012). HCP-reported relational outcomes of this change in perspective resulted in a re-balancing and a sense of equal participation in conversations and development of a stronger relationship with the person (James et al., 2012). It has also been suggested that HCP awareness of the client's perspective results in empowerment for the other as well as respect for their personal choices (Finlay, 2008).

In addition, experimental study findings also provide evidence of empathic behavioural outcomes as a result of a VF intervention to enhance communication. A randomized controlled trial conducted by van Weert and colleagues (2011) evaluated the effect of a multi-component intervention involving web-enabled VF, training and practice/feedback opportunities on oncology nurses' communication skills pertaining to older adults with cancer. The study findings indicated that the intervention was effective for increasing affective communication skills (as characterized by showing empathy, giving emotional support and listening) for the nurses in the treatment group (van Weert et al., 2011). And more recently, a pilot study sought to investigate the effect of an intervention, comprised of instruction on self-reflection and how to perspective-take, practice opportunities, and a VF session, on improving empathic responses in nursing students interacting with informal carers about their health-risk behaviours. Thematic analysis of the carers' responses noted that the students' approach was well-received in that they were non-judgemental and inquisitive in their interactions, allowing the carers to gain new insights into their health-risk behaviour (Lobchuk et al., 2016).

In summary, in consideration of the theoretical works pertaining to empathy, perspective-taking and PCCommunication, key commonalities between these concepts exist that has not yet been clearly identified within the extant literature. First, both approaches represent a pathway to unite the separate perspectives and entities of the self and other. PCCommunication is optimally facilitated within a context of relationship and mutual respect for the other (Brooker, 2007; Kitwood, 1997), as is the case with empathy, as evidence suggests that efforts to enhance empathic responses are most effective when directed towards a person that is psychologically close (Davis & Begovie, 2014). Secondly, the role of a person-centred approach to

communication within the empathy pathway appears to have a critical and reciprocal function. To illustrate, having knowledge of a person to enable understanding of their perception of an experience is a precursor to effective perspective-taking (Lobchuk, 2006). It is hypothesized that this is supported through person-centred and relational communication approaches that facilitate getting to know and understand the person as a unique individual. Further, it has been suggested that by undertaking the deliberate process of perspective-taking, care providers' communication competence can potentially improve (Lobchuk, 2006), thus suggesting that empathic communication (facilitated by person-centred approaches) is also a desired outcome or goal of cognitive empathy. It does not appear that these theoretical linkages have been established within either the PCCommunication or empathy literature, yet provide a novel dimension to the study of PCCommunication that begs an opportunity for further exploration.

S - Supportive social environment. A social environment that supports person-centred dementia care recognizes the human need for meaningful relationships and provides opportunities for socialization and personal growth in alignment with the person's abilities (Brooker, 2007; Kitwood, 1997). Upon review of the literature, some evidence exists as to the role of VF in the development and maintenance of a supportive social environment at the interpersonal and community levels.

As a person-centred dementia care approach maintains that one's life and experiences are grounded in relations with others (Brooker, 2007; Kitwood, 1997), an intervention that aims to enhance communication must be also be theoretically situated to support relationship development and interconnectedness (Alsawy, Mansell, McEvoy, & Tai, 2017; Cross & Kennedy, 2011). Findings from studies within the ID and dementia care settings reveal that

improved quality of relationships was indeed an outcome of VF approaches due to the development of closer relationships and personal connections between caregivers and individuals in their care (Gerritsen et al, 2018; James et al., 2012). In further support, a quasi-experimental study that examined the effects of a VF program for caregivers of children and adults with visual and ID in a residential setting found that the intervention had a significant improvement on the quality of interactions with residents. This was specifically demonstrated through video observations of an increased proportion of resident initiatives responded to by the caregiver, and improved affective mutuality, or an increase in reciprocal sharing of experiences and emotions (Damen, et al., 2011). And lastly, an experimental study conducted in two LTC homes that employed a multi-faceted intervention comprised of instruction, video biographies of residents, and VF with discussion for care aides working with residents (without significant cognitive impairment) reported that the strongest effect was an increase in resident-reported relationship closeness with the staff. HCP–reported closeness also increased at both homes and there was evidence to suggest that resident and HCP satisfaction with the relationship increased after the intervention (Coleman & Medvene, 2013). These studies suggest that VF has a promising impact on the ability to foster PCCommunication and interpersonal relationship processes that are built upon trust, mutuality and interdependence.

From a systems perspective, to support PCCare and PCCommunication at the direct care interface, the impact at the broader community level should also be considered. Creation of an organizational culture that supports and fosters the growth of person-centred approaches is felt to be a significant factor for implementation success (Forsgren, Skott, Hartelius, & Saldart, 2016; Harding et al., 2015; Stanyon et al., 2016). Again, the VF literature shows promise in this

regard. First, just as VF offers a new perspective in which to view everyday interactions between HCPs and persons in care, it offers a framework to help individuals within an organization to see things differently and to work collectively toward transforming institutional culture (James et al., 2012). Second, VF can provide insight into how organizations and staff can collaboratively transform service structures and routines that provide enhanced opportunities for individual choice and community involvement (Finlay et al., 2008). And third, in the spirit of fostering care partnerships, as VF is felt to be a medium appropriate for the public as well as professionals, it may provide a unique opportunity for HCPs, residents and families to improve PCCommunication together (Bickerton et al., 2011).

To review, there are many parallels that can be drawn between the research describing the impact of VF on care providers' communication and relational skills to the central proponents of a person-centred dementia care approach. This body of literature provides support for the use of VF in the enhancement of providers' relational communication skills and behaviour. Attention will now be directed towards exploring the means in which VF has the potential to enhance the linguistic aspects of PCDC skills development.

Linguistic communication strategies. Effective PCDC also involves knowledge and execution of ability-appropriate linguistic communication strategies (Table 4). As mentioned previously, meta-analysis evidence indicates that VF is effective in generally improving these communication skills in professional settings (Fukkink et al., 2011). Specific examples of language-based skills acquisition from the VF literature will be reviewed, as well as VF's ability to deliver effective feedback to enable these outcomes.

Language-based skills acquisition. Three studies that examined the effect of VF on nurses' communication provide evidence in support of VF improving linguistic skills. An earlier experimental study of nurses working with older adults in community and LTC settings found that nurses provided more information and used more open-ended questions after receiving a VF intervention that was composed of communication skills training and six small-group VF sessions (Caris-Verhallen et al., 2000). van Weert and colleagues' (2011) study in an oncology setting found that VF training had a significant impact on the nurses' generic communication skills such as adapting information and delivery methods to suit the individual's situation and preferences. A third study that investigated the impact of a VF intervention on the generic communication skills of primary care nurses also found evidence of improvement. Nurses were more attuned to individuals' requests for assistance and gave more understandable information (Noordman, van der Weijden, & van Dulmen, 2014). Although the majority of these studies were conducted in other settings, parallels can be drawn between these linguistic outcomes and PCDC strategies in that ensuring the delivery and receipt of meaningful, understandable information tailored to the individual's needs is a relevant approach within the population of interest (Downs & Collins, 2015; Harwood et al., 2012; Williams, 2013).

Provision of effective feedback. The provision of meaningful feedback is an integral component of skills and practice development (Ivers et al., 2012).VF is an effective strategy to deliver impactful feedback to participants (Cross & Kennedy, 2011; Fukkink et al., 2011). A meta-analysis of feedback outcomes within teaching-learning environments revealed that effective types of feedback provide cues or reinforcement to learners. The most powerful feedback strategy was video-assisted feedback (Hattie & Timperley, 2007). Additionally, in

alignment with the effectual feedback attributes outlined in Ivers and colleagues' (2012) meta-analysis, VF can be provided by a facilitator or peer, in written and/or verbal formats, and over a series of sessions based on the HCP's learning needs (Fukkink et al., 2011). As such, VF provides a flexible feedback intervention that has been utilized across a variety of health settings with promising results in relation to enhancing the linguistic and relational elements of PCCommunication.

In summary, as the theoretical and interventional work above indicates PCDC consists of both linguistic and relational approaches, and empirical evidence suggests that VF enhances both language-based and relational skills (Fukkink et al., 2011), a linkage can be established. Thus, it is surmised that VF would be an effective self-reflective technique to enhance the PCDC skills and behaviours of LTC providers.

Health Care Aides in LTC

Health care aides are a significant contributor to the LTC workforce, providing 75 to 80% of direct care to residents in Canadian LTC homes (Berta et al., 2013; Estabrooks et al., 2015). As this study's outcomes will primarily be focused on HCA communication skills development, the demographics, educational preparation, work-life experience and care approaches of this fundamental group of care providers will be examined in further detail.

Definition of HCA. In Canada, care aides are an unregulated workforce and are considered paraprofessionals, working under the supervision of a licenced healthcare provider (Berta et al., 2013; Browne & Braun, 2008). Care aides working within the Canadian LTC

sector are identified by numerous titles, namely, Personal Support Worker (Ontario, New Brunswick), Resident Care Attendant (British Columbia), Resident Care Worker (Quebec), Nursing Aide (Yellowknife), Continuing Care Assistant (Saskatchewan and Nova Scotia), Personal Care Attendant (Newfoundland) and Health Care Aide (Alberta and Manitoba) (Hewko et al., 2015). As this thesis research will be conducted within the Manitoba PCH context, *health care aide* will used as the referent terminology.

The exact size of the HCA workforce in Canada is unknown due to the fact that there is no regulatory process or body in place to monitor the labour supply (Berta et al., 2013; Estabrooks et al., 2015). In an effort to move towards regulation, some provinces have instituted mandatory or voluntary care aid registries. In 2010, British Columbia established a mandatory registry for care aides working in publicly-funding LTC homes. Ontario established a mandatory registration for community-based care aides in 2012 with plans to expand to care aides working in all sectors in 2018. Nova Scotia instituted a voluntary care aide registration process in 2010 and Alberta initiated an employer-implemented directory of care aides in 2011 (Estabrooks et al., 2015). At the current time, Manitoba does not have regulatory process, registry or directory of HCAs working in the province.

Based on an international review of the overall HCA workforce literature (Hewko et al, 2015), the role of HCA was felt to be unclear with wide variation in duties, responsibility and level of autonomy. HCA-assigned tasks fell into five categories: physical tasks, resident/patient contact tasks, non-resident/patient contact tasks, clerical/administrative tasks, and tasks similar to licensed nurses (i.e. delegated tasks, such as medication administration, vital sign assessments,

etc.). Resident-patient contact tasks such as personal care and meal assistance were found to be the most frequently cited (Hewko et al., 2015). In Canada, role-required behaviours of HCAs typically include assisting residents with ADLs, such as bathing, dressing, eating, continence care and mobility. Increasingly, HCAs are also relied upon for extra-role behaviours that go above-and-beyond meeting physical care needs, including the provision of emotional support and engaging residents in leisure activities (Berta et al., 2013).

Profile of HCAs. A profile of HCAs working in Western Canadian LTC homes has been put forth by Estabrooks and colleagues (2015). Their study of the characteristics of HCAs working within a representative sample of 30 urban LTC homes in Alberta, Saskatchewan and Manitoba provided some descriptive insight into this workforce. Overall results of survey data from 1,381 HCAs across the three provinces suggested that care aides tended to be female (92.5%) and middle-aged (65.2% over the age of 40) with a high school-level education (92.7%). The majority (83.6%) also had a health care aid certificate. Over half (60.2%) were not born in Canada and 48.8% reported they did not speak English as their first language. On average, the participants had worked 10.6 years as an HCA. They also reported experiencing an average of three different types of dementia-related responsive behaviours during their past week of work (Estabrooks et al., 2015). This Canadian data parallels national trends in the United States LTC workforce, where foreign-born women also provide a significant amount of direct care to LTC residents (Browne & Braun, 2008).

In the same Canadian study, indicators for the Manitoba respondents were similar in regards to gender (89% female), age (67.5% over the age of 40) and high school-level education

(94.3%). A higher percentage of respondents reported holding an HCA certification (92.6%). Of note, more Manitoba HCAs were born outside of Canada (72.3%) and did not speak English as a first language (58.9%) compared to the overall average across the three provinces (Estabrooks et al., 2015). Based on this profile, interventions developed to enhance PCDC knowledge and behaviour must consider the HCA participants' educational preparation and language abilities, as well as be sensitive to ethnic and cultural influences on communication with residents (Browne & Braun, 2008).

Education and training. Increasing emphasis on quality care, performance measurement and collaborative care in LTC has led to higher expectations in regard to the competencies, skills and critical thinking abilities of HCAs. However, system-level education requirements and supports for HCAs have not kept pace with their evolving role (Berta et al., 2013). In regard to entry-level training, there currently is no national minimum education standard for HCAs (Berta et al., 2013); although most provinces and jurisdictions require HCAs to hold a vocational- or college-level care aid certification. Provincial care aide program curricula are defined in some provinces, while other jurisdictions have adopted a list of approved HCA programs based on the educational institution-approved curricula. This results in significant variation in the entry-level preparation among HCAs across the country (Estabrooks et al., 2015).

Within Manitoba, provincial-level HCA curricula have not been developed. However, the Winnipeg Regional Health Authority provides an annual listing of approved HCAs programs within the province that are deemed acceptable. To work as a HCA in a Winnipeg PCH, an

individual must have completed a certificate in one of the approved programs (L. Lamont, personal communication, February 28, 2017) or one of deemed equivalence. A number of educational facilities within Manitoba offer a Health Care Aide certification but differ somewhat in length and course content. One example, the HCA certificate program at Red River College, is a 20-week program that encompasses classroom and simulation learning along with a six-week clinical practicum (RRC, 2019). Course content includes assisting with ADLs, changes associated with aging, communication skills, safety considerations, and non-violent crisis intervention, an approach designed to respond to and de-escalate difficult or aggressive resident behaviours (RRC, 2018). Of note, none of the Manitoba HCA program curricula reviewed mentioned person-centred care or a person-centred approach explicitly, suggesting a potential gap in entry-level HCA education in regards to this care and service philosophy.

Once employed within the LTC sector, orientation and ongoing education for HCAs also varies significantly across provinces and individual sites. Estabrooks and colleagues (2015) found that only 47.8% of the HCAs in their study reported attending additional training, workshops or courses regularly over the past year. In Manitoba, the percentage was somewhat higher at 57.2%. Based on the Manitoba *Personal Care Home Standards* (2015) and WRHA requirements, the only mandated annual staff education pertains to fire safety and management of an obstructed airway (i.e. choking). Additionally, WRHA and accreditation requirements also require Winnipeg PCHs to offer annual education to staff on additional topics, such as safe feeding and swallowing, infection control practices, dementia care, restraints lifts/transfers are offered to HCA staff annually (K. Bauer, personal communication, August, 2019). However, these sessions are not mandatory and the ability to deliver regular, quality education with the

LTC homes in Winnipeg is often limited by the availability of educator resources in the PCH and releasing staff time from care. Of interest regarding relevancy of educational efforts, HCAs have reported that training they did receive sometimes did not reflect the real-world realities of the practice setting (Aubry, Etheridge, & Couturier, 2013).

Work-life experiences of HCAs.

Role in the LTC organizational structure. In the Canadian LTC setting, HCAs work under the direction of a licensed nurse (Berta et al., 2013). In Manitoba, this may be a Registered Nurse (RN), a Licensed Practical Nurse (LPN) or a Registered Psychiatric Nurse (RPN). The HCA role has been considered by some as a lower-level position within the LTC hierarchy associated with lower occupational status (Browne & Braun, 2008). Due to the nature of HCA role-required activities, specifically in relation to washing and continence, these care tasks may be viewed socially as dirty work and subsequently devalued and stigmatized. Recent grounded theory research by Ostaszkiewicz and colleagues (2016) found a link between continence care, stigma and low occupational status of direct carework in LTC. Their findings suggest that occupational exposure to continence care activities may function as social indicators for occupational inequities in LTC homes (Ostaszkiewicz, O'Connell, & Dunning, 2016).

Care approaches. Due to the increasing complexity of residents in LTC and heightened dependency on providers to meet care needs, HCAs are challenged to complete care tasks in less time (Chamberlain et al., 2016). Research in LTC by Knopp-Sihota and colleagues (2015) indicated that most HCAs in their study (85%) reported feeling rushed when providing care to residents, with 75% omitting at least one care task in the previous shift. It is suggested that the

nature of HCA carework and workload pressures have resulted in a routinized, task-oriented approach to care delivery that promotes a time and task culture in LTC (Knopp-Sihota et al., 2015). In response to staffing shortages, lower staff-to-resident ratios and the constant changing of resident needs, adherence to routines and tasks has been viewed as a possible coping mechanism for LTC providers in an effort to manage their time and exert control over their work-life (Cammer et al., 2014). A pragmatic approach to care delivery would emphasize the importance of routines in work efficiency and getting the job done. Additionally, having some daily consistency helps define structure and expectations for both residents and care providers (Brown-Wilson, Davies, & Nolan, 2009). However, care approaches based solely on routines and a task-based approach can impede opportunities to facilitate individualized care (Brown-Wilson et al., 2009) and result in feelings of neglect on the part of the resident, impairing the ability to develop a close relationship with their providers (McGilton & Boscart, 2007). Thus, the question surrounding routines is not necessarily whether they are *good or bad*, but rather how to strike an effective balance between their ability to provide structure *and* offer a medium to enhance relationships and relational care approaches (Brown-Wilson et al., 2009).

The fostering of personal relationships between LTC providers and residents has been found to be a key determinant in the caring culture and effective care provision (Cammer et al., 2014), positive life experiences and meaning within the LTC home (Brown-Wilson et al., 2009), and a close, emotional connection within the caregiving dyad (McGilton & Boscart, 2007). In Knopp-Sihota and colleagues' study (2015), HCAs acknowledged the need and desire to connect with residents at a personal level and "spend more time providing something extra for residents" (p. 2821) but feel the opportunity to do so was limited. Thus, a care philosophy that aims to

provide a blended approach where relational, person-centred interactions occur during task-based care activities offers one vehicle to better meet residents' physical, psychosocial and relational needs within the context and time pressures of the LTC environment (Aubry et al., 2013; Vass et al., 2010). Of note, it has also been documented that not all residents desire (McGilton & Boscart, 2007) or benefit from (Bergland & Kirkevold, 2005) close, interpersonal relationships with their care providers. In alignment with a person-centred philosophy, accounting for each individual's wishes in this regard would be an important consideration when attempting to engage residents on a relational level.

Using effective communication strategies is key to the promotion of relational care and close personal relationships between providers and residents (Brown-Wilson et al., 2009), yet research has documented the difficulties care providers report finding the time to converse with residents. In McGilton and Boscart's (2007) descriptive study examining the perception and definition of LTC resident-provider close relationships, residents noted that some care providers were rushed and did not listen to their questions or initiate non-care-related conversations. In a more recent study that examined relatedness, autonomy and competence with the LTC caregiving relationship, residents felt less satisfied with the level of relatedness to their caregivers when they were hurried and didn't have the time to talk with them (Custers, Westerhof, Kuin, Gerritsen, & Riksen-Walraven, 2012). Lastly, pertaining to rushed and missed care in Western Canadian LTC homes, the task HCAs most frequently omitted was talking with residents (Knopp-Sihota et al., 2015). Language barriers from the perspective of both provider and resident may impact the ability to enhance relational care through communication approaches. McGilton and Boscart (2007) found that residents' inability to communicate,

declining cognitive status and lack of social interactional skills inhibited the development of close relationships with their care providers. The same study also noted that care providers often avoided conversation with residents who spoke a different language than their own or had communication impairments (McGilton & Boscart, 2007). Strategies to overcome these barriers have also been put forth in the literature. Paying close attention to cultural influences that may impact communication between providers and residents is paramount when considering communication education, interventions and context (Browne & Braun, 2008). Informal learning through peer mentoring and support has also been deemed an effective learning strategy to enhance the relational communication skills and care approaches of HCAs (Aubry et al., 2013). Lastly, relationship development through the use of informal dialogue and story-telling between care providers and residents is another strategy that can be used to re-shape care delivery approaches and promote a person-centred philosophy through day-to-day interactions (Brown-Wilson et al., 2009).

HCA job satisfaction. Despite the pervasive challenge of balancing available time with workload expectations (Knopp-Sihota et al., 2015) and the suggestion that their work and role may be devalued and stigmatized (Ostaszkiewicz et al., 2016), research suggests that HCAs have high job satisfaction. Estabrooks and colleagues (2015) found that the HCAs in their prairie-province sample reported high levels of satisfaction with their work and their vocation, and felt they had adequate knowledge and orientation to carry out their job. A second study conducted within the same Canadian context found corroborative results in that 94.4 % of the HCAs in their sample reported feeling satisfied with their job (Chamberlain et al., 2016). Research into the predictors of HCA job satisfaction has found that certain factors may influence this aspect of

work life. Individual-level attributes that positively influence HCA job satisfaction include increased professional efficacy, or a feeling of emotional accomplishment and meaning from one's work (Chamberlain et al., 2016), and feelings of empowerment and autonomy related to their job (Squires et al., 2015). Individual factors that have been found to negatively influence HCA job satisfaction include higher emotional exhaustion, defined as diminished emotional and physical reserves, and higher cynicism, or a detached/negative attitude about one's job (Chamberlain et al., 2016). Organizational and contextual factors associated with HCA job satisfaction include leadership approaches, culture, social capital, organizational slack (i.e. a cushion of time, staff resources and space to allow for adaptation and adjustment to internal/external pressures or changes) (Chamberlain et al., 2016), facility resources and workload (Squires et al., 2015). Qualitative findings noted by Squires and colleagues' (2015) review of job satisfaction among residential care aides, indicated that contact and relationships with residents, the nature of the care aides' work and opportunities for learning and advancement were additional factors that impacted HCAs job satisfaction.

HCA burnout. Recent research attention has also been directed towards exploring the risk for work-related burnout in LTC aides. According to Maslach & Jackson (1981), burnout is comprised of three components: 1) emotional exhaustion, or a loss of emotional resources and coping energy; 2) depersonalization, described as an emotional/physical detachment from an individual, or negative attitude or lack of compassion towards another; and 3) decreased personal accomplishment, or a person's negative feelings towards one's work and sense of competence. The Maslach Burnout Inventory-General Survey (MBI-GS) was developed to measure the risk of burnout through the domains of emotional exhaustion and cynicism (higher scores in both

domains equate to higher risk), and professional efficacy (lower scores suggest lower risk) (Maslach, Jackson, & Leiter, 2016). Using this measure, Estabrooks and colleagues (2015) found that the HCAs in their sample experienced moderate risk for burnout in the areas of exhaustion and cynicism. Further research by Chamberlain and colleagues (2017) using the same measure, found that a sample of LTC aides working in the three prairie provinces displayed high levels of emotional exhaustion and cynicism. Interestingly, in both studies, HCAs concurrently reported high levels of professional efficiency, or a sense of accomplishment and meaningful work (Chamberlain et al., 2017; Estabrooks et al., 2015). It has been hypothesized that this latter result may be due to the HCA's role as a primary care provider, as close bonds often form between provider and resident resulting in a relationship that moves beyond task-based care (Chamberlain et al., 2017). However, these dichotomous findings also raise a concern regarding the ability for HCAs to sustain a relational connection with residents while at high risk for emotional exhaustion and cynicism. Due to the cross-sectional nature of this research to date, further study is needed to examine whether high levels of professional efficacy can be maintained in the context of prolonged perceptions of emotional exhaustion and cynicism.

Research in this area has also identified buffers and predictors of burnout in LTC aides. Based on review evidence (Cooper et al., 2016), buffers at the individual level included a positive appraisal of the job, duties and residents, feelings of identity (including ethnic identity) and perception of influence on a resident's well-being. Demographic characteristics, such as being married, older and having more years of education, was shown to reduce feelings of depersonalization towards residents. Organizational-level buffers included a reduction in work strain and available job training (Cooper et al., 2016). A recent study by Chamberlain and

colleagues (2017) reported predictors of burnout according to the three domains of burnout on the MBI-GS (i.e. emotional exhaustion, cynicism and professional efficacy). Individual predictors of emotional exhaustion and cynicism included speaking English as a second language, lower reports of physical and mental health, and exposure to dementia-related responsive behaviours. Organizational predictors within all three domains included organizational slack in relation to staff and space, culture, structural resources and receipt of feedback (Chamberlain et al., 2017).

Overview of HCA Literature. In consideration of the literature pertaining to this fundamental group of LTC providers, a number of themes can be brought forth to inform this thesis research:

- Research conducted in the LTC setting should recognize and value the contribution of the HCA's role and work towards the residents' quality of life, well-being and relational care;
- HCAs should be involved in the development of professional development interventions and education so that their learning needs can be articulated and used to inform the approach;
- Due to the nature and volume of their work, an intervention developed for HCAs should endeavour to minimize time away from the residents, and if possible, be conducted within the real-world setting;
- A communication intervention aimed at enhancing HCA knowledge and skills should be sensitive to culture influences and current language/linguistic ability;

- As promoting a relational connection between providers and residents is believed to increase job satisfaction and professional efficacy and lessen burnout, an intervention with this aim may act as one means to enhance HCA work-life; and
- As dementia is a common condition experienced by LTC residents and exposure to dementia-related responsive behaviours may be a predictor of burnout, strategies aimed to enhance effective care strategies and communication is paramount in the cognitive and emotional support of HCAs in LTC.

Research and Ethical Considerations Pertaining to the Use of Video

The use of a video medium within a LTC setting requires attention to ethical and procedural sensitivities (Purveen, Phinney, Cox, & Purves, 2016). As both residents with dementia and HCAs will be engaged in video-recorded interactions during daily care activities, research and ethical considerations pertaining to the use of video within these two groups will be examined.

Use of video within the dementia population. An area of major consideration involves the potential disruptive and negative impact of the use of video in vulnerable groups, such as dementia (Vanclay, Baines, & Taylor, 2013). Capturing video images of LTC residents with dementia during daily care activities may potentially place them in a further position of vulnerability. However, if collected in an ethical and sensitive manner, video images can foster growth and learning and promote positive perceptions of aging (Puurveen et al., 2016). The appropriate use of video has ethical implications in a number of areas pertaining to consent, confidentiality, privacy and participant burden which will be explored below.

Initial informed consent when using a video methodology requires an understanding of: 1) who and what will be recorded, and other filming conditions; 2) the duration, location and conditions of video storage; 3) how and where the recording might be used and by whom; and 4) whether the recording process could interfere with care delivery (Broyles et al., 2008; Finlay et al., 2008). Within the context of dementia, decisional capacity as to the ability to understand and provide informed consent is a crucial consideration. If a person with dementia lacks the legal capacity to provide consent for participation, enrollment consent is then sought from the proxy or substitute decision-maker (SDM). However, regardless of formal decision-making capacity, ongoing assent should also be obtained from the person prior to each video observation and their preferences respected in the moment [Canadian Institutes of Health Research (CIHR), Natural Sciences and Engineering Research Council of Canada (NSERCC), and Social Sciences and Humanities Research Council of Canada (SSHRCC), 2018; Puurveen et al., 2016].

Due to the increased identifiability of individuals, video medium poses additional confidentiality risks and has implications for secure storage arrangements and data access. If video images will be used within the organization or a broader research/education community, specific consent must be obtained for this purpose (Broyles, Tate, & Happ, 2008). Also, in consideration of recording in a communal living setting, care needs to be taken not to inadvertently capture non-participating residents or HCPs in the video encounters (Puurveen et al., 2016). Procedures for video-editing or masking the capture of non-study personnel and residents or use of real names recorded during the video dialogue also needs to be addressed in the ethical protocol.

In relation to privacy, the most glaring concern of the use of video within the study's context would be the recording of private activities that occur within the provision of daily personal care (Puurveen et al., 2016). Consideration would need to be given to the types of care scenarios that would agreeable to the resident, SDM and HCP to record and this would need to be explicitly outlined in the enrollment consent and confirmed through ongoing consent. VF studies conducted within LTC settings have recorded HCP-resident interactions during morning care (Caris-Verhallen, et al., 2000; Coleman & Medvene, 2013; Hansebo & Kihlgren, 2001), as well as afternoon check-ins and physical rehabilitation (Coleman & Medvene, 2013). Other dementia communication research suggests that meal assistance represents a less intrusive opportunity for observing interaction (Carpiac-Claver & Levy-Storms, 2007; Levy-Storms et al., 2016).

Participant burden is the final ethical concern to explore in relation to the perspective of the person with dementia. An argument could be raised in which the presence of video equipment and/or person conducting the recording could create stress and anxiety in the person with dementia. Although extremely important to acknowledge, the potential for stress arising from being on video can be addressed via the ongoing consent process described above. In addition, none of the VF studies reviewed disclosed any significant issues in relation to client/resident refusals or concerns with being video-recorded. Furthermore, a review of patient/general-practitioner acceptance of the use of video-recording in the primary care setting found that most people felt only slightly or not at all influenced by the presence of the video equipment or the individual operating the devices (Thermessl-Huber et al., 2008).

In conclusion, the use of video in a vulnerable population, such as dementia, can be regarded as an ethically sound approach if the rationale for its use over other methodologies is clearly articulated and justified (Smith, Mountain, & Hawkins, 2016), as argued above. Additionally, detailed attention must be paid to protocols pertaining to consent, confidentiality and privacy issues.

Use of video with HCAs. Concern has been expressed that care providers may express reluctance to the prospect of being video-recorded (Coleman & Medvene, 2013; Gerritsen et al, 2018; Strathie et al., 2011). Reasons for apprehension about the use of video include; anxiety about being video-recorded (Lindon-Morris & Laidlaw, 2014), concern regarding confidentiality of the recordings (Colemen & Medvene, 2013), fear that the video would be used as surveillance (Crenshaw, 2012) or documentation of clinical practice for performance management purposes (Broyles et al., 2008), and that the intervention would be too self-confronting (Noordman et al., 2014). However, despite these concerns, in the VF research to date that has addressed HCP feasibility, evidence of acceptability and perceived value of the intervention is consistently documented (Damen et al., 2011; Embregts, 2002; Gerritsen et al., 2018; Hansebo & Kilhgren, 2001; James et al., 2012; Lobchuk et al., 2016, 2018; Noordman et al., 2014; van Vonderen et al., 2012; van Vonderen et al., 2010).

To increase the acceptance of VF, a number of safeguards are recommended: 1) provide an advanced opportunity to discuss VF and its intended benefits with HCAs prior to the study (Finlay et al., 2008; Lindon-Morris & Laidlaw, 2014); 2) communicate and adhere to strict confidentiality guidelines regarding access to the video recordings, i.e. not for management

viewing or performance appraisal (Finlay et al., 2008); and 3) ensure feedback is provided in a respectful, timely manner that upholds the individuals' self-worth and motivation to learn (Fukkink et al., 2011; James et al, 2012; van Vonderen et al., 2010). In short, although challenges to HCP acceptability of VF may present initially, evidence to date suggests that this potential barrier can be overcome through awareness of possible emotional reactions to VF, careful planning, and adherence to agreed-upon and ethically approved protocols.

Additionally, in regard to impact on the care provider, concerns have been raised in relation to potential observation effects and performance bias. It has been argued that the presence of a video camera during an actual care encounter may be a distraction to the HCP (van Vonderen et al., 2010) and raise awareness that their behaviour is being observed, causing them to act in unrepresentative ways (Coleman & Medvene, 2013). To counter this concern, it has also been noted in previous research that HCPs tend to quickly resume their natural behaviour in the presence of a video camera (Caris-Verhallen, Kerkstra, & Bensing, 1999) and that there is little empirical evidence to suggest video-recording significantly affects HCP behaviour (Themessl-Huber et al., 2008). As an added strategy, providing a wash-out period to acclimatize to the video-recording is also recommended (Coleman & Medvene, 2013).

The use of video with LTC residents and care providers raises research methodology and ethical challenges. However, with careful consideration and attention to pre-intervention preparations and adherence to ethical protocols, the potential merits of the VF to enhance providers' PCDC skills can be explored through this thesis research.

Summary of the Literature Review

A broad range of topics in the literature has been scanned in the formation and planning of this thesis research. To provide a philosophical grounding to the notion of communication within a person-centred approach, the PCCare theoretical literature was first explored. Through this review, Kitwood's person-centred dementia care philosophy (Brooker, 2004; 2007; Kitwood 1997) emerged as a means to describe aspects of PCCommunication. Specifically, Kitwood's (1997) principles of positive person work can act as a framework in which to establish both an interventional and measurement approach to PCCommunication. Despite providing a foundational origin for this research, the PCCare theoretical literature did not provide sufficient detail concerning instrumental approaches to dementia communication. Therefore, the literature pertaining to evidence-informed dementia communication strategies was next examined. This review found that dementia communication strategies can be categorized by verbal (language-based), paralingual and non-verbal approaches. Some evidence exists to suggest that interventions aimed at improving care providers' verbal and non-verbal dementia communication skills result in positive outcomes for both residents and caregivers. This literature also provides insight into the content and context of dementia communication interventions for care providers in LTC that can be used to inform the intervention development for this thesis research. By then connecting aspects of the PCCare and dementia communication literature, a theoretical linkage can be established to define the linguistic and relational components of PCDC.

Theoretical perspectives used to ground PCCommunication studies conducted to-date were next examined in this literature review. It was noted that five theoretical perspectives had relevance to this area of study, with many originating from Canadian researchers. These theories

were critiqued as to their ability to support both the linguistic and relational aspects of PCDC. This analysis revealed that the Communication Enhancement Model (Ryan et al., 1995) was best positioned to underpin a study examining HCA-resident communication research in LTC. However, some expansions are needed to the model to incorporate specific relational aspects of PCDC, as well as define explicit provider, resident and system outcomes. The body of literature pertaining to PCCommunication interventional research was next reviewed. Although a relatively new field of study, a few single-dimensional and multi-dimensional PCCommunication interventions have been piloted and tested with some positive changes noted for provider-, resident- and system-level outcomes. Of note, a significant gap in the PCCommunication interventions to date concerns the lack of attention to self-reflective learning techniques. This is felt to be an essential aspect of transforming the care culture through reflection upon one's personal values and beliefs about care approaches and delivery. However, these studies offer some practical guidance as to the development and implementation of a PCCommunication intervention for direct care providers.

As video-feedback has been identified as a learning technique to foster self-reflection, literature pertaining to its use in improving communication skills/behaviour and enhancing provider-person relationships was examined. A foray into this topic area revealed that it has not been used within the context of improving PCDC per se. However, some study has occurred within the intellectual disability caregiving and communication context and parallels can be drawn between these two populations to inform research in a dementia care setting. The ability for VF to support the principles of PCCare was examined in comparison to the VIPS framework (Brooker 2004; 2007). Emerging evidence in the interventional research suggests that VF has

the potential to promote values-based relationships, an individualized approach to care, an empathic perspective towards understanding the resident's situation, and a supportive social environment. Thus, it presents as a promising technique to promote the values of a PCCare approach and improve communication and relational care within the context of LTC providers and residents with dementia.

Lastly, considerations of the research setting and participants were considered. Descriptions of the HCA role in LTC, the profile of Canadian HCAs, and aspects of their work-life were reviewed. This literature provides some insight as to the demographics and learning needs of this fundamental workforce, as well as tensions and pressures within the LTC work environment. This information is essential to inform this research as it offers practical guidance as to the planning, design and implementation of a communication intervention for HCAs. Additionally, as both HCAs and residents will be engaged via a video medium in the research, ethical considerations pertaining to the use of video in these populations were reviewed. The use of video methodology within a LTC setting may present some ethical and practical challenges. However, diligent preparatory work and adherence to well-defined ethical protocols that address initial/ongoing consent, confidentiality and privacy will support an ethically sound research approach and allow an opportunity to investigate the potential of VF to enhance PCDC.

Chapter 3: Theoretical Framework

As informed by the preceding literature review, this chapter will describe the theoretical framework used to underpin this thesis research. When looking across the person-centred care (PCCare) and person-centred communication (PCCommunication) theoretical works, strong linkages between these two areas of study emerge. The foundational theme that interconnects the two concepts and is woven throughout the theoretical literature is the desire to achieve a relational approach to interpersonal interactions and care. Within PCCare, it is through relationships with others that recognition and respect for the person and preservation of their personhood is realized. The theoretical work also indicates that PCCommunication approaches enacted by the care provider offer a critical pathway to developing and maintaining meaningful person-provider relationships and supporting relational care.

Due to the lack of rigorous empirical work in relation to PCCommunication interventions, a connection to the PCCare theoretical literature is essential to underpin the elements of PCCommunication approaches. As such, the consistent theoretical principles of PCCare, namely value and respect for the person and perceiving them as a unique individual with specific needs and care approaches, must also reflected within the elements of PCCommunication. Effective language-based accommodation strategies and relational approaches are both necessary to ensure respectful communication and quality interpersonal relations while promoting or maintaining communication competence and avoiding the theorized communication predicaments of ageing and dementia (Ryan et al., 1986).

Both PCCare and PCCommunication also share similar outcomes including enhanced psychological well-being and quality of life, and increased satisfaction with person-provider relationships for the individual living in a LTC setting. For the healthcare provider, common indicators also exist across both theoretical fields and include increased knowledge and competence, enhancement of the quality of relationships with residents and increased work satisfaction. Both concepts also reflect a critical epistemology in that they seek to promote action and change by the creation of person-centred therapeutic care paradigms and positively influence individual and societal views in relation to ageing and dementia.

Despite this theoretical alignment, a single, stand-alone framework, theory or model that fulsomely incorporates both person-centred principles and the specific relational and linguistic approaches and outcomes of PCCommunication in long-term care (LTC) or dementia care does not currently exist. However, this gap could be addressed by combining existing PCCare and PCCommunication theoretical perspectives. The Communication Enhancement Model (CEM) (Ryan et al., 1995) provides a template to support both relational and language-based aspects of effective PCCommunication. However, it lacks specific delineation of these components and related outcomes. As four of Kitwood's (1997) person-centred affirming interactions (i.e. recognition, negotiation, validation and facilitation) have been linked to effective PCCommunication in prior empirical research (Ryan et al., 2005; Savundranayagam & Moore-Nielsen, 2015), these person-centred components could be incorporated into the CEM to provide additional theoretical clarity and guidance. Additionally, resident-, provider- and system-level outcomes evidenced in the literature to-date could also be added to the model to provide

guidance pertaining to the development of research questions and subsequent measurement strategies.

As such, a Person-Centred Communication Enhancement Model (PC-CEM) for LTC (Figure 3) is proposed to provide theoretical grounding for this thesis research. Based upon the CEM (Ryan et al., 1995), the model offers additional clarity and specificity surrounding the elements and outcomes of PCCommunication within the context of LTC, as well as theoretical and practical considerations to inform a PCCommunication intervention. This enhanced model has the flexibility to theoretically support PCCommunication approaches in general or person-centred dementia communication (PCDC) specifically. A fulsome description of the model's components is discussed below.

Figure 3 – Person-Centred Communication Enhancement Model (PC-CEM) for LTC

Informed by:
- PCCare principles (Kitwood, 1997; Brooker, 2004, 2007)
  - Respect/value for person
  - Individualized approaches
  - Perspective of the person
  - Relationships are central
- Empathic dimensions (Davis, 1994)
  - Cognitive
  - Behavioural
  - Affective

Person-Centred Communication Intervention:
- Knowledge and skills development (education and practice)
  - Linguistic communication i.e. effective accommodation strategies for older adults, dementia care, cultural influences
  - Relational/person-centred communication i.e. recognition, negotiation, validation, and facilitation/collaboration approaches (Kitwood, 1997)
- Values-based learning/transformation strategies, i.e. reflection, perspective-taking, video-feedback
- Ongoing support, i.e. structure for peer mentoring, supervision

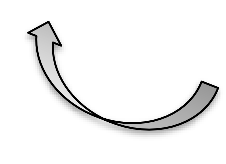
Interpersonal Encounter with resident

Recognition of individual, perspective, abilities, cues

Modified Communication based on individual needs (accommodation and relational approaches)

Individualized care/communication interventions

Empowerment of resident and provider



Maximized Communication skills/opportunities

Supportive Person-Centred Environment/ Culture:
- Leadership support
- Relational/ interpersonal processes enacted during care
- Respectful relationships and interactions amongst team members

Resident Outcomes
Relational:
- Enhanced psychological well-being
- Improved quality of life
- Less neuropsychiatric symptoms (dementia)
- Met needs: physical, emotional, relational
- Increased satisfaction with care
- Improved quality of and satisfaction with provider relationships

Communication:
- Increased opportunities for communication
- Increased participation in reciprocal communication

Provider Outcomes
Relational:
- Improved quality of and satisfaction with resident relationships
- Increased self-reflection
- Improved emotional responses
- Increased satisfaction with work

Communication:
- Increased knowledge, skill, and confidence
- Increased use of relational and linguist strategies
- Decreased use of patronizing speech
- Enhanced empathic communication and empathic accuracy

System Outcomes
- Creation/maintenance of a positive communication climate
- Transfer of person-centred principles into daily care/practice
- Reduction of ageist views and stereotypes

Adapted from Ryan, E. B., Meredith, S. D., MacLean, M. J., & Orange, J. B. (1995). Changing the way we talk with elders: Promoting health using the communication enhancement model. *International Journal of Aging and Human Development*, *41*(2), 89–107.

Person-Centred Communication Intervention

The PCCommunication intervention, as outlined at the onset of the PC-CEM, consists of evidence-informed components found to be associated with effective implementation and outcomes (Figure 3 – green box). The specific components and considerations pertaining to the intervention are outlined below.

Knowledge and skills development. The extent literature suggests that care providers' knowledge and skills development is supported through training/education and practice opportunities within real-world settings. Thus, the video-feedback (VF) component in this study will employ examination of and reflection upon exchanges between HCAs and residents during actual care encounters. Also, as PCCommunication is comprised of linguistic and relational elements, both aspects will be addressed within the intervention components. Examples of linguistic communication skills could include effective accommodation strategies for older adults, as well as dementia-related communication strategies (verbal and non-verbal) and cultural influences on communication. Skill development in regards to relational aspects of PCCommunication would involve imparting knowledge, awareness and recognition of person-centred elements of communication (i.e. recognition, negotiation, validation and facilitation) as outlined by Kitwood (1997).

Values-based learning. To facilitate a shift in caring culture to a more person-centred approach, PCCommunication interventions would also need to incorporate values-based learning and transformation strategies, such as self-reflection, perspective-taking and performance feedback, i.e. VF in this research context. Additionally, a PCCommunication intervention

should also include an ongoing mechanism for support and feedback, using strategies such as peer mentoring or supervision.

Theoretical influences. Providing an overarching framework, relevant theoretical perspectives would act to inform all aspects of the PCCommunication approach and intervention (Figure 3 – gray box). The PCCare principles of respect and value for each person, an individualized approach to care and service, and recognition of the centrality of relationships within the LTC context and caring culture (Brooker 2004; 2007; Kitwood, 1997) would offer a consistent lens in which to view communication interventions, interactions and outcomes. Additionally, the inclusion of empathy theory and consideration of the cognitive, behavioural and affective empathic dimensions (Davis, 1994) provides a basis to further explore theoretical and empirical linkages between empathy and PCCommunication.

Communication Feedback Loop

In consideration of an actual PCCommunication exchange between a LTC provider and resident, the PC-CEM follows the same cyclical progression as the CEM (Ryan et al., 1995) and begins with a care provider's *interpersonal encounter* with a LTC resident (Figure 3 – blue ovals). As a result of the PCCommunication intervention, the care provider comes to the interpersonal encounter with enhanced knowledge and awareness of person-centred values and PCCommunication (linguistic and relational) strategies. Based on initial communication attempts by the care provider and knowledge of the person, there is *recognition* of the individual resident's perspectives, abilities and communication cues. As a result of this communication feedback, the care provider *modifies their communication* approaches (i.e. appropriate linguistic

accommodation and relational approaches) based on the resident's needs and abilities. Ongoing exchanges may assist the care provider to further tailor communication approaches based upon their assessment of the resident's response. Through improved communication and mutual participation in conversation, *individualized care and communication interventions* can be developed and implemented. Successively, as a result of this mutual exchange and partnership approach to the caring relationship, resident and care provider *empowerment* occurs and results in *positive outcomes* for both communication partners. These positive outcomes are hypothesized to *maximize communication* skills and opportunities for both resident and provider, offering enhanced confidence and knowledge to bring forth in future encounters.

Person-Centred Communication Outcomes

Based on research evidence, it is hypothesized that PCCommunication could result in specific relational and communication outcomes on the part of the resident and provider, as well as have broader contextual influences. These will be highlighted in further detail below.

Resident outcomes. Relational outcomes of PCCommunication approaches pertaining to residents are outlined in Figure 3 (pink box). These include the potential for enhanced psychological well-being, improved quality of life, a reduction in neuropsychiatric symptoms for residents with dementia, holistic meeting of physical, emotional and relational needs, increased satisfaction with care, and improved quality of and satisfaction with provider relationships. Outcomes pertaining to communication enhancement on the part of the resident are also noted in the literature. These include increased opportunities for communication and increased participation in reciprocal communication.

Provider outcomes. Provider relational outcomes have also been reported (Figure 3 - purple box). These include improved quality of and satisfaction with resident relationships, improved emotional responses, an enhanced ability to engage in self-reflection, and increased satisfaction with their work. Outcomes related to improved provider communication skills are also noted in the literature. These are in relation to increased communication knowledge and skill, increased use of relational and linguistic accommodation strategies, decreased use of patronizing speech, and enhanced empathic communication and accuracy.

System outcomes. It is also proposed that the PCCommunication approach has implications at the macro level. Possible system outcomes (Figure 3 - orange box) include the creation and maintenance of a positive communication climate, translation of PCCare principles into the culture of daily care and practice, and a reduction of ageist views and stereotypes pertaining to LTC residents and individuals with dementia.

Environmental and Contextual Factors

The final component of the PC-CEM parallels the CEM (Ryan et al., 1995) in that efforts to enhance PCCommunication skills and opportunities, and the subsequent exchanges that ensue between providers and residents, occur within the context of *multiple environmental influences*. In consideration of PCCommunication, a supportive person-centred environment and culture is considered a crucial ingredient to success. This consists of leadership support, inclusion of relational/interpersonal engagement during the course of daily care activities, and respectful relationships and interactions among team members.

In summary, the PC-CEM for LTC provides a theoretical basis for the formulation of many research inquiries pertaining to PCCommunication approaches and outcomes. For the purposes of this pilot study, the principles concerning knowledge/skills development (language-based and person-centred communication strategies) and values-based learning strategies will be used to guide the development and implementation of the PCCommunication intervention with video-feedback. To investigate the promise of the intervention on enhancing PCDC, provider (HCA) communication and relational outcomes will be the primary endpoints of interest for this study (Figure 3 – bolded items in purple box). Fulsome details in relation to the study design and methodology will be discussed in the following section.

Chapter 4: Design and Methods

This chapter will address the study design and methods used to address the study aim and research questions. The study design and methodology will be outlined and include a description of the research setting, research participants and recruitment strategies, intervention and study protocols, measurement approaches, data analysis plan, and ethical approval and considerations.

Methodology

Purpose of the study and research questions. The primary aim of this research was to pilot test the effectiveness of an intervention incorporating video-feedback (VF) on health care aide (HCA) person-centred dementia communication (PCDC) behaviours and perceived quality of relationship with residents who have dementia. The secondary aim was to investigate the acceptability, utility and feasibility of a communication intervention with VF in a LTC setting.

Primary research question. Is a PCCommunication intervention that includes an educational and video-feedback component an effective and feasible method to enhance person-centred communication and relationships between HCAs and residents with dementia in LTC?

Specific research questions.

1. Does the communication intervention improve the linguistic (i.e. language-based) elements of PCDC behaviour of HCAs?
2. Does the communication intervention improve the relational (i.e. person-centered) elements of PCDC behaviour of HCAs?
3. What is the effect of the communication intervention on HCA perceived competence and confidence in relation to communicating with residents with dementia?

4. What is the effect of the communication intervention on HCA ratings of relationship satisfaction and relationship closeness with residents?
5. What are the acceptability, utility and feasibility of implementing the communication intervention in a LTC setting from the perspective of the HCAs and residents in the study, as well as the nursing leadership?

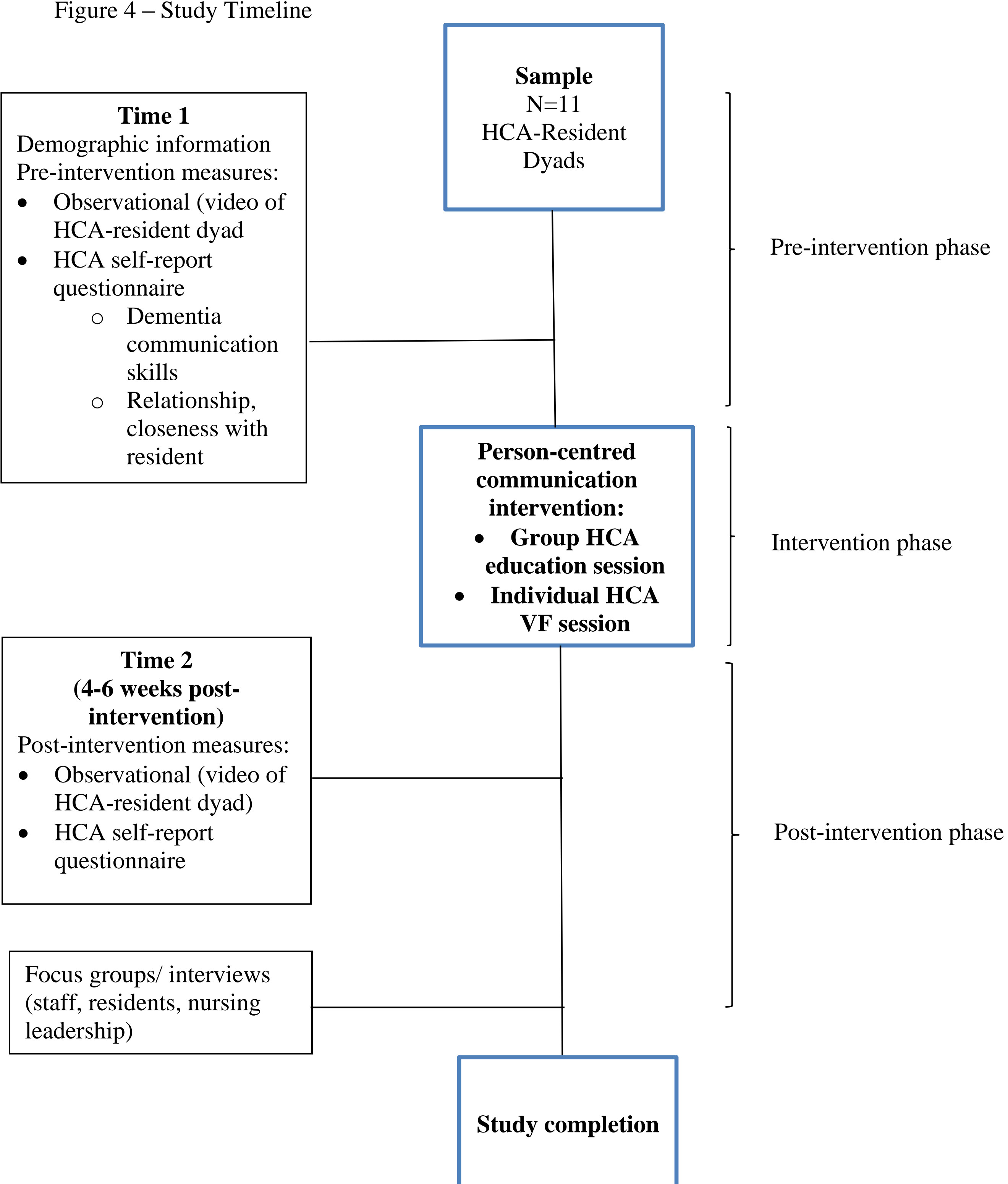
Study design. This research was conducted in an urban, 121-bed non-proprietary, free-standing personal care home (PCH) in Manitoba, Canada. The study employed a quasi-experimental single group pre-test/post-test design to observe for within-participant differences in response to the intervention:

Pre-test	Intervention	Post-test
O_1	X	O_2

Post-intervention focus groups and interviews were used to obtain qualitative data in relation to the acceptability, utility and feasibility of the intervention.

The overall timeline for the study design is outlined in Figure 4. After sample recruitment and at Time 1, demographic data and baseline observations (via video recording of a HCA-resident dyad interaction) and HCA self-report measures (O_1) were collected. The PCDC intervention, inclusive of a group HCA education session and an individual HCA video-feedback session (X), was then administered. Time 2 data collection occurred approximately four weeks after the intervention and included a repeat of the observational (via a post-intervention video of the same HCA-resident dyad) and HCA self-report measures (O_2). In the course of the study, there were two video recordings of each HCA-resident dyad taken during a care encounter. The

Figure 4 – Study Timeline



first video, taken pre-intervention, acted as the baseline for the observational measures. In addition, the baseline video also formed part of the PCDC intervention, as it was used for the individual VF session with each HCA following the group education session. The (second) post-intervention video of the HCA-dyad was used for comparison to the baseline video to observe for any change in HCA communication behaviour. Following the post-test measurements, interviews were offered to individual residents, focus groups or interviews were conducted with HCAs and a focus group was held with the PCH's nursing leadership team (i.e. Director of Care, Assistant Director of Care, and Nursing Managers) to gather information pertaining to the acceptability, utility and feasibility of the PCDC intervention.

Threats to validity. As mentioned previously, the single group pre-test/post-test design is a practical, flexible, real-world research approach that can be used to gather information on the "promise of an intervention" (Marsden & Torgerson, 2012, p. 592) during its piloting and development phase. However, this methodology is generally deemed to be a weaker design in relation to internal validity (Bell, 2010). Although this approach provides some indication of change between measurements, it lacks the ability to infer causality as it does not eliminate the possibility that the observed change at Time 2 might have occurred regardless of the treatment, or as a result of a confounding variable. For example, this design cannot control for the potential effects of *history*, such as a staff person's awareness of alterations, events and activities in the workplace environment, as well as changes in the residents' care status over time. These influences may account for some or all of the changes in the outcome(s) of interest (Marsden & Torgerson, 2012). Additional threats may be related to measurement techniques and approaches. *Testing effects* due to the use of the same questions on both the pre- and post-tests may impact

how individuals perform on the repeated test, and it is possible that improvements can result from the test itself (Marsden & Torgerson, 2012; Tappen, 2011). Also, an observational measure, such as a video medium, may induce a *Hawthorne effect* or *observation bias*, in which participants change their behaviour or increase productivity as a result of increased attention or an awareness of being observed. Additionally, *construct validity* of the outcome measure(s) may be compromised if the same person who delivered the intervention also collected/coded the outcome measures, as this may introduce a favourable bias towards the effects of the intervention (Shadish et al., 2002). In relation to validity threats concerning sampling, *attrition* effects may be seen if participants are lost to follow-up or drop out of the study between measurements. Lastly, s*election bias* may occur through the use of convenience samples and lack of randomization ultimately affecting both internal and external (generalizability) validity. Thus, a positive outcome from a single group pre-test posttest study is a suggestion of an effect and caution should be taken not to draw causal conclusions from studies employing this design (Tappen, 2011).

Reducing threats to internal validity. To reduce threats to internal validity within quasi-experimental designs, it is recommended that the researcher identify possible threats and design controls that limit the impact of these threats on study outcomes (Baldwin & Berkeljon, 2010). In consideration of this, a number of safeguards and approaches were employed to minimize threats to internal validity in this thesis research.

Potential history effects were addressed by scheduling the study and intervention to occur at a time when it did not coincide with another education program or initiative in the PCH that may have impacted person-centred behaviours in staff. The absence of any unintended

influences on the study outcomes was also confirmed during the interviews and focus groups with the HCAs and nursing leadership team. In an attempt to minimize attrition effects, the pre-intervention data collection, intervention and post-intervention measurements were conducted over a condensed 3-month period of time (early February to late April 2019). To reduce testing effects, longer periods of time between measurements are recommended (Shadish et al., 2002). In this study, participants completed the pre-intervention questionnaire at the beginning of the 3-month period and the post-intervention questionnaire at the end of this timeframe. The potential effects of observation bias on behaviour were assessed via the HCA focus groups and interviews. Although the HCAs noted awareness of the video-recording during the care encounters, they reported its presence did not impact their usual interaction or care approach with the resident. As the researcher acted as both interventionist and coder for the quantitative and qualitative outcome measures, threats to construct validity were addressed by engaging a second independent coder for both the video observations and thematic analysis of the focus groups and interview transcripts. Selection bias of resident partners for the HCAs was minimized through the use of purposive sampling. HCAs who agreed to participate in the study were asked to confidentially identify potential residents partners with whom they would like to enhance their interpersonal relationship or were experiencing communication challenges. This aimed to target situations in which HCAs found the intervention efficacious and relevant to their practice reality.

Research participants. The recommended sample size target based on study design and purpose was between 10-20 participants (Dr. R. Rabbani, personal communication, January 25, 2018). Recruitment of HCAs and residents occurred over a 2-month period (December 2018 to January 2019). The approach to sampling consisted of both convenience and purposive

strategies which is described in further detail below. Due to the fact that this intervention had not been employed within this research context, an effect size could not be determined based on previous studies and a power analysis could not be conducted. The sample and information generated from this pilot study provides a foundation to determine effect size for future interventional research in this topic area (Dr. R. Rabbani, personal communication, January 25, 2018).

Inclusion/exclusion criteria. Inclusion criteria for HCA participants were: provided regular care and/or assistance to residents in the PCH, held a position of either full-time or part-time status, schedule included either day or evening shifts, able to speak and read English, and available/agreeable to participate in the study. Exclusion criteria included; a causal or return-to-work position, scheduled exclusively for night shifts, unable to speak and/or read in English, and not available for the anticipated length of the study (e.g. planned leave of absence, etc.). A sampling pool of approximately 60 HCAs met the study inclusion criteria.

As HCA participants were confirmed, they were asked to confidentially identify potential residents with dementia with whom they would like to enhance their interpersonal relationship and/or communication. Further resident inclusion criteria included: a diagnosis of dementia (any subtype), mild to moderate stage of dementia (defined as a current Cognitive Performance Scale score of 1, 2 or 3, as this is the standardized cognitive screening tool used in the Winnipeg health region over the Mini-Mental Status Exam), willingness/ability to participate in the study, and capability to provide informed consent or has a legal proxy who can provide consent. Exclusion criteria included: cognitively well (CPS score of 0), severe (late) stage of dementia (defined as a CPS score of 4 or higher), extreme responsive behaviours that prevent the ability to converse

with care providers during daily care, unable to communicate in English, and not available for the anticipated duration of the study (e.g. receiving end-of-life care, planned transfer to hospital or other setting, etc.).

Recruitment. General information pertaining to the research project was shared with staff, residents and families by the researcher prior to the recruitment of participants by means of study invitation letters (Appendix D and Appendix E), posters in staff/conference rooms (Appendix F), excerpts in staff and family newsletters (Appendix G and Appendix H), and attendance at a general HCA meeting. HCA recruitment was initiated by the researcher via informal small group meetings with day and evening HCAs in all resident care areas to discuss the study. The purpose of these recruitment meetings was for the researcher to provide an overview of the study, address any questions about the project and garner interest in participation. Interested HCAs were approached on a one-on-one basis by the researcher to discuss the study in more detail and review the consent form (Appendix I). As HCA participants were confirmed, they were asked to confidentially identify potential resident partners on paper and place the list in a sealed envelope. The sealed envelopes were given to a nurse manager who evaluated the identified residents as to the study inclusion and exclusion criteria (Appendix J). If the resident met the study criteria, the nurse manager contacted the resident or their substitute decision-maker (SDM) to request permission to forward their contact information to the researcher. Residents/SDMs who expressed interest in speaking to the researcher about the study were then contacted by phone and further details were shared. If there was a desire to participate in the study, the researcher met with either the resident or SDM to review the consent form (Appendix K) to gain informed consent.

In the context of conducting research with individuals who have dementia, it was important to consider both the resident and SDM in the study consent process. Residents with mild to moderate dementia may still be able to understand the risks and benefits of participating in research. Excluding these residents from the informed consent process by solely approaching the SDM would not be respectful of their personhood and decision-making capacity and this ability was assessed on a case-by-case basis with the assistance of the nurse manager. In the present study, one resident was able to provide informed consent independently while the remainder of the consents was provided by the residents' SDMs.

Description of the intervention. The person-centred dementia communication intervention was comprised of two components: a group educational workshop followed by a one-to-one VF session. Specific information in regards to the content and process of both intervention aspects is outlined in further detail below.

Educational component. Development of the education session content incorporated the theoretical and empirical evidence in relation to PCCare and PCDC. Logistical considerations, such as length and timing of the session, were determined with input from the nursing leadership team at the research site. In relation to the delivery method of the education session, research indicates that onsite educational efforts are more effective and acceptable to care providers when interactive learning approaches are employed and participants are provided an opportunity to practice the learned skills (Machiels et al., 2017; Vasse et al., 2010). Thus, the education session engaged participants through the use of reflective techniques and activities, small and large group discussion, analysis and critique of communication examples, and role play. The one-time education session was three hours in length and aimed to address the cognitive and behavioural

components of learning person-centred communication skills (McGilton et al., 2009). The session was delivered by the researcher and repeated twice to accommodate the schedules of the HCAs in the study. HCAs were paid three hours to attend the session as per usual practice in the present LTC setting.

The education session plan is outlined in Appendix L. The session began with a general overview of the aspects of good communication along with communication challenges in dementia care. The components of PCDC were then addressed by division into two sections: person-centred and language-based approaches. To provide context to person-centred communication, this section began with discussion and reflection upon general PCCare principles. These PCCare principles encompass value and respect for each person, an individualized approach to care and communication, understanding the perspective of the person with dementia and provision of a supportive social environment (Brooker, 2004; 2007; Kitwood, 1997). The four person-centred communication strategies (i.e. recognition, negotiation, validation and facilitation) (Kitwood, 1997) were then introduced and an enabler (checklist) provided for reference (Appendix M). Educational video clips were then presented and the participants asked to critique the videos for examples of person-centred strategies and missed opportunities where these approaches could have been used. Participants were then asked to have role play conversations with a partner to practice using the four person-centred communication strategies (Appendix N). The next section of the session addressed the language-based strategies found to be effective when communicating with individuals who have dementia (Appendix M) (Eggenberger et al., 2013; Savundranayagam & Moore-Nielsen, 2015). In pairs, the participants were invited to identify examples of language-based strategies in a written

conversation between a HCA and resident (Appendix O) with a follow-up group discussion on their findings. Non-verbal communication strategies were also discussed based on empirical evidence (Eggenberger et al., 2013). The session concluded with information relating to self-reflective techniques (Appendix P) and the value of self-reflection in learning (Mann et al., 2009; Williams & Gallinat, 2011). This discussion acted as a segue to discuss the forthcoming individual video-feedback (VF) session and what to expect in relation to this aspect of the PCDC intervention. Lastly, the participants were provided with a take-home reflection activity (adapted from Lobchuk et al., 2016, 2018) to complete prior to the VF session (Appendix Q).

Video-feedback component. The individual VF session was independent of the education component of the intervention. This involved a single 30-45 minute one-on-one session with each HCA and the researcher arranged at a mutually suitable time after completion of the four hour education session. At the beginning of the VF session, the HCAs were asked to discuss any insights they had gained in response to the take-home reflection activity. The HCAs were then offered an opportunity to review the baseline video of their interaction with their resident partner during the care encounter (obtained during the baseline measurement at Time 1). To stimulate active and self-reflective learning (Mann et al., 2009; Williams & Gallinat, 2011), the HCAs were asked to view the recording and note displayed linguistic and relational communication behaviours using the same checklist provided in the education session (Appendix M). After the viewing, the HCAs were asked to first share their reflections in relation to displayed person-centred communication skills, and subsequently any missed opportunities they noted. The researcher then offered additional observations (if any) and asked the participant to self-identify

communication areas they would like to focus on for improvement over the coming weeks (Damen et al., 2011; van Vonderen et al., 2010; van Vonderen et al., 2012; Zijlmans et al., 2011).

Study protocol.

Pre-intervention phase. Once HCA and resident consents were obtained, HCA participants were asked to complete the demographic information and baseline measures on a self-report, paper-based questionnaire (Appendix R). Resident demographic information was also collected at this time (Appendix S). Then, at an agreed-upon time and location in consultation with the HCA and consenting/assenting resident, a care interaction was video-recorded to be used for the baseline observational measure, as well as the VF component of the intervention. The video-recording was conducted by the researcher using a portable electronic device (i.e. tablet). Ongoing consent from the HCA, indicated as verbal agreement, and assent from the resident was obtained prior to the start of the video-recording. The resident's assent was determined by an affirmative verbal response or a non-verbal response such as smiling or nodding. A negative verbal response, outward signs of distress, or physical withdrawal from the researcher would have been interpreted as lack of assent but this was not encountered during any of the video-recording events and all recording of care episodes proceeded as planned.

Intervention phase (aka PCDC intervention). Within two to three weeks of completing the baseline activities and measures, the group educational session was held for the participating HCAs. Within two to three weeks of the education session, (specific timing was dependent upon availability and work schedule of the HCA), the individual VF sessions were held with each HCA to review their baseline video.

Post-intervention phase. Within four to six weeks of the completion of the PCDC intervention (i.e. group education session plus the individual VF session), a post-intervention video of the same HCA-resident dyad was recorded to act as an observational measure of comparison to the baseline video recording. During this time frame, HCAs were also asked to complete the post-intervention self-report questionnaire (Appendix T). Immediately after the second video recording, residents were assessed for their interest and ability to participate in an interview with the researcher to discuss their experiences in the study. Following collection of all post-intervention quantitative measures, focus groups and interviews with the HCAs and a focus group with the nursing leadership team (i.e. Director of Care, Assistant Director of Care and Nurse Managers) were conducted.

Data collection and outcome measures.

HCA demographic information. Based on research describing the profile of HCAs working in Canadian LTC homes (Estabrooks et al., 2015), the following demographic information was collected via the pre-intervention self-report questionnaire (Appendix R); age, gender, highest level of education achieved, shift worked most of the time, position status (full-time or part-time), first language, country of birth, hours worked in the past two weeks, years worked on the current unit/floor, years worked in LTC, and years worked as a HCA. Additionally, to assist in understanding the context of the current HCA-resident relationship and any communication difficulties with the resident within the caregiving dyad, the following information was also collected at this time; length of caregiving relationship with resident, length of time experiencing communication challenges with the resident (if any) and previous attempts/efforts to improve communication with the resident. Lastly, global ratings of the

perceived closeness of the relationship with the resident, as well frequency of self-reflection upon actions and feelings at work were collected.

Resident demographic information. The Canadian Institute for Health Information clinical data on LTC residents (2019) and empirical research on the profile of residents living in Western Canadian care homes (Estabrooks et al., 2013) provided guidance as to relevant descriptive data to collect about the resident participants of this study. The following resident information was collected in the pre-intervention phase of the study: age, gender, number of active medical diagnoses, number of medications received during the past month, subtype of dementia (if available), most recent Cognitive Performance Scale (CPS) score, and most recent Index of Social Engagement (ISE) score (Appendix S). This information was collected by the researcher via review of the resident's physical chart and Resident Assessment Instrument/Minimum Data Set (RAI-MDS) electronic records in the PCH (the latter accessed by the nurse manager).

Outcome measures. The measures used to investigate the effects of the intervention on the dependent variables and outcomes of interest are outlined in detail below in relation to each of the research questions.

1. *Does the communication intervention improve the linguistic (i.e. language-based) elements of PCDC behaviour of HCAs?*

This research question was addressed via means of a published quantitative observational measurement approach. The categorization of PCDC linguistic strategies and related coding system developed and tested by Savundranayagam and Moore-Nielson (2015) (Table 4) was used to observe for any language-based changes in dementia communication behaviour

between pre- and post-intervention video measurements. This coding system, comprised of 21 linguistic strategies, was utilized by the above authors to analyze transcripts of audio-recorded care interactions between LTC aides and residents with dementia to examine overlap between person-centred and linguistic dementia communication strategies. The coding system involves examining care provider utterances for evidence of any of the 21 linguistic strategies and recording an absolute count of each linguistic strategy noted within the care interaction (i.e. a possible value of 0 to infinity). To provide additional structure to the coding scheme within this study, the 21 linguistic strategies were categorized according to their relative communication goal: 1) reciprocity, to encourage two-conversation; 2) clarity/coherence, to promote clear understanding and communication; and, 3) continuity, to support the resident to continue the conversation or activity. To test reliability of the coding system, the originating authors reported a 91% agreement analysis between two trained researchers who independently coded 20% of the transcripts (9 of a total of 42) (Savundranayagam & Moore-Nielson, 2015). The coding approach undertaken in the current study is described below under Research Question #2.

2. *Does the communication intervention improve the relational (i.e. person-centred) elements of PCDC behaviour of HCAs?*

Assessment of differences in respect to the relational elements of PCDC was evaluated in a similar manner to the first research question. A measurement approach pertaining to the relational (person-centred) aspects of PCDC has also been developed and utilized within the empirical literature (Savundranayagam, 2014; Savundranayagam & Moore-Nielson, 2015; Savundranayagam et al., 2016). Aligning with Kitwood's four indicators of positive person

work relevant to PCDC (Kitwood, 1997), this coding scheme identifies the presence of recognition, negotiation, validation and facilitation/collaboration within care provider interactions with LTC residents during care activities (Table 6). The coding approach involves examining care provider utterances for evidence of any of the four relational strategies and recording an absolute count of each noted within the care interaction (i.e. a possible value of 0 to infinity). A similar approach to the testing of the language-based (linguistic) coding system described above was also taken by the researchers to examine reliability of this coding tool. Agreement analysis of 20% of the transcripts (n=9) coded independently by two trained researchers was reported to be 91% for recognition, 92% for negotiation, 84% for facilitation and 85% for validation (Savundranayagam, 2014; Savundranayagam & Moore-Nielson, 2015; Savundranayagam et al., 2016).

Table 6 – Relational (Person-Centred) Dementia Communication Categories and Coding System

Relational Strategy	Examples
Recognition	
1. To acknowledge the resident as a person, known by name, affirmed in a unique way (e.g. greeting, listening, eye contact)	"Hello Mrs. Smith <*recognition*>. Are you ready for lunch?" "Good morning, John <*recognition*>. How did you sleep?"
2. Use of Biographical statements. Code when the HCA refers to something about the resident's family, life, or day. This category is coded *by topic*, not by individual statement. Do not code general statements such as statements about the current weather situation.	"I saw your sister yesterday in the mall." "Has your husband been to visit lately?" "How many kids do you have?" "Where did you grow up?"
Negotiation	
1. To consult about the resident's preferences, desires, needs. • **Much negotiation takes place over simple everyday issues, such as whether a person feels ready to get up, or have a meal, etc.** • **Negotiation gives a sense of control to a person with dementia**	Example 1: Mrs. Johnson: "I, uh ... I can't find my place. Oh ... here it is!" Staff: "Actually, your table is over there (pointing). Would you like to walk over together before the meals are served?" <*negotiation*> Example 2: Staff: "That was a nice bit of fresh air, wasn't it? I'm ready for my dinner now; would you like to join me?" <*negotiation*>
Validation	
1. To acknowledge the reality of a person's emotions/feelings, and give a response on the feeling level **2. To appreciate and respond to the desire or need that a person may be expressing; to help if necessary, to convert it to an intention** **3. To use empathy and gain some sense of what a person may be experiencing** **4. To understand a person's definition of the situation** **5. To respond sensitively to any signs that a person's definition of the situation is changing, and to move with any changes that occur**	Example 1: Mrs. Johnson: (eagerly) "Why don't I help set the uhm ... tables – that way ... uh ... lunch'll arrive sooner!" (reaches for the butter knives) Staff: "Mrs. Johnson, that'd be really helpful! <*validation*> We can set the tables together and soon have things under control. <*validation*> Example 2: Mr. Lawton: "Where's Mary? Isn't she supposed to be here?" Staff: "Mary will be at work now, and she knows you're here. You have managed well this morning since you've been worried about Mary." <*validation*>

Relational Strategy	Examples
Facilitation/Collaboration	
1. To work together **2. To involve the person's initiative and abilities in a shared task, with a definite aim in view.** **3. To enable a person to do what otherwise he/she wouldn't be able to do by themselves by providing the missing parts of the action** **4. To enable interaction to get started, to amplify it and to help the person gradually fill it out with meaning** **5. To enable a person to sustain his or her action; to keep it from falling into the void because of memory failure** **6. To be ready either to initiate or respond to the resident; neither rushing in too quickly, nor holding back for too long.** **7. To enable the use of remaining abilities by requesting that the resident perform an activity of daily living.** **8. To fill gaps in meaning (note: explaining the task to the resident is only facilitation if it is filling a gap in understanding and the resident prompted the explanation.**	Example 1: Mrs. Smith:(wanders into the dining room) "Have you seen ... have you seen it?" Staff: "What is it you're looking for, Mrs. Smith? Can I help? *<facilitation> Tell me what it is and we can look for it together. <facilitation>* Example 2: Mrs. Rogers: "She knew I didn't want to go to bingo, and instead we uhh..." Staff: "What happened then?" *<facilitation>*
∗Note: to distinguish between validation and facilitation, statements that are more feeling- oriented should be categorized under validation and those that are more action-oriented should be categorized under facilitation.	

(Savundrananyagam, 2014)

In the present study, the researcher and a trained research assistant (Ms. Miranda Stead, undergraduate nursing student) independently coded HCA statements from transcriptions of pre-/post-intervention video observations utilizing the described coding system for language-based and person-centred elements of PCDC (Appendix U). The researcher's advisor (Dr. Michelle Lobchuk) was also trained in the coding system to act as a third reviewer in the event of coding disagreement. Transcripts were analyzed in conjunction with viewing the original videos to confirm the intent and purpose of statements. To address rigor of coding, the following steps were taken:

1. All videos were transcribed into separate typed records by an independent transcriptionist with each statement in the transcript referenced by a time stamp (minute:second);
2. The transcripts were reviewed and compared to the videos for accuracy by the researcher;
3. The research assistant received general training from the researcher on the PCDC coding scheme. Coding practice and discussion proceeded on one study-related video/transcript until 100% agreement was reached;
4. The entire length of each of the remaining 20 videos (average pre-video length was approximately 13 minutes and post-video length 12 minutes) were then independently coded by the researcher and research assistant in the following manner:
    i) Each HCA statement in the video/transcript was reviewed sequentially for evidence of language-based and/or person-centred PCDC strategies and noted on the transcript adjacent to the associated time stamp;
    ii) If a statement exhibited both language-based and person-centred strategies, it was coded as having two code counts (one for language and one for person-centred);

iii) If a statement did not exhibit any strategy in the PCDC coding system, it was coded as 'Uncategorized';

iv) The researcher and research assistant met either in person or via phone to discuss the results of the independent coding until 100% agreement was reached on all transcripts;

v) At the completion of the video coding, the totals were calculated and recorded on the coding sheet for the following:

(1) Number of HCA statements;

(2) Number of HCA statements coded;

(3) Number of uncategorized statements;

(4) Number of resident statements;

(5) Number of statements for each of the 21 language-based strategies;

(6) Sub-total of language-based statements for each of the three communication categories (i.e. reciprocity, clarity and continuity statements);

(7) Number of language-based strategy types used in each of the three communication goal categories;

(8) Total number of language-based statements;

(9) Number of statements for each of the four person-centred strategies;

(10) Total number of person-centred statements; and

(11) Total number of PCDC statements (language-based plus person-centred).

To provide a complementary perspective on the effectiveness of the intervention on the HCAs' PCDC behaviours, a qualitative comparative analysis of each dyad's pre- and post-

intervention video was undertaken. This evaluation sought to reveal contextual considerations that may have impacted or enhanced communication efforts, as well as changes in PCDC behaviour supplemental to the coding system.

3. *What is the effect of the communication intervention on HCA perceived competence and confidence in relation to communicating with residents with dementia?*

This research question was examined using quantitative data obtained from the HCAs via the pre/post self-report questionnaires. Perceived competence and confidence in communicating with residents with dementia was measured using the Providers' Interactional Comfort Survey (PICS) (Bowles, Mackintosh, & Torn, 2001). The PICS is a six-item scale that measures perceptions of provider competence, confidence, willingness, frequency and scope of practice related to communication with patients/residents/clients (Appendix V). Each dimension is scaled from 0 to 10 where 0 indicates *not at all* (e.g. competent) and 10 represents *extremely* (e.g. competent). Thus, total scores on the PICS range from 0 to 60, with higher scores indicating increased competence, confidence and comfort in communicating with patients (Bowles et al. 2001). Although the PICS was originally developed for use with nurses, subsequent studies have employed this tool with other health care providers, including care aides working in continuing care settings (McGilton, Irwin-Robinson, Boscart, & Spanjevic, 2006; McGilton et al., 2016; McGilton et al., 2010). The scale has demonstrated acceptable internal consistency reliability in previous empirical work (Cronbach's alpha coefficient of 0.81) (McGilton et al., 2006) and has shown sensitivity to a communication intervention (McGilton et al., 2010).

4. *What is the effect of the communication intervention on HCA ratings of relationship satisfaction and relationship closeness with residents?*

The fourth research question was also addressed using quantitative data obtained from the pre/post HCA self-report questionnaires. HCA relationship satisfaction with the resident was measured using the Personal Accomplishment (PA) subscale of the Maslach Burnout Inventory - Human Services Survey (MBI-HSS) (Maslach & Jackson, 1981). The MBI-HSS was developed to measure the aspects of burnout syndrome in human services and educational workers and is comprised of three subscales: Emotional Exhaustion, Depersonalization and Personal Accomplishment. The PA subscale is independent of the other two subscales and can be scored and utilized as a stand-alone measure. It is comprised of eight items that describe feelings of success and achievement in relation to one's work and provision of care/service to others (Appendix W). Each item is scaled relative to frequency and scores range from 0 to 6, with 0 denoting *never* and 6 indicating *every day*. Total scores of the PA subscale span from 0 to 48, with higher values suggestive of greater feelings of accomplishment in one's work. Internal consistency of the PA subscale was originally reported as 0.71 (Cronbach's coefficient alpha) (Maslach & Jackson, 1981). Subsequently, across a wide range of samples and empirical studies, reliability coefficients have shown similar internal consistency for the PA subscale (Maslach et al., 2016). Both convergent and discriminant validity has been demonstrated in the initial and ongoing development of the tool (Maslach & Jackson, 1981; Maslach et al., 2016). Slight wording adjustments to the items were required for this study to apply the questions to a particular resident. This particular variation has been utilized and

subsequently demonstrated face validity in a study examining person-centred behaviour change of care aides in LTC as a result of a PCCare intervention (Coleman & Medvene, 2013).

Relationship closeness with the resident was measured using a quantitative self-report measure obtained from the HCA questionnaires. The Mutuality Scale (MS), created by Archbold and colleagues (1990), was developed to measure closeness and reciprocity in family caregiving relationships. Relevant to this thesis research context, it has been used as a general measure to study relationship closeness between older adults and family caregivers (Lyons, Sayer, Archbold, Hornbrook, & Stewart, 2007) and LTC residents and care aides (Coleman & Medvene, 2013; Heliker & Nguyen, 2010). The MS is a 15-item scale that is comprised of four theoretically-derived and empirically-supported latent factors: shared pleasurable activities, shared values, love and reciprocity (Archbold, Stewart, Greenlick, & Harvath, 1990; Pucciarelli et al., 2016). Each item is assessed on a five-point scale ranging from 0 (*not at all*) to 4 (*a great deal*) (Appendix X). The total scoring ranges from 0 to 60 with higher values indicating greater relationship mutuality. Initial testing and subsequent studies have reported high reliability of the MS with a Cronbach's alpha of > 0.90 (Archbold et al., 1990; Heliker & Nguyen, 2010; Lyons et al., 2007; Pucciarelli et al., 2016). Confirmatory factor analysis within the context of a stroke population has also supported the four-factor structure of the measure (Pucciarelli et al., 2016).

Additionally, global ratings of relationship closeness with the resident were collected using the Provider Close Visual Analogue Scale (VAS). The measurement tool was a 100mm VAS with anchors *Not at all close provider-resident relationship* and *Very close provider-resident relationship*. The Provider Close VAS has been used in previous study of provider-

resident relationship closeness and has demonstrated good test-retest reliability (*r* = 0.90) and responsiveness to change (McGilton et al., 2010).

To provide insight into the intervention's impact on self-reflection, a global rating score was collected in response to the question 'How often do you reflect upon (or think deeply) about your feelings and actions at work to help you understand the resident's situation?' The measurement tool was a 100mm visual analogue scale with anchors *Never* and *All the time*.

5. *What are the acceptability, utility and feasibility of implementing the communication intervention in a LTC setting from the perspective of the HCAs and residents in the study, as well as the care home's nursing leadership?*

To evaluate the acceptability (i.e. degree of tolerance and acceptance), utility (i.e. usefulness and benefits) and feasibility (i.e. ease of use and implementation) of the communication intervention from the perspective of the HCAs and nursing leadership, qualitative information was gathered via focus group and interview methods. Depending upon their preference and availability, HCA participants were invited to partake in a focus group or interview to explore their perception of the communication intervention. The focus groups and interviews were facilitated by the researcher and guided by semi-structured questions with prompts to encourage the participants to elaborate on responses (Appendix Y). The questions addressed:

1. The HCAs' perception of the content and delivery method of the educational workshop relative to its acceptability, ease of use and effectiveness in learning PCDC approaches and improving interactions and relationships with residents (McGilton et al., 2016; McGilton et al., 2010);

2. The HCAs' perception of the video-recording experience and VF session as to its acceptability, ease of use and effectiveness in learning PCDC approaches and improving interactions and relationships with residents (Embregts, 2002; van Vonderen et al., 2012; van Voderen et al., 2010);
3. Other benefits noted in relation to the communication intervention and/or in comparison to other learning methods; and
4. Factors that facilitated or hindered the communication intervention and interactions with residents, in general (McGilton et al., 2016; McGilton et al., 2010).

Additionally, the post-intervention surveys gathered qualitative comments from the HCAs as to their perception of whether the relationship and communication with their resident partner improved over the course of the study.

The personal care home's nursing leadership team members (i.e. Director of Care, Assistant Director of Care and Nursing Managers) were invited to a separate focus group to obtain their perspective as to the acceptability, utility and feasibility of the communication intervention. Similar questions (Appendix Y) were posed to inquire as to their impression of:

1. The effectiveness of the intervention overall on the HCAs' communication approaches and relational interactions with residents;
2. The ease of use and implementation from a leadership perspective;
3. Other benefits noted in relation to the communication intervention and/or in comparison to other learning methods; and
4. Factors that facilitated or hindered the communication intervention during the study and/or perceived barriers for future use.

Resident acceptability of the intervention was addressed via two approaches. First, an observational measure obtained from the pre-/post-intervention video recordings was used to capture and compare the residents' response to interactions with the HCA. This measure was observed four times in total, at the beginning and end (i.e. the first and last 30 seconds) of each pre- and post-intervention video recording and involved identification of the presence or absence of the following outcomes via a yes/no response to the questions below:

1. Was the resident engaged with the HCA? (i.e. as evidenced by resident eye-gaze, nodding and/or verbal responsiveness directed towards the HCA) (Caris-Verhallen et al., 2000; McGilton et al., 2009);
2. Did the resident display any outward signs of positive mood/affect, i.e. as demonstrated by a calm demeanor, smiling, laughing or verbal agreement with caregiver? (McGilton et al., 2009; Vasse et al., 2010);
3. Did the resident display any outward signs of negative mood/affect i.e. as evidenced by sadness, tearfulness, anger or withdrawal from the HCA? (Eggenberger et al., 2013; McGilton et al., 2009); and
4. Did the resident display any responsive behaviour i.e. resistance to care/intervention from the HCA, agitation or physical/verbal aggression? (Eggenberger et al., 2013: Vasse et al., 2010).

Additionally, immediately following the post-intervention video-recording of a dyad's care interaction, the residents were assessed as to their ability and asked to participate in an interview to gather information on their perspective regarding any change in the HCAs communication or relational skills and their experience in relation to being video-recorded

during the study. Interviews and focus groups were conducted by the researcher, audio-recorded and subsequently transcribed verbatim to facilitate data analysis.

Data analysis plan.

Quantitative analysis. The quantitative data analysis plan was developed in consultation with Dr. R. Rabbani, statistician and the steps are outlined below. A significance level of $p < 0.1$ was used for all testing due to the small sample size. The Statistical Package for Social Sciences (SPSS) version 26 (IBM, 2019) was used to conduct the statistical testing.

1. Using intention-to-treat principles, missing data were addressed by averaging the other responses in the respective scale or measure.
2. Descriptive statistics were used to describe the HCA and resident characteristics, as well as all quantitatively measured variables of interest at pre-intervention and post-intervention.
3. The Kolmogorov-Smirnov and Shapiro-Wilk statistical tests and histogram charts were used to assess the data for normal distribution. If at least one of the statistical tests was significant to the 0.1 level and/or the histogram indicated normal distribution, the scores were considered normally distributed. If none of these conditions were met and the histogram skewed, an attempt was made to transform the data using Log10 transformation technique.
4. To observe for unadjusted changes in HCA outcomes between pre-intervention and post-intervention measures, paired samples t-test was used for normally distributed data (17 outcome measures) and the Wilcoxon-Signed Rank test utilized for non-normal distribution (one outcome measure).

5. To inform the regression analysis, independent samples testing was conducted to determine the presence of any relationship between the independent variables (i.e. 21 HCA and resident covariates in total) and outcome variables. Parametric tests for normally distributed data (i.e. Pearson correlations for continuous variables, t-test for 2-category variables and ANOVA for greater than 2-category variables) and non-parametric tests for non-normal distributions (i.e. Spearman correlation for continuous variables, Mann-Whitney test for 2-category variables and Kruskal-Wallis test for greater than 2-category variables) were used for the independent samples testing.
6. To explore between-subject and within-subject effects on the outcome variables of interest, univariate regression analysis was conducted using a repeated measures general linear model (GLM) procedure (Dobson & Barnett, 2008; Fitzmaurice, Laird, & Ware, 2011). Covariates from the independent samples testing in Step #5 that had a significant relationship with any of the outcome variables were included in the regression model. Thirteen independent variables were included in the model to examine potential effects on the normally distributed outcome variables that showed significant unadjusted differences pre- and post-intervention in the paired samples testing.
7. Using Cronbach's alpha, reliability testing of the individual scale items [i.e. Provider Interaction Comfort Scale (PICS), Personal Accomplishment (PA), Mutuality Scale (MS), observational language-based and person-centred communication skills] was undertaken to inform the interpretation of results.

Qualitative analysis. To examine the acceptability, utility and feasibility of the PCDC intervention, transcripts from the focus groups and interviews with the HCAs and leadership team members were analyzed for thematic content. Prior to the analysis, the transcripts were cross-referenced with the corresponding audio-recording for accuracy. Content analysis methodology (Graneheim & Lundman, 2004) was used to identify themes and sub-themes in the data. The transcripts were read and re-read to gain an overall appreciation for the content and flow of the material and then manually coded line-by-line to identify consistent words, phrases and concepts. Codes were grouped with like codes and then organized and refined into themes and overarching categories.

To maintain rigour in the analysis, the researcher and an advisory committee member (Dr. Genevieve Thompson) independently coded two interview transcripts and then met to compare and verify emerging themes. Subsequently, the remaining focus group transcripts were independently coded and the researcher developed a draft summary of categories with associated themes. The second coder then compared her findings to the summary to ensure all themes had been captured.

Research ethics and ethical considerations. Ethics approval was obtained via the Education/Nursing Research Ethics Board (ENREB) at the University of Manitoba (Protocol #E2018:055 - HS21919). Site access approval was obtained via the Winnipeg Regional Health Authority (WRHA) Research Access and Approval Committee.

Ethical considerations in relation to use of video. A number of ethical considerations required delineation specifically pertaining to the use of a video medium in this thesis research. The first consideration relates to who would have access to viewing the baseline and post-

intervention video-recordings. In relation to the use of the video as a component of the intervention (i.e. VF session), the researcher initially viewed the video independently to screen for any inadvertent capture of non-participating residents' or staff members' images or names. Subsequently, the researcher reviewed the video with the individual HCA. The HCA did not receive a copy of the video. In regard to the use of the video for baseline and post-intervention observational data collection, only the researcher, a transcriptionist, the research assistant, and the researcher's advisor viewed the videos. The videos were not shown or provided to any other individual or organization, including the management team of the PCH.

A second consideration pertains to the absence of coercion or use of power relationships to recruit HCA participants into a study that utilizes video medium. To address this concern, any information pertaining to the staff's participation in the study originated from the researcher and not the management. The researcher personally engaged the HCAs and residents/SDMs in recruitment conversations and gaining of consent.

Finally, care was taken to avoid the capture of non-participating residents and PCH staff in the video recordings. All care interactions were video-recorded in private locations within the care home that eliminated the possibility of capturing other individuals. In cases where residents required a two-person assist during the videoed care encounter, all efforts were made to enlist the assistance of another HCA already enrolled in the study. If this was not possible, agreement was obtained from the second HCA prior to the initiation of the video recording.

Data management and security. Due to the use of video medium within this study, identification of individual participants was possible; therefore, the ethical duty of confidentiality

and the use of appropriate measures to safeguard information throughout the research life cycle was paramount (CIHR-NSERCC-SSHRCC, 2018). Security measures to protect research information and the confidentiality of participants took into account the data's format, content, mobility, and vulnerability to unauthorized access.

The data collected in this study were in both electronic (video-files of care interactions and audio-files of focus groups/interviews) and paper (HCA and resident demographic data, HCA pre- and post-intervention questionnaires, transcripts of focus groups/interviews) formats. Individual HCAs and residents were identifiable via the video-recordings but de-identified on the demographic and questionnaire records via use of a study code. The code was identified on a Master List linking the study code with HCA and resident names and stored separately from the data collected. Electronic data was collected by means of a password-protected portable device (i.e. tablet) and stored on a primary encrypted memory stick. To allow for mobility between the researcher and transcriptionist/research assistant, the video files were copied onto a second encrypted memory stick. The research assistant and transcriptionist signed a Confidentiality Pledge that outlined responsibility for protection of the electronic files on the memory stick(s), i.e. no transfer or copying of files was allowed. The audio files from the focus groups/interviews were managed and stored in a similar fashion. After publication of the study results, the encrypted memory sticks with the video and audio files will be taken to the University of Manitoba Information Services and Technology (IST) department for permanent destruction.

After the analysis phase was completed, the paper-based data were scanned and uploaded to Dataverse and stored as a dataset within the thesis project's dataverse. Following the upload of files, the paper-based information was shredded and disposed of as confidential waste. Seven

years after the completion of the study, all remaining project data on Dataverse will be deleted by the researcher.

Summary

This chapter has provided an overview of the study design and methodology used to establish a systematic and rigorous approach to address the research questions. A single group pre-test/post-test study design supplemented by focus groups and interviews was used in this pilot study to investigate the promise of a PCCommunication intervention incorporating a VF component. The perceived acceptability, utility and feasibility of the approach from the perspective of the study participants and nursing leadership at the PCH were also examined. Ethical considerations pertaining to the study, particularly in relation to the use and management of a video medium within this research context, as well as related electronic data management and security matters, were also discussed. With careful consideration and attention to pre-study preparations, ethical procedures and intervention protocol, it was possible to explore the potential benefits of this PCCommunication intervention within an ethically and methodologically sound research approach.

Chapter 5: Research Results

The primary research question addressed whether the person-centred dementia communication (PCDC) intervention piloted in this study was an effective and feasible method to enhance person-centred communication (PCCommunication) and relationships between health care aides (HCA) and residents with dementia in long-term care (LTC). The first four specific research questions focused on the effectiveness of the PCDC intervention relative to the language-based (linguistic) and person-centred (relational) elements of observed communication behaviour, as well as HCA self-reported perceived competence and confidence in dementia communication skills and ratings of relationship satisfaction and closeness with their resident partner. The final specific research question addressed the acceptability, utility and feasibility of implementing the communication intervention in a LTC setting from the perspective of the HCAs and residents in the study, as well as the nursing leadership.

To begin, this chapter will present an overall description of the sample (HCA and resident participants) and video recordings. Results of the reliability testing of the quantitative tools and measures are also described. Findings pertaining to the effectiveness of the intervention include outcomes of the comparative statistical analysis of the paired observational and self-report measures. Results of the regression analysis that examined potential effects of within-subject and between-subject factors on the study outcomes are also discussed. To offer a supplementary perspective of intervention effectiveness, the findings of a qualitative comparative analysis of each dyad's pre- and post-intervention video are also presented. This section concludes with a presentation of findings from the content analysis of the HCA, resident and nursing leadership

interviews and focus groups that examined the acceptability, utility and feasibility of the PCDC intervention.

Description of the Sample

Sample characteristics. The study sample consisted of 11 HCA-resident dyads. One resident acted as partner for two HCAs; therefor the total number of resident participants was 10. All HCAs completed the study; however, one HCA unexpectedly left their employment at the personal care home (PCH) prior to the post-intervention video being taken. All other pre-/post-data was obtained from this participant.

Health care aides. According to Table 7, HCAs (N = 11) were 40.6 years of age (mean, SD = 9.02; range = 24-52), female (82%), born outside of Canada (55%) and reported English as their first language (55%). Eighty-two percent reported completion of a college program as their highest level of education. All had completed a HCA certification as well as received previous education on dementia communication. HCAs had worked 9.2 shifts in the past week (mean, SD = 0.87; range = 8.0 to 10.0) with the majority holding a full-time position (64%). They had worked 3.1 years on their current floor (mean, SD = 2.65; range = 0.8 to 9.0) and 10.6 years as a HCA (mean, SD = 8.52; range = 1.1 to 24.5).

Table 7 – Health Care Aide Demographics

	Mean (±SD)	Median (Range)
Age* (years)	40.6 (9.02)	41.0 (24.0-52.0)
Shifts worked in past 2 weeks	9.2 (0.87)	9.0 (8.0-10.0)
How long working with resident partner* (months)	21.9 (23.74)	15.0 (3.5-84.0)
Years worked on current floor/unit	3.1 (2.65)	2.0 (0.8-9.0)
Years worked in LTC	10.7 (8.39)	9.0 (1.1-24.5)
Years worked as HCA	10.6 (8.52)	9.0 (1.1-24.5)
		n (%)
Gender		
• **Female**		9 (82%)
• **Male**		2 (18%)
First Language		
• **English**		6 (55%)
• **Other**		5 (45%)
Country of Birth		
• **Canada**		5 (45%)
• **Other**		6 (55%)
Highest Level of Education Completed		
• **College program/certificate**		9 (82%)
• **University degree**		2 (18%)
Completed HCA Certificate		
• **Yes**		11 (100%)
Previous Dementia Communication Education		
• **Yes**		11 (100%)
Primary Shift Worked		
• **Days**		6 (55%)
• **Evenings**		5 (45%)
Current Position		
• **Full-time**		7 (64%)
• **Part-time**		4 (36%)

N= 11; *N=10

Residents. As noted in Table 8, residents (N = 10) were 88.9 years of age (mean, SD = 8.57; range 74 to 103), female (90%), had 7.4 active medical diagnoses (mean, SD = 2.07; range = 5 to 11) and were receiving 9.8 prescription or over-the-counter medications (mean, SD = 4.42;

Table 8 – Resident Demographics

	Mean (± SD)	Median (Range)
Age (years)	88.9 (8.57)	88.0 (74-103)
Number of active medical diagnoses	7.4 (2.07)	7.0 (5-11)
Number of medications (OTC and prescriptions)	9.8 (4.42)	9.0 (4-17)
***Cognitive Performance Scale Score**	2.5 (0.71)	3.0 (1-3)
****Index of Social Engagement Score**	3.0 (1.49)	2.5 (1-6)
		n (%)
Sex		
• **Female**		9 (90%)
• **Male**		1 (10%)
Sub-type of Dementia		
• **Alzheimer**		2 (20%)
• **Vascular**		2 (20%)
• **Unknown**		6 (60%)
Number of staff assist – pre-video		
• **One**		7 (70%)
• **Two**		3 (30%)
Number of staff assist – post-video		
• **One**		6 (60%)
• **Two**		4 (40%)

N=10 (one resident acted as partner for 2 Health Care Aides)
*Cognitive Performance Scale range: 0-6
**Index of Social Engagement range: 0-6

range = 4 to 17). The Cognitive Performance Scale (CPS) score was 2.5 (mean, SD = 0.71; range 1 to 3), indicative of moderate dementia. The subtypes of dementia included Alzheimer (20%) and vascular (20%), with 60% unknown/not documented. The Index of Social Engagement (ISE) score was 3.0 (mean, SD = 1.49; range 1 to 6) suggestive of moderate social engagement levels of the residents. During the pre-intervention video, 70% (n = 7) of residents required one staff assistance for personal care, while this decreased to 60% (n = 6) during the post-intervention video due to functional decline.

Video characteristics. Twenty-one videos were obtained across the 11 HCA-resident dyads. The length of the pre-intervention videos (n = 11) was 13.1 minutes (mean, SD = 5.09; range = 6.3 to 22.0) and the post-intervention video (n = 10) length was 12.4 minutes (mean, SD = 4.3; mean = 6.0 to 19.5). The video recording occurred during morning care (5 HCA-resident dyads), evening care (5 HCA-resident dyads), or exercise sessions (1 HCA-resident dyad). Pre-intervention and post-intervention videos captured the same care encounter; e.g., if morning care was recorded for the baseline video, then morning care was also captured for the post-intervention video. Recorded care activities included assistance with transfers, ambulation, dressing, washing, oral care, hair care, shaving and exercise supervision. If a resident was in a state of partial undress during the care encounter, this portion was not captured visually but recorded audibly to preserve the natural flow and intent of the conversation. All care encounters occurred within a private setting, i.e. in the resident's (single) room or an exercise room. A time limit was not established for the video-recordings and a care encounter was captured from its natural beginning to its conclusion to depict the typical flow of the interaction and conversation.

Reliability Testing of the Outcome Measures

Table 9 highlights the results from the reliability testing of the self-report and observational outcome measures. All three self-report measures [i.e. Provider Interaction Comfort Scale (PICS), Personal Accomplishment (PA) scale, and Mutuality Scale (MS)] demonstrated high internal consistency as indicated by Cronbach's alpha values greater than 0.8. The reliability testing of the observational measures was mixed. The sub-categories of the language-based communication statements had low pre-and post-intervention internal consistency based on the reliability testing (i.e. reciprocity = .36 for both measurements, clarity = .49 and .06 respectively, and continuity = .57 and .45 respectively); however, total language-based statements overall had higher coefficient values (pre-intervention = .71; post-intervention = .60). Both person-centred communication statements and overall PCCommunication statements (language-based plus person-centred) had acceptable internal consistency pre- and post-intervention with Cronbach's alpha values greater than 0.7.

Table 9 – Outcome Measures Reliability (Internal Consistency) Testing

	Pre-Intervention Cronbach's alpha	**Post-Intervention Cronbach's alpha**
Self-Report Measures		
Providers Interaction Comfort Scale (0-60)	.88	.85
Personal Accomplishment Score (0-48)	.97	.86
Mutuality Scale (0-60)	.92	.87
Video Observation Measures		
Language-based statements:		
Sub-total reciprocity statements	.36	.36
Sub-total clarity statements	.49	.06
Sub-total continuity statements	.57	.45
Total language-based statements	.71	.60
Person-centred statements	.72	.72
Overall PCCommunication statements (language + PC)	.80	.79

Person-Centred Dementia Communication Intervention Effectiveness

Table 10 summarizes the unadjusted results of the pre- and post-intervention comparative analysis (paired samples testing) of the video observational measures (i.e. language-based and person-centred elements of PCDC behaviour) and self-report measures (i.e. perceived competence and confidence in dementia communication, relationship satisfaction and closeness with the resident partner, and self-reflection at work to understand the resident's situation).

Video observational measures. Observations from the pre- and post-intervention videos were used to address the first and second specific research questions relative to whether the communication intervention improved the HCAs' use of language-based and person-centred elements of PCDC. The total number of HCA pre-intervention statements was 1,437 with the post-intervention statement count being slightly higher at 1,533. Overall, 2,970 HCA statements were included in the PCDC coding and analysis.

Language-based elements. Due to the small sample size, a significance level of $p < 0.1$ was used in all statistical tests. There was a significant increase in reciprocity statements ($t = -2.174$, $p = .055$) and the number of reciprocity categories ($t = -1.838$, $p = 0.96$) used by the HCA participants. There was also a significant increase in continuity statements ($p = .014$) and number of continuity categories ($t = -2.324$, $p = .042$) compared to pre-intervention measures. There was an increase in the use of clarity statements and categories; however, these increases were not significant. Overall, there was a significant increase in the total number of language-based statements used ($t = -2.249$; $p = .048$).

Table 10 – Paired Samples Testing Summary (unadjusted change over time)

	Pre-Intervention Mean (±SD)	Post-Intervention Mean (±SD)	t-value	Sig. (2-tailed) p-value
Video Observation Measures				
Number of HCA statements	130.4 (68.15)	139.6 (61.05)	-0.515	.618
Number of HCA statements coded	88.27 (48.80)	116.5 (52.65)	-2.160	.056
Number of resident statements	59.36 (46.31)	71.18 (48.90)	-1.73	.114
Language-based skills:				
Sub-total reciprocity statements	47.36 (27.25)	59.36 (29.34)	-2.174	.055
Number of reciprocity categories used	3.82 (0.75)	4.27 (0.65)	-1.838	.096
Sub-total clarity statements	16.09 (10.30)	20.55 (10.17)	-1.536	.155
Number of clarity categories used	3.64 (1.12)	4.00 (1.34)	-0.803	.441
Sub-total continuity statements	0.00 (0-12)**	5.00 (4.86)	--	.014
Number of continuity categories used	0.82 (0.98)	1.64 (0.92)	-2.324	.042
Total language-based statements	66.00 (36.71)	84.64 (40.84)	-2.249	.048
Number of person-centred statements	49.00 (23.38)	66.64 (30.0)	-1.862	.092
Number of uncategorized statements	42.00 (26.32)	23.09 (12.62)	2.584	.027
Overall PCCommunication statements (language+ person-centred)	114.8 (59.49)	151.27 (67.1)	-2.077	.065
^Self-Report Measures				
Rate how close your relationship is with the resident	63.45 (27.05)	69.0 (28.54)*	7.544	<.001
How often do you reflect upon about your feelings and actions at work to understand the resident's situation?	61.73 (33.82)	88.36 (12.32)	-2.435	.035
Providers Interaction Comfort Scale	45.0 (9.13)	50.18 (5.44)*	15.862	<.001
Personal Accomplishment Score	42.09 (6.76)	41.73 (3.58)	0.188	.855
Mutuality Scale	41.09 (10.16)	42.82 (7.73)	-0.699	.501

N=11; significance level of 0.1
All paired samples with normal distributions were compared using the paired samples t-test with one exception indicated by**.
* Normal distribution with Log10 transformation
** Non-normal distribution; median (range) and related-samples Wilcoxon Signed-Rank results reported
^ Close relationship with resident rating range 0-100; Reflection at work rating range 0-100; Providers Interaction Comfort Scale range 0-60; Personal Accomplishment Score range 0-48; Mutuality Scale range 0-60

Person-centred elements. The person-centred elements of PCDC were analyzed independently of the language-based components. There was a significant increase in the total number of person-centred statements used by the HCAs ($t = -1.862$; $p = .092$).

Total PCCommunication statements. There was an overall significant increase in PCDC behaviours when both language-based and person-centred statements were combined ($t = -2.077$; $p = .065$). The quantity of HCA and resident statements increased post-intervention but did not reach levels of significance. However, the number of HCA statements coded increased ($t = -2.160$; $p = .056$) and the number of uncategorized statements decreased ($t = 2.584$; $p = .027$) compared to pre-intervention measures.

Overlapping statements. Of note, a number of HCA statements were coded as demonstrating both language-based and person-centred elements. Seventeen percent ($n = 238$) of the pre-intervention statements, 21% ($n = 322$) of the post-intervention statements and 19% ($n = 560$) of the overall total had overlapping language-based and person-centred elements of PCDC.

Self-report measures. Responses from the pre- and post-intervention questionnaires were used to examine the third and fourth specific research questions relating to perceived competence and confidence in dementia communication (i.e. PICS) and relationship satisfaction and closeness with the resident partner (i.e. PA, MA and global rating Provider Close and Self-reflection VAS). There was a significant increase in the PICS scores ($t = 15.862$; $p < .001$). There was a significant increase in global reports of relationship closeness with the resident ($t = 7.544$; $p < .001$) and global reports of self-reflection at work to understand the resident's

situation (t = -2.435; p .035). There was an increase in MS scores that did not reach significance and a slight decrease (non-significant) in the post-intervention PA scores.

Covariate analysis. Table 11 outlines the results of the univariate regression analysis of covariate influences on the outcome measures with significant pre-/post-intervention differences as per the unadjusted paired samples testing. This analysis explored if a significant within-subject change in the pre-/post-intervention outcome measures still existed if the effect of one significant covariate (factor) was controlled (i.e. comparison of adjusted means by covariate). Furthermore, the regression analysis provided insight into the presence of between-subject/group differences. This aspect of the analysis observed for differences in outcome measures/scores between discrete groups (e.g. categorical covariates such as gender, level of education, etc.) and individual factors (e.g. continuous covariates such as age, social engagement score, etc.). Lastly, this analysis also considered any covariate interaction effects with time, i.e. was a change in outcome measure/score over time different between discrete groups or had a directional relationship (i.e. positive or negative) with specific individual factors.

The significant outcomes included in the regression model were three self-report measures (i.e. global ratings of relationship closeness, global ratings of reflection upon feelings/actions at work and the PICS score) and eight PCDC video observation measures (i.e. number of HCA statement coded, sub-total reciprocity statements, number of reciprocity categories, number of continuity categories, total language-based statements, number of person-centred statements, number of uncategorized statements and total PCCommunication statements). The findings for each outcome are described in detail below. A significance level of $p < 0.1$ was used in the regression analysis due to the small sample size.

Table 11 - Univariate Regression Analysis (adjusted by a single factor) of Outcomes Measures

Self-Report Outcome Measures					
Rate how close your relationship is with the resident (Range 0-100).					
Close Relationship (Adjusted by Level of Education)	**Mean (SE)**	**p-value**	**Level of Education**	**Mean (SE)**	**p-value**
Pre	46.17 (6.50)	<.001	College Program	73.55 (7.04)	.002
Post	60.64 (10.91)		University	33.25 (14.93)	
			Time*education		.003
Close Relationship (Adjusted by Current Position)	**Mean (SE)**	**p-value**	**Current Position**	**Mean (SE)**	**p-value**
Pre	59.18 (7.25)	<.001	Full-time	74.86 (9.12)	.059
Post	66.80 (9.04)		Part-time	51.13 (12.06)	
			Time*position		.058
Close Relationship (Adjusted by Shifts Worked)	**Mean (SE)**	**p-value**	**Shifts Worked in Past Two Weeks**	**Mean (SD)**	**p-value**
Pre	63.46 (7.08)	.234	Continuous variable	9.2 (0.87)	
Post	69.0 (8.88)		Time*shift worked		.069
How often do you reflect upon about your feelings and actions at work to help you understand the resident's situation (Range 0-100)?					
Reflect upon Feelings/Actions (Adjusted by HCA Gender)	**Mean (SE)**	**p-value**	**HCA Gender**	**Mean (SE)**	**p-value**
Pre	45.50 (11.04	.004	Male	56.75 (11.47)	.112
Post	90.36 (4.97)		Female	79.11 (5.41)	
			Time*gender		.034
Reflect upon Feelings/Actions (Adjusted by Level of Education)	**Mean (SE)**	**p-value**	**Level of Education**	**Mean (SE)**	**p-value**
Pre	43.36 (10.08)	.001	College Program	79.61 (5.16)	.068
Post	90.75 (4.92)		University	54.50 (10.94)	
			Time*education		.011

Reflect upon Feelings/Actions (Adjusted by Yrs Worked HCA)	Mean (SE)	p-value	Years Worked as HCA	Mean (SD)	p-value
Pre **Post**	61.72 (8.04) 88.36 (3.62)	.001	Continuous variable Time*yrs_wkd_HCA	10.6 (8.52)	 .008
Reflect upon Feelings/Actions (Adjusted by ISE Score)	**Mean (SE)**	**p-value**	**Resident's ISE Score**	**Mean (SD)**	**p-value**
Pre **Post**	61.73 (8.13) 88.36 (3.78)	.207	Continuous variable Time*ISE	3.0 (1.49)	 .017
Providers Interaction Comfort Scale (PICS) Score (Range 0-60)					
PICS (Adjusted by HCA Gender)	**Mean (SE)**	**p-value**	**HCA Gender**	**Mean (SE)**	**p-value**
Pre **Post**	40.33 (2.86) 50.69 (2.22)	<.001	Male Female Time*gender	42.25 (3.99) 48.78 (1.88)	.025 .037
PICS (Adjusted by First Language)	**Mean (SE)**	**p-value**	**First Language**	**Mean (SE)**	**p-value**
Pre **Post**	44.55 (2.40) 50.08 (1.70)	<.001	English Other Time*language	50.33 (2.18) 44.30 (2.39)	.068 .072
PICS (Adjusted by Yrs Worked LTC)	**Mean (SE)**	**p-value**	**Years Worked in LTC**	**Mean (SD)**	**p-value**
Pre **Post**	45.00 (2.31) 50.18 (1.73)	<.001	Continuous variable Time*yrs_wkd_LTC	10.7 (8.39)	 .054
PICS (Adjusted by Yrs Worked HCA)	**Mean (SE)**	**p-value**	**Years Worked as HCA**	**Mean (SD)**	**p-value**
Pre **Post**	45.00 (2.26) 50.18 (1.73)	<.001	Continuous variable Time*yrs_wkd_HCA	10.6 (8.52)	 .045
PICS (Adjusted by ISE Score)	**Mean (SE)**	**p-value**	**Resident's ISE Score**	**Mean (SD)**	**p-value**
Pre **Post**	45.00 (1.21) 50.18 (1.72)	<.001	Continuous variable Time*ISE	3.0 (1.49)	 <.001

PICS (Adjusted by Sub-type Dementia)	**Mean (SE)**	**p-value**	**Sub-type Dementia**	**Mean (SE)**	**p-value**
Pre **Post**	42.62 (2.76) 50.69 (2.14)	<.001	Alzheimer Vascular Unknown Time*type_dementia	23.85 (2.65) 16.73 (2.65) 24.24 (1.41)	.094 .130
Video Observation Measures					
Number of HCA Statements Coded					
HCA Statements Coded (Adjusted by Current Position)	**Mean (SE)**	**p-value**	**Current Position**	**Mean (SE)**	**p-value**
Pre **Post**	80.45 (12.98) 114.10 (17.14)	.026	Full-time Part-time Time*position	116.00 (16.67) 78.50 (22.05)	.208 .151
HCA Statements Coded (Adjusted by Pre Video Assist)	**Mean (SE)**	**p-value**	**Pre Video Assistance**	**Mean (SE)**	**p-value**
Pre **Post**	79.65 (16.22) 101.50 (15.26)	.172	1-person 2-person Time*pre_assist	116.50 (14.54) 64.67 (23.75)	.096 .371
HCA Statements Coded (Adjusted by Post Video Assistance)	**Mean (SE)**	**p-value**	**Post Video Assistance**	**Mean (SE)**	**p-value**
Pre **Post**	86.92 (14.76) 114.20 (14.59)	.072	1-person 2-person Time*post_assist	120.50 (17.61) 80.60 (19.29)	.161 .472
HCA Statements Coded (Adjusted by ISE Score)	**Mean (SE)**	**p-value**	**Resident's ISE Score**	**Mean (SD)**	**p-value**
Pre **Post**	88.27 (12.01) 116.46 (15.74)	.116	Continuous variable Time*ISE	3.0 (1.49)	 .369

Sub-total Reciprocity Statements					
Sub-total – Reciprocity (Adjusted by Level of Education)	**Mean (SE)**	**p-value**	**Level of Education**	**Mean (SE)**	**p-value**
Pre	41.19 (10.75)	.124	College Program	56.67 (9.05)	.414
Post	53.97 (11.75)		University	38.50 (19.21)	
			Time*education		.875
Sub-total – Reciprocity (Adjusted by Current Position)	**Mean (SE)**	**p-value**	**Current Position**	**Mean (SE)**	**p-value**
Pre	43.27 (7.48)	.020	Full-time	60.86 (9.84)	.238
Post	57.84 (9.51)		Part-time	40.25 (13.02)	
			Time*position		.101
Sub-total - Reciprocity (Adjusted by Pre Video Assist)	**Mean (SE)**	**p-value**	**Pre Video Assistance**	**Mean (SE)**	**p-value**
Pre	41.31 (8.65)	.164	1-person	62.13 (8.27)	.073
Post	50.81 (8.38)		2-person	30.00 (13.51)	
			Time*pre_assist		.403
Sub-total - Reciprocity (Adjusted by Post Video Assist)	**Mean (SE)**	**p-value**	**Post Video Assistance**	**Mean (SE)**	**p-value**
Pre	46.83 (8.48)	.066	1-person	61.42 (10.82)	.298
Post	58.28 (8.49)		2-person	43.70 (11.85)	
			Time*post_assist		.299
Sub-total - Reciprocity (Adjusted by ISE Score)	**Mean (SE)**	**p-value**	**Resident's ISE Score**	**Mean (SD)**	**p-value**
Pre	47.36 (6.76)	.193	Continuous variable	3.0 (1.49)	
Post	59.36 (8.29)		Time*ISE		.563

Number of Reciprocity Categories Used					
Number Reciprocity Categories (Adjusted by HCA Gender)	**Mean (SE)**	**p-value**	**HCA Gender**	**Mean (SE)**	**p-value**
Pre	3.50 (0.26)	.066	Male	3.50 (0.37)	.140
Post	4.17 (0.26)		Female	4.17 (0.18)	
			Time*gender		.324
Number Reciprocity Categories (Adjusted by Level of Education)	**Mean (SE)**	**p-value**	**Level of Education**	**Mean (SE)**	**p-value**
Pre	3.50 (0.26)	.010	College Program	4.11 (0.19)	.445
Post	4.36 (0.26)		University	3.75 (0.41)	
			Time*education		.038
Number Reciprocity Categories (Adjusted by First Language)	**Mean (SE)**	**p-value**	**First Language**	**Mean (SE)**	**p-value**
Pre	3.78 (0.20)	.074	English	4.25 (0.22)	.206
Post	4.27 (0.21)		Other	3.80 (0.24)	
			Time*language		.219
Number Reciprocity Categories (Adjusted by Born in Canada)	**Mean (SE)**	**p-value**	**First Language**	**Mean (SE)**	**p-value**
Pre	3.87 (0.16)	.093	No	3.75 (0.20)	.052
Post	4.28 (0.20)		Yes	4.40 (0.22)	
			Time*born_canada		.093
Number Reciprocity Categories (Adjusted by Sub-type Dementia)	**Mean (SE)**	**p-value**	**Sub-type Dementia**	**Mean (SE)**	**p-value**
Pre	3.67 (0.25)	.088	Alzheimer	4.25 (0.39)	.350
Post	4.26 (0.25)		Vascular	3.50 (0.39)	
			Unknown	4.14 (0.21)	
			Time*type_dementia		.603

Number of Continuity Categories Used					
Number Continuity Categories (Adjusted by Level of Education)	**Mean (SE)**	**p-value**	**Level of Education**	**Mean (SE)**	**p-value**
Pre	0.50 (0.37)	.013	College Program	1.28 (0.26)	.662
Post	1.78 (0.37)		University	1.00 (0.56)	
			Time*education		.117
Total Language-Based Statements					
Language-Based Statements (Adjusted by Current Position)	**Mean (SE)**	**p-value**	**Current Position**	**Mean (SE)**	**p-value**
Pre	60.75 (10.29)	.026	Full-time	85.07 (13.43)	.259
Post	82.57 (13.25)		Part-time	58.25 (17.76)	
			Time*position		.188
Language-Based Statements (Adjusted by Pre Video Assist)	**Mean (SE)**	**p-value**	**Pre Video Assistance**	**Mean (SE)**	**p-value**
Pre	59.33 (12.15)	.165	1-person	86.19 (11.62)	.107
Post	73.19 (11.91)		2-person	46.33 (18.98)	
			Time*pre_assist		.280
Language-Based Statements (Adjusted by Post Video Assist)	**Mean (SE)**	**p-value**	**Post Video Assistance**	**Mean (SE)**	**p-value**
Pre	65.13 (11.28)	.058	1-person	88.33 (14.24)	.208
Post	82.90 (11.37)		2-person	59.70 (15.60)	
			Time*post_assist		.272
Language-Based Statements (Adjusted by ISE Score)	**Mean (SE)**	**p-value**	**Resident's ISE Score**	**Mean (SD)**	**p-value**
Pre	66.00 (8.51)	.206	Continuous variable	3.0 (1.49)	
Post	84.64 (11.25)		Time*ISE		.612

Number of Person-Centred Statements					
Person-Centred Statements (Adjusted by Current Position)	**Mean (SE)**	**p-value**	**Current Position**	**Mean (SE)**	**p-value**
Pre **Post**	44.66 (5.62) 66.77 (9.91)	.034	Full-time Part-time Time*position	63.43 (8.13) 48.00 (10.75)	.282 .096
Language-Based Statements (Adjusted by ISE Score)	**Mean (SE)**	**p-value**	**Resident's ISE Score**	**Mean (SD)**	**p-value**
Pre **Post**	49.00 (6.26) 66.64 (9.42)	.179	Continuous variable Time*ISE	3.0 (1.49)	 .454
Number of Uncategorized Statements					
Uncategorized Statements (Adjusted by Shift)	**Mean (SE)**	**p-value**	**Shift**	**Mean (SE)**	**p-value**
Pre **Post**	40.75 (7.04) 22.73 (3.81)	.030	Days Evenings Time*shift	63.43 (8.13) 48.00 (10.75)	.078 .195
Uncategorized Statements (Adjusted by Pre Video Assist)	**Mean (SE)**	**p-value**	**Pre Video Assistance**	**Mean (SE)**	**p-value**
Pre **Post**	35.85 (8.24) 19.00 (3.36)	.079	1-person 2-person Time*pre_assist	38.69 (4.83) 16.17 (7.89)	.038 .609
Uncategorized Statements (Adjusted by Resident Age)	**Mean (SE)**	**p-value**	**Resident Age**	**Mean (SD)**	**p-value**
Pre **Post**	42.00 (6.72) 23.09 (3.24)	.431	Continuous variable Time*resident_age	88.9 (8.57)	 .308

Total PCCommunication Statements (language-based and person-centred)					
PCCommunication Statements (Adjusted by Current Position)	**Mean (SE)**	**p-value**	**Current Position**	**Mean (SE)**	**p-value**
Pre	105.27 (15.81)	.028	Full-time	148.36 (21.01)	.258
Post	149.34 (22.33)		Part-time	106.25 (27.80)	
			Time*position		.131
Language-Based Statements (Adjusted by ISE Score)	**Mean (SE)**	**p-value**	**Resident's ISE Score**	**Mean (SD)**	**p-value**
Pre	114.82 (14.55)	.181	Continuous variable	3.0 (1.49)	
Post	151.27 (20.09)		Time*ISE		.510

Close relationship with the resident. Three covariates were included as single factors in the regression model for this dependent variable: HCA level of education, current position and shifts worked.

Level of education. After adjusting for level of education, there remained a significant increase (p = <.001) in ratings of relationship closeness pre- to post-intervention. There was a significant difference (p = .002) between the college and university sub-groups with college-program graduates reporting higher mean ratings on relationship closeness with their resident partner. There was also a significant interaction effect (p = .003) between time and level of education. Although the university sub-group had lower scores overall, there was a greater increase in pre- to post-intervention ratings of relationship closeness compared to the college program sub-group. This suggests that education level may have an overall effect on ratings of relationship closeness, as well as change over time.

Current position. After controlling for current position (e.g. full-time versus part-time), a significant increase (p = .001) in relationship closeness ratings was still observed over time. There also was a significant difference (p = .059) between full-time and part-time groups with full-time staff reporting higher relationship closeness. There was a significant interaction effect (p = .058) between time and current position with part-time HCAs demonstrating a higher increase in pre- to post-intervention ratings of relationship closeness. This analysis suggests that full-time or part-time status may impact ratings of relationship closeness overall and with time.

Shifts worked. After adjusting for the number of shifts worked in the past two weeks, there were no significant within-subject effects noted over time. There was a significant interaction effect (p = .069) suggesting a negative relationship between the number of shifts

worked in a two-week period and ratings of relationship closeness. These results suggest that the number of shifts worked may influence HCA ratings of relationship closeness with residents over time.

Reflection upon feelings/actions at work. Four covariates were tested as single factors for the dependent variable 'reflection upon feelings and actions at work': HCA gender, level of education, years worked as a HCA and resident ISE score.

HCA gender. After adjusting for the factor HCA gender, there remained a significant increase (p = .004) in ratings of reflection upon feelings and actions at work. There were no overall significant differences between gender groups; however, there was a significant interaction (p = .034) between time and gender with males exhibiting more change in ratings from pre- to post-intervention. The analysis suggests that an increase in self-reports of reflection upon feeling or actions at work over time may be impacted by gender group.

Level of education. There continued to be a significant increase (p = .001) in pre-/post-intervention reports of reflection after level of education was controlled. There was a significant difference (p = .068) between the college and university sub-groups with college-program graduates again reporting higher mean ratings. There was a significant interaction effect (p = .011) between time and level of education with the university sub-group demonstrating more change between pre- and post-intervention ratings. This suggests that an increase in self-report reflection overall and over time may be influenced by level of HCA education.

Years worked as a HCA. After adjusting for the number of years worked as a HCA, there remained a significant increase (p = .001) in mean pre- and post-intervention scores. There were no overall significant differences based on years worked as a HCA; however, there was a

significant interaction (p = .008) between time and years worked suggestive of a positive relationship where more years' experience as an HCA were associated with higher scores over time. The analysis suggests that an increase in self-reports of reflection upon feeling or actions at work over time may also be impacted by the length of time an individual has worked as a HCA.

ISE score. After controlling for the resident ISE score, no significant changes were noted in pre-/post-intervention means. There was a significant interaction effect (p = .017) between time and ISE score indicative of a positive relationship, i.e. the higher the resident's ISE score, the higher the ratings of self-reflection over time. These findings suggest that resident ISE scores may influence overall reports of self-reflection and changes over time.

Providers interaction comfort scale (PICS) score. Six covariates were included as single factors in the regression analysis for this outcome measure: HCA gender, first language, years worked in LTC, years worked as a HCA, the resident ISE score and sub-type of dementia.

HCA gender. After adjusting for the factor HCA gender, a significant increase (p < .001) in the PICS score remained. There was a significant difference between gender groups with females reporting higher mean scores (p = .025). There was a significant interaction effect (p = .037) between time and gender with males experiencing more change in scores over time. The analysis suggests that an increase in PICS score overall and with time may be impacted by HCA gender.

HCA first language. There was a significant increase (p < .001) in pre-/post-intervention PICS scores when the covariate HCA first language was controlled. There was a significant difference (p = .068) between language sub-groups with higher mean PICS scores for the

English-as-first-language group. There was a significant interaction effect ($p = .072$) between time and first language with the non-English sub-group demonstrating more change in pre- to post-intervention scores. This proposes that an overall or over time increase in PICS score, or comfort in speaking with residents with dementia, may be influenced by the HCA's first language.

Years worked in LTC. After adjusting for the number of years worked in LTC, there remained a significant increase ($p < .001$) in mean pre- and post-intervention PICS scores. There was also a significant interaction effect ($p = .054$) between time and years worked in LTC suggestive of a negative relationship. The analysis suggests that an increase in PICS scores may also be impacted by the length of time a HCA has worked in LTC.

Years worked as a HCA. When the covariate number of years worked as a HCA was controlled, there was a significant increase ($p < .001$) in mean pre- and post-intervention PICS scores. There was a significant interaction effect ($p = .045$) between time and years worked indicative of a negative relationship. These results suggest that an increase in PICS score may also be influenced by the length of time an individual has worked as a HCA.

ISE score. After controlling for the resident ISE score, significant increases ($p < .001$) were still noted in pre-/post-intervention PICS mean scores. There was a significant interaction effect ($p < .001$) between time and ISE score suggesting a negative relationship. These findings suggest that a resident's social engagement level, represented by ISE score, may influence a HCA self-reported comfort level in conversing with residents with dementia.

Sub-type of dementia. After adjusting for the sub-type of the resident partner's dementia, there remained significant pre-/post-intervention increases ($p < .001$) in PICS score. There were

also overall differences between the sub-groups with dementia type unknown and Alzheimer dementia associated with the highest average PICS scores ($p = .094$). There was no interaction effect between time and sub-type of dementia. This analysis suggests that the type of dementia may have an overall impact on the providers' communication comfort level with the residents.

Number of HCA statements coded. Four covariates were tested as single factors for the video observation outcome measure 'number of HCA statements coded' as per the PCDC coding scheme: current position, pre-video assistance, post-video assistance and resident ISE score.

Current position. After controlling for current position, a significant difference ($p = .026$) in pre-/post-intervention HCA statements remained. Current position did not have a significant overall between-group effect or interaction with time. This analysis suggests that the HCA's current position (i.e. full-time or part-time) did not have an effect on the number of HCA statements coded.

Pre-video assistance. Once pre-video staff assistance was adjusted, there was not a significant difference between pre- and post-intervention counts of HCA statements coded. There was an overall significant difference between groups ($p = .096$) with higher counts of HCA statements coded associated with residents requiring 1-person assistance compared to 2-person. There were no interaction effects between time and pre-video assistance. This analysis suggests that whether the resident requires a 1-person or 2-person assist may have an impact on the number of HCA statements coded from the exchange.

Post-video assistance. A significant increase ($p = .072$) in pre-/post-intervention HCA statements was noted when post-video assistance was controlled. Post-video assistance did not have a significant overall between-group effect or interaction with time. This analysis suggests

that post-video assistance required by the resident (i.e. 1-person or 2-person assist) did not have an effect on the number of HCA statements coded.

ISE score. After controlling for the resident ISE score, there were no significant changes in pre-/post-intervention HCA statements coded and no interaction effects over time. This suggests that the resident's ISE score, or level of social engagement, may impact the number of HCA statements coded pre- to post-intervention.

Sub-total reciprocity statements. Five covariates were included in the regression model as single factors for this PCDC language-based outcome measure: level of education, current position, pre-video assistance, post-video assistance and resident ISE score.

Level of education. After adjusting for HCA level of education, there were no significant changes in pre-/post-intervention HCA statements coded and no interaction effects over time. This analysis proposes that the HCA's level of education, may impact the number of HCA statements coded pre- to post-intervention.

Current position. After controlling for current position, a significant increase ($p = .020$) in pre-/post-intervention use of reciprocity statements remained. Current position did not have a significant overall between-group effect or interaction with time. This analysis suggests that the HCA's current position did not have an effect on the number of reciprocity of statements used.

Pre-video assistance. Once pre-video staff assistance was adjusted, there was not a significant difference between pre- and post-intervention sub-total of reciprocity statements. There was an overall significant difference between groups ($p = .073$) with higher use of reciprocity statements associated with residents requiring 1-person assistance compared to 2-person. There were no interaction effects between time and pre-video assistance. This analysis

suggests that whether the resident required a 1-person or 2-person assist may have an overall impact on the use of reciprocity statements.

Post-video assistance. A significant increase (p = .066) in pre-/post-intervention reciprocity statements remained when post-video assistance was controlled. Post-video assistance did not have a significant overall between-group effect or interaction with time. This analysis suggests that post-video assistance required by the resident did not have an effect on the number of reciprocity statements used by the HCAs.

ISE score. After controlling for the resident ISE score, there were no significant changes in within-subject pre-/post-intervention reciprocity statements or interaction effects over time. This suggests that the resident's ISE score, or level of social engagement, may impact the number reciprocity statements used pre- to post-intervention.

Number of reciprocity categories used. Five individual factors were tested in the regression model for this language-based PCDC outcome measure: HCA gender, level of education, first language, country of birth and dementia sub-type of the resident partner.

HCA gender. After adjusting for HCA gender, there continued to be a significant increase (p = .066) in the number of reciprocity categories used pre- to post-intervention. There were no overall significant differences between gender groups and no interaction between time and gender. These findings suggest that HCA gender did not have an influence on the number of reciprocity categories used pre- to post-intervention.

Level of education. There remained a significant increase (p = .010) in pre-/post-intervention use of reciprocity categories after level of education was controlled. There were no between-group significant differences between the college and university sub-groups. There was

a significant interaction effect (p = .038) between time and level of education with the university sub-group exhibiting more of a change pre- to post-intervention than the college sub-group. This suggests an increased use of reciprocity categories over time may be influenced by level of HCA education.

HCA first language. There was a significant increase (p = .074) in pre-/post-intervention use of reciprocity categories when the covariate HCA first language was controlled. There were no significant differences between language sub-groups and no interaction effect. This analysis suggests that the HCA's first language did not have an impact on pre- to post-intervention differences in the use of reciprocity categories.

Country of birth. After adjusting for country of birth, there was a significant increase (p = .093) in the use of reciprocity categories. There was a significant between-group difference (p = .052) with those born in Canada using more reciprocity categories on average from pre- to post-intervention. There was a significant interaction effect (p = .093) between time and country of birth with those born outside of Canada experiencing a greater change from pre- to post-intervention. These results suggest that an increase in the use of reciprocity categories may be influenced over time by HCA country of birth.

Sub-type of dementia. After accounting for the sub-type of the resident partner's dementia, there were significant pre-/post-intervention increase (p = 0.88) in the HCAs' use of reciprocity categories. There were no significant differences between the sub-groups of dementia and no interaction effect. This analysis suggests that the type of dementia did not have an impact on the number of reciprocity categories used by the HCAs.

Number of continuity categories used. Only one significant factor, HCA level of education, was included in the regression analysis for this dependent variable. After adjusting for level of education, there remained a significant increase (p = .013) in the number of continuity categories used pre- to post-intervention. There were no overall significant differences between education sub-groups and no interaction effect between time and level of education. These findings suggest that education did not have an influence on the number of continuity categories used pre- to post-intervention.

Total language-based statements. Four single covariates were included in the analysis of this observational outcome measure: current position, pre-video assistance, post-video assistance and resident ISE score.

Current position. After adjusting for current position, a significant increase (p = .026) in pre-/post-intervention total language-based statements was still noted. Current position did not have a significant overall between-subject effect or interaction with time. These findings suggest that the HCA's current position did not have an effect on the total number of language-based statements used.

Pre-video assistance. After controlling for pre-video assistance, no significant within-subject changes or interaction effects were noted overall or over time. This suggests that presence of one or two staff members during a care episode may impact the number of language-based statements used by the HCA.

Post-video assistance. After adjusting for post-video assistance, a significant increase (p = .058) in pre-/post-intervention total language-based statements remained. Post-video assistance did not have a significant overall between-group effect or interaction with time. This

analysis suggests that post-video assistance required by the resident did not have an effect on the total number of language-based statements used by the HCAs.

ISE score. After controlling for the resident ISE score, there were no significant changes in pre-/post-intervention total counts of language-based statements. There was no significant interaction between time and ISE score. This suggests that the resident ISE score may influence the within-subject use of language-based statements pre- to post-intervention.

Number of person-centred statements. Two covariates were tested as to their potential influence on the total number of person-centred statements observed: current position and resident ISE score.

Current position. After adjusting for current position, a significant increase ($p = .034$) in the number of person-centred statements used pre- to post-intervention was still present. There was no significant overall between-group effect. However, there was a significant interaction between time and current position with the part-time sub-group demonstrating more of a change pre- to post-intervention. This suggests that the HCA's current job status (i.e. full-time or part-time) may have an effect on the number of person-centred statements used over time.

ISE score. After controlling for the resident ISE score, there were no significant changes in pre-/post-intervention use of person-centred statements. There was no significant interaction between time and ISE score. This suggests that the resident ISE score may influence the within-subject use of person-centred statements pre- to post-intervention.

Number of uncategorized statements. Three covariates were included in the analysis of the outcome measure 'number of uncategorized statements': shift worked, pre-video assistance, and resident age.

Shift worked. After adjusting for shift worked, there remained a significant decrease ($p = .030$) in the number of uncategorized statements used by the HCAs pre- to post-intervention. There was a significant overall difference ($p = .078$) between the shift worked sub-groups with evening staff using fewer uncategorized statements. There was not a significant interaction between time and shift worked. These findings suggest that the type of shift worked may have an overall impact on the number of uncategorized statements used.

Pre-video assistance. After controlling for pre-video staff assistance, there remained a significant decrease ($p = .079$) in pre- to post-intervention uncategorized statements. There was an overall significant difference between groups ($p = .038$) with fewer uncategorized statements associated with residents requiring 2-person assistance compared to 1-person. There were no interaction effects between time and pre-video assistance. This analysis suggests that whether the resident requires a 1-person or 2-person assist may have an overall effect on the number of uncategorized statements used.

Resident age. When resident age was accounted for, there was no significant change in the number of uncategorized statements pre- to post-intervention and no significant interaction between time and resident age. These findings suggest that resident age may have a within-subject effect on the number of uncategorized statements used by HCAs.

Total PCCommunication statements. Two factors were analyzed as to potential influences on the pre- to post-intervention counts of total PCCommunication statements (i.e. language-based plus person-centred): current position and resident ISE score.

Current position. After adjusting for current position, a significant increase ($p = .028$) in the total number of PCCommunication statements used pre- to post-intervention continued to be

observed. There was no significant between-group effect or interaction with time and current position. This suggests that the current position of the HCA did not have an effect on the total number of PCCommunication statements used.

ISE score. When resident ISE score was controlled, there was no significant change in the total number of PCCommunication statements pre- to post-intervention and no significant interaction between time and ISE score. These findings suggest that resident's level of social engagement, as defined by ISE score, may have an effect on the total number of PCCommunication statements made by HCAs over time.

Summary. All covariates that were included as single factors in the regression analysis had significant between-subject/group and/or within-subject effects on at least one of the outcome measures examined with the exception of post-video staff assistance. Covariates having a significant within-subject effect over time included; HCA level of education, number of shifts worked in the past two weeks, pre-video staff assistance and resident age and ISE score. Covariates with significant between-subject/group effects were; HCA gender, level of education, first language, country of birth, position (part-time/full-time), shift worked (days/evenings), pre-video staff assistance and the resident's subtype of dementia. Covariates with significant interactions effects with time included; HCA gender, level of education, first language, country of birth, number of shifts worked in the past two weeks, position and years worked as an HCA, as well as resident ISE score.

Factors that appeared to have the greatest between/within-subject influence on the self-report measures of relationship closeness, reflection and interaction comfort were; HCA level of education, gender, first language, number of shifts worked in the past two weeks, years worked

in LTC, years worked as a HCA, resident ISE score and type of dementia. Variables that seemed to have the largest between/within-subject impact on the PCDC observational outcomes were; HCA level of education, current position, shift worked, country of birth, pre-video assistance, resident age and ISE score.

Individual Analysis of Pre-/Post-Intervention Videos

For this aspect of the analysis, each dyad's pre- and post-intervention videos were compared individually to provide a qualitative perspective and collateral information as to changes or improvements in PCDC behaviour that may not have been captured with the coding scheme. Contextual influences during the care encounters that may have impacted the interaction between the HCA and resident or effectiveness of the PCDC approaches are outlined in the descriptions below. Any missed opportunities for the use of PCDC approaches are also noted. Specific person-centred reflections and areas of PCDC improvement self-identified by the HCA participants during the VF session are highlighted. This information was then compared between the pre- and post-intervention videos referencing the information in Table 12, which offers a summary of the actual counts of the individual dyad pre- and post-intervention video observational and self-report measures.

Table 12 - Actual Counts of the Individual Dyad Pre-/Post-Intervention Measures

Video Observational Measures																								
	HCA statements		Number coded		Uncat statements		Reciprocity statements		Reciprocity categories		Clarity statement		Clarity categories		Continuity statements		Continuity categories		Total language		Total PC statements		Total PCComm	
Dyad	**Pre**	**Post**	**Pre**	**Post**	**Pre**	**Post**	**Pre**	**Post**	**Pre**	**Post**	**Pre**	**Post**	**Pre**	**Post**	**Pre**	**Post**	**Pre**	**Post**	**Pre**	**Post**	**Pre**	**Post**	**Pre**	**Post**
1	57	60	31	52	26	8	22	26	4	5	2	4	1	2	0	3	0	2	24	33	28	33	50	66
2	107	91	80	81	27	8	31	39	3	5	32	22	5	5	0	3	0	3	63	64	47	56	110	120
3	86	--	72	--	14	--	31	--	4	--	11	--	4	--	5	--	2	--	47	--	48	--	95	--
4	215	168	154	144	61	24	78	80	3	3	30	32	4	6	7	10	2	2	115	122	71	57	186	179
5	61	63	42	51	19	12	23	29	4	4	9	8	4	5	0	1	0	1	31	38	23	25	54	63
6	80	138	41	100	39	38	32	52	3	4	6	20	3	4	0	4	0	1	38	73	21	62	59	135
7	203	230	166	208	37	22	95	116	5	5	22	32	3	5	12	17	2	3	129	165	80	106	209	271
8	189	163	120	144	69	19	52	61	3	4	27	24	4	3	3	1	2	1	82	86	63	70	145	156
9	119	128	85	100	34	28	41	46	4	4	16	30	5	3	0	0	0	0	57	76	49	62	106	138
10	241	175	137	140	104	35	89	84	5	4	15	13	4	2	2	5	1	1	106	102	85	88	191	190
11	76	234	44	188	32	46	27	89	4	5	7	30	3	5	0	6	0	2	34	125	24	126	58	251

Uncat = Uncategorized
PCComm = Person-centred communication

	Self-Report Measures					
	Provider Interaction Comfort Scale		**Personal Accomplishment**		**Mutuality Scale**	
Dyad	**Pre**	**Post**	**Pre**	**Post**	**Pre**	**Post**
1	58	54	44	42	31	27
2	37	55	24	40	21	42
3	44	50	45	40	45	48
4	29	48	48	48	54	54
5	54	52	47	45	42	40
6	37	53	38	45	30	38
7	38	44	41	39	52	49
8	56	55	44	40	50	49
9	45	37	43	41	39	45
10	47	52	41	35	43	45
11	50	52	48	44	45	34

HCA-resident dyad #1.

Pre-intervention video. This care encounter occurred during the course of a busy shift when the HCA was behind in the usual routine due to unfinished work on the previous shift. The resident was recovering from an extended illness and had been confined to her room and bed for a number of days, causing some irritability and depressed mood. The resident required two-person assistance for care, so a second HCA was in the room to help freshen-up the resident in preparation for night-time. Many of the statements during the encounter coded as ‘uncategorized’ were ones directed at the second staff person. The HCA’s approach to care and communication was directive and abrupt in nature, i.e. providing direction to the resident but not asking permission (“Turn left, turn right.”), using phrases such as “I need to…” or “We are going to…”. There were missed opportunities to inquire or address the resident’s emotional response to being ill and isolated in her room over the past number of days.

Self-reflection and self-identified PCDC goals. After watching the pre-intervention video during the VF session, the HCA participant shared discomfort with how they sounded and felt that their approach with the resident was too abrupt. The HCA reflected upon the belief that people’s choices are stripped when they move into a LTC home and that care providers need to promote resident choice. The HCA expressed a desire to take on a more facilitative approach and work in partnership with the resident to complete care tasks, as well as learn more about the resident’s preferences and life history.

Post-intervention video and PCDC improvements. The post-intervention video also occurred during a busy shift relating to another resident on the floor causing increased stress among the staff. This encounter again involved a second HCA assisting during the care. Despite

the additional stress and workload that day, this was not reflected in the HCA's demeanor towards the resident. There were increased attempts to engage the resident in conversation based on her past life history. There was an increase in the use of facilitation statements compared to the pre-intervention video (2 to 22 statements) and efforts to engage the resident to complete care together. There was also a reduction in the number of uncategorized statements (26 to 8 statements) despite the second care provider's presence during the care encounter. More conversation was directed towards the resident, who in turn responded more positively (i.e. cooperative, laughing, lighter mood) compared to the pre-intervention encounter.

HCA-resident dyad #2.

Pre-intervention video. This care encounter captured a typical morning routine of assisting the resident to dress, transfer from bed, walk to the washroom and provision of morning personal care (i.e. washing, oral care and shaving). The resident required the assistance of a second person for transferring and walking, therefore a second HCA was in the room during the care encounter. The HCA was very polite towards the resident; however, the conversation was solely task-oriented and related to the care task that was being delivered. The care provided in the washroom was efficient but depersonalized. The resident was asked to brush their teeth while sitting on the toilet and then once completed the HCA proceeded to shave the resident with an electric razor.

Self-reflection and self-identified PCDC goals. During the VF session, the HCA reflected on communication challenges with residents with memory loss and hearing or sight impairments and difficulties findings conversation topics or approaches that could stimulate "more than one-word answers". After watching the pre-intervention video, the HCA noted a

desire to be less task-focused in conversation and to enhance the PCDC elements of negotiation and facilitation during care encounters. The HCA also stated an intention to find out more about the resident's personal history and family to aid communication efforts.

Post-intervention video and PCDC improvements. The post-intervention video captured a morning care encounter that included assistance with dressing (in bed) and a transfer out of bed to the washroom using a mechanical sit-to-stand lift. During the time between the pre- and post-intervention videos, the resident's transfer mobility had changed and a mechanical lift was required as walking was no longer deemed to be safe. The use of the lift increased the amount of time to assist the resident from bed to washroom. A second HCA was again present during the care encounter. Throughout the episode, there were increased attempts by the HCA to engage the resident in personal conversation based on the resident's interests and past career, as well as offering the resident clothing choices for the day. The care communication also reflected less of a directive tone in which the HCA asked the resident permission before initiating care tasks. In regards to person-centred statements in the pre- and post-intervention videos, facilitation comments remained unchanged (22 statements in both videos); however, negotiation statements increased (4 to 15 statements). The number of uncategorized statements decreased from 27 statements pre-intervention to 8 statements post-intervention despite the presence of the second staff member. Although the morning care that subsequently occurred in the washroom was not captured on the post-intervention video, the researcher observed changes in the HCA's behaviour compared to the baseline care encounter. Instead of completing multiple care tasks at once, the resident was allowed some quiet time when on the toilet while the HCAs straightened the room and monitored the resident indiscreetly for safety. The resident was then assisted to a

wheelchair and positioned in front of the sink where the HCA facilitated the resident's completion of oral care and shaving.

HCA-resident dyad #4.

Pre-intervention video. This video captured a typical encounter for this dyad where the HCA provided oversight to the resident during a 20-minute exercise session on a stationary bike. The session occurred in a separate exercise room with only the resident and HCA present. The HCA assisted the resident with set-up of the equipment and initiation of the exercise and then stayed and conversed with the resident until the session was complete. There was a great deal of dialogue between the HCA and resident during this encounter and there appeared to be good rapport between the partners. However, it was noted that the conversation was often imbalanced and HCA-centric (i.e. 215 HCA statements overall compared to 158 resident statements). The resident initiated many of the conversation topics, while the HCA talked mostly about happenings in their life (as evidenced by 33 uncategorized statements out of a total of 61). There was little evidence of listening to the resident or responding to resident-initiated statements about their life or experiences. One example pertained to a comment the resident made about a close friend whose partner had recently passed away. This represented a missed opportunity to explore the resident's feelings and emotional impact of the situation.

Self-reflection and self-identified PCDC goals. During the VF session, the HCA reflected upon the importance of giving residents more choice and control and respecting them as a person with individual needs. The HCA also noted an enhanced awareness in communication approaches since the education session and recognized the difference between PCDC strategies and how others were communicating with residents. After viewing the pre-intervention video,

the HCA was pleased at seeing evidence of PCDC approaches. There was a desire and understanding of the need to increase the use of negotiation approaches to prevent residents from feeling “forced to do things”, as well as utilizing validation strategies to “dig deeper” into the resident’s experience and feelings.

Post-intervention video and PCDC improvements. The post-intervention video captured the same exercise session and context as the pre-intervention video. For a brief time, a recreation facilitator entered the room to inquire if the resident would be attending the afternoon activity; otherwise, the resident and HCA were alone during the session. There was a noticeable shift in the focus of the conversation away from HCA-focused topics to ones that were resident-centred. This resulted in a dialogue that was more balanced and reciprocal. There were increased attempts to engage the resident in conversation about their life and preferences (accounting for 14 of the 28 facilitation statements in the post-intervention video) and less relating to the HCA’s life (1 uncategorized statement out of a total of 24). There was also increased use of some language-based strategies (i.e. affirmation and confirming understanding by asking for clarification) that were used in to engage the resident in two-way conversation. In respect to changes in the use of validation strategies to understand the resident’s feelings, there was a quantitative decrease in the number of coded statements pre- to post-intervention (28 to 16 statements) that is not reflected in the qualitative improvements evident throughout the dialogue.

HCA-resident dyad #5.

Pre-intervention video. This video captured a care episode where the HCA assisted the resident with evening care and settling into bed for the night. Per the usual routine, the HCA attempted to begin the evening care in the washroom but the resident appeared to be mildly

irritated and was insistent on going directly to bed. The HCA complied with the request and the resident was assisted to bed. During the video, the HCA seemed somewhat self-conscious and nervous and addressed the researcher a couple of times during the care encounter. The conversation with the resident during the care encounter was largely task-focused and directive in nature. There were some missed opportunities in regards to exploring concerns the resident expressed in relation to not having a good day, experiencing pain, and not being able to locate a missing personal item.

Self-reflection and self-identified PCDC goals. During the VF session, the HCA noted that there had not been much time to reflect on feelings and actions at work due to heavy workloads but was attempting to incorporate the information learned in the education session. The HCA expressed feeling nervous during the video-recording session but felt more prepared for the follow-up recording, now knowing what to expect. After watching the pre-intervention video, the HCA noted an intention to incorporate increased use of validation and facilitation strategies in her conversations with the resident partner.

Post-intervention video and PCDC improvements. The post-intervention video captured the same evening care scenario but this time included care provided in the washroom prior to the resident settling into bed. Both resident and HCA appeared to be more calm and relaxed compared to the pre-intervention video-recording session. There were increased attempts by the HCA to engage the resident in conversation beyond care and tasks and the resident was receptive to these efforts. The HCA's conversation represented a more facilitative approach (8 facilitative statements post-intervention compared to 2 statements pre-intervention). More specifically, this improvement was evidenced by employing conversation starters in reference to the resident's

personal history or recent events, and promoting a partnership approach to care completion. The number of validation statements remained the same pre- and post-intervention at 9; however, opportunities to address resident concerns or feelings did not arise during this care encounter.

HCA-resident dyad #6.

Pre-intervention video. This video captured a typical evening care interaction between the HCA and resident partner that involved provision of oral care, washing and changing into night-time garments. There were no unusual occurrences or confounding contextual events that occurred on the floor or during the video. During the care encounter, the HCA's comments towards the resident were very polite but instructive and directive in nature, e.g. "We have to…", "You have to …", "I want you to…" etc. The majority of the 39 uncategorized statements coded in the video were directive comments made toward the resident during care. The HCA's conversation was largely task-oriented and only two comments pertained to how the resident was feeling or something that happened in the resident's day.

Self-reflection and self-identified PCDC goals. During the VF session, the HCA reflected upon the emotions a resident may feel about being in a care home and noted that anger, sadness and confusion could be common. The HCA then shared an experience where a resident with bilateral leg amputations kept asking for their shoes. The HCA noted it was difficult to know what to say to reassure and comfort residents in these situations. After viewing the pre-intervention video, the HCA felt the exhibited care and communication approach was too task-oriented. Expressed goals were to learn more about the resident to facilitate two-way conversation and to increase the use of validation and facilitation approaches.

Post-intervention video and PCDC improvements. The post-intervention video recorded the same evening care; however, since the timing of the pre-intervention video, the resident's mobility status had changed necessitating the use of a sit-to-stand mechanical lift. Thus, during this video, a second HCA was in the room during the care encounter to assist with the transfer. There was an increased attempt to engage the resident in personal conversation topics, e.g. opinion about the supper meal, food likes/dislikes. The use of all four person-centred communication elements increased from the pre-intervention video; however, the most notable included negotiation (from 5 to 22 statements) and validation strategies (from 3 to 14 statements). Negotiation approaches included asking the resident for permission prior to initiation of a task and inquiring as to preferences/offering choices). Facilitation strategies involved enabling and teaching the resident how to participate in the mechanical lift transfer and working together to complete care (i.e. cleaning of dentures and washing face). There was also an increase in the number and type of reciprocity and clarity language-based strategies utilized to engage the resident in clear, two-way conversation. Lastly, the total number of uncategorized statements remained similar (39 pre-intervention and 38 post-intervention); however, there were less directive comments towards the resident and most of the post-intervention uncategorized statements were directed towards the second staff person for assistance with the two-person transfer (21 of 38 statements).

HCA-resident dyad #7.

Pre-intervention video. The pre-intervention video captured a usual evening care interaction between the HCA and resident partner that included washing and changing into night-time clothing. There were no unusual occurrences or confounding contextual events that

occurred on the floor or during the video. The HCA was naturally person-centred in communication approaches and this was evident throughout the video. There was also very good rapport between the HCA and resident partner. There were a few missed opportunities for a facilitated approach where permission was not asked prior to initiating a task, e.g. "I'm going to…" Also, some requests of the resident were stated in a directive manner (17 of the 37 uncategorized statements).

Self-reflection and self-identified PCDC goals. During the VF session, the HCA reflected that is must be difficult to be a resident in LTC, as people would miss their families or be confused as to why they were there. The HCA noted that she recently had sat with a resident who was anxious and upset about being in the care home and had listened to her concerns as an effort to be understanding and supportive of their emotional reality. The HCA felt that she had already begun to make a stronger connection with her resident partner and other residents using the communication strategies from the education session. After watching the video, the HCA stated a goal of incorporating more of a facilitative approach and partnership with residents.

Post-intervention video and PCDC improvements. The post-intervention video captured the same care interaction as previous. Although, the HCA demonstrated high pre-intervention use of the PCDC strategies, all elements of language-based and person-centred communication increased post-intervention. In relation to the HCA's personal goal to promote working together and partnership in care, facilitation statements increased from 24 pre-intervention to 37 post-intervention. A specific example in language transition involved the pre-intervention use of the phrase "I going to…" to a post-intervention approach of "Let's do…" There were less

statements of a directive nature (11 of 23 uncategorized statements) and more occurrences of asking the resident for permission.

HCA-resident dyad #8.

Pre-intervention video. This video captured a typical morning care encounter that involved assisting the resident to walk from bed to bathroom and helping to wash, dress and complete oral and hair care. The resident was in good spirits and cooperative with the HCA's requests. The HCA demonstrated many elements of language-based (82 statements in total) and person-centered (63 statements in total) communication behaviour during the baseline video; however, half of the uncategorized statements (35 of 69 statements) were directive in nature (e.g. "I'm going to get you dressed.")

Self-reflection and self-identified PCDC goals. When asked about reflections since the education session, the HCA expressed a belief that dementia is different for everyone and mood or behavioural impacts may be based on the individual's personality. After viewing the pre-intervention video, the HCA noted a desire to use more validation and facilitation strategies. The HCA also expressed challenges engaging residents with dementia in meaningful conversation and stated another goal to improve communication was to use more open-ended questions pertaining to topics of personal importance and relevance to the resident. The HCA noted a mutual connection with the resident in relation to faith and felt this was a potential avenue to bring into conversation.

Post-intervention video and PCDC improvements. The post-intervention video aimed to capture the same morning care episode as the previous video; however, the resident was not feeling well that morning and expressed a great deal of pain. At the HCA's encouragement, the

resident attempted to stand and walk to the bathroom but became quite distressed repeating "It hurts. It hurts." The resident proceeded to flop back down on the bed and cover herself with the bed linens. Recognizing that the resident was in pain, the HCA did not force her to try again but encouraged rest. After a few minutes, the HCA noted that the resident appeared sad. In response, the HCA held the resident's hand and said a prayer over the resident, asking for strength and assistance with healing. The praying together lasted approximately one minute and at the conclusion, the HCA noted the resident was tearful and carefully wiped the tears from her face with a tissue. The change in the resident's demeanor was instant. Her mood brightened and she was willing to attempt another walk to the bathroom.

In relation to the HCAs specific goals to increase the use of PCDC elements, there was an increase in the number of validation (27 statements post-invention compared to 21 pre-intervention) and facilitation (18 post-intervention compared to 13 pre-intervention) statements. There was an increase in the number of language-based statements overall (86 post-intervention over 82 pre-intervention) but not a quantitative increase in the use of open-ended questions. Of note, there were less uncategorized statements overall (19 post-intervention compared to 69 pre-intervention) and less directive-style comments (7 in total).

HCA-resident dyad #9.

Pre-intervention video. The pre-intervention video captured a morning care encounter where the HCA assisted the resident to dress, transfer to a wheelchair and then move into the washroom to wash and complete oral and hair care. The resident was hearing impaired and the HCA had some challenges with verbal communication but compensated successfully by using

hand motions and visual cues. The conversation with the resident was mainly task-oriented. Of the 32 statements coded as uncategorized, 19 were of a directive or instructional nature.

Self-reflection and self-identified PCDC goals. During the VF session, the HCA reflected upon how the losses a LTC resident experiences must cause feelings of sadness and grief. The HCA shared a recent experience where a resident felt depressed and did not want to get out of bed for the day. The HCA sat and talked with the resident for a few minutes and acknowledged their life's work and contributions. The resident responded positively to the HCA's actions in the moment and was appreciative. After observing the pre-intervention video, the HCA noted that she would like to practice strategies to improve communication with residents who are hard of hearing. The HCA also expressed a desire to continue to incorporate more validation approaches in her interactions with residents.

Post-intervention video and PCDC improvements. The post-intervention video captured the same morning care episode as the first video. During this care encounter, the resident appeared to be significantly more hearing impaired compared to the pre-intervention care episode. (It was later found that the resident had a large build-up of wax in her ears further impacting her hearing impairment.) The HCA demonstrated use of numerous linguistic, para-linguistic and non-verbal strategies to accommodate for the hearing loss. The HCA attempted on a number of occasions to engage the resident in personal conversation; however, these efforts were hampered by the hearing impairment and the resident misunderstood many of the comments and questions asked by the HCA. The use of verbal validation strategies was relatively unchanged pre- to post-intervention; however, there was an increase in facilitation

statements (8 pre-intervention to 19 post-intervention). Lastly, there were also fewer directive-style statements (10 post-intervention compared to 19 pre-intervention).

HCA-resident dyad #10.

Pre-intervention video. This video captured a typical morning care scenario between the HCA and resident. The resident was assisted to partially dress at the bedside and then transfer to a wheelchair so the remainder of the morning care (i.e. washing, dressing, oral care and hair care) could be conducted in the washroom. The resident appeared to be experiencing some weakness that morning, as it took a number of attempts for the HCA to assist her transfer to the wheelchair. The HCA was very patient and encouraging with the resident during these attempts. The HCA demonstrated many elements of language-based (106 statements in total) and person-centred (85 statements in total) communication in the baseline video. Of the large number of uncategorized statements (104), 39 were statements of a directive nature (e.g. "I'm going to take your top off now, okay?") The remainder of the uncategorized statements were polite acknowledgements (e.g. "Thank you") and general comments directed to self or the room.

Self-reflection and self-identified PCDC goals. During the VF session, the HCA reflected upon recent successes using validation strategies. The HCA shared one example of a resident who was feeling down and refusing to eat, and by listening and talking with them was able to convince them to leave their room and go for lunch. After viewing the pre-intervention video, the HCA expressed a desire to use more of the language-based strategies and to use statements that promote a facilitation approach.

Post-intervention video and PCDC improvements. The post-intervention video again captured a morning care episode; however, since the earlier video, the resident's transfer ability

had worsened and was now using a mechanical sit-to-stand lift. This required a second HCA to be present during the care encounter. Partial dressing at the beside and transfer to the washroom using the lift was recorded in this video. There were increased efforts by the HCA to engage the resident in personal conversation based on recent events, family and the resident's life history. It was obvious that the HCA knew many details about the resident's life before and during her stay at the care home. The use of language-based strategies decreased marginally (106 statements pre-intervention and 102 statements post-intervention); however, the number of facilitation statements increased slightly (38 pre-intervention to 41 post-intervention). There was also evidence of language change in this regard with use of statements that began with "Let's do…" as opposed to "I'm going to…" There were less uncategorized statements (35 post-intervention from 104 pre-intervention) despite the presence of the second care provider in the room. Of the uncategorized statements, only 12 of those statements were directive in nature compared to 39 in the pre-intervention video.

HCA-resident dyad #11.

Pre-intervention video. The last dyad's pre-intervention video captured a usual morning care routine that encompassed assistance with dressing, transfer to wheelchair, washing, oral and hair care. The HCA's care and conversation was polite but very task-oriented. Care was 'done to' the resident and there were no opportunities provided to allow or support the resident to complete care tasks. As an example, after returning from the bathroom with a warm face cloth, the HCA proceeded to wash the resident's face without asking permission or inquiring as to whether the resident was able or wanted to perform this task. The resident was very quiet

during the care encounter, responding mostly with one-word answers, and appeared to acquiesce to the care being provided.

Self-reflection and self-identified PCDC goals. When asked about reflections concerning residents with dementia and the LTC workplace, the HCA expressed concern that some staff rush to finish their work and that they don't understand the importance of talking to residents. The HCA also noted that some residents with dementia are confused and lonely and thus need staff support and reassurance. After watching the pre-intervention video, the HCA expressed a desire to be less task-focused in care and conversation and to increase use of all four person-centred communication strategies.

Post-intervention video and PCDC improvements. The post-intervention video captured the same morning care encounter as the previous video; however, the tone and mood of the interaction improved dramatically compared to the pre-intervention episode. There were enhanced efforts to engage the resident in person-centred conversation through sharing of common experiences, talking about the resident's family and recognition of personal likes. As an example, the HCA asked the resident if she liked to sing and when a positive response was returned, they sang one of the resident's favorite songs together while care was being provided. There was evidence of respecting the resident's wishes by asking permission and offering items of clothing from which to choose, as well as encouragement of resident participation in care tasks such as face-washing, oral care and hair-combing. All three areas of language-based skills increased pre- to post-intervention with the total number of statements rising from 34 to 125. There was also an increased use of all four person-centred skills with totals reaching 126 statements post-intervention compared to 24 pre-intervention.

Summary. The comparative review of each dyad's pre- and post-intervention videos provides additional insight as to the potential effect of the PCDC intervention on HCA communication behaviours. In addition to the positive findings from the paired comparisons of the group data, nine of the 10 HCAs in this analysis independently exhibited an overall positive change in PCDC behaviours pre- to post-intervention. Furthermore, nine of the HCAs demonstrated a positive change in one or more of the communication enhancement goals they had articulated during the VF session. Overall, the quality of the HCA-resident conversations improved post-intervention. There was an increase in resident-focused conversation topics and a decrease in task-focused communication. HCAs used less directive statements towards the residents and more frequently asked permission prior to initiating a care task. When the occasion arose, there were spontaneous and appropriate responses to a resident's emotional state or reaction. Lastly, the frequency of uncategorized statements decreased pre- to post-intervention in most cases, suggesting that HCAs utilized communication strategies that were more in alignment with PCDC approaches.

Person-Centred Dementia Communication Intervention Acceptability, Utility and Feasibility

Acceptability, utility and feasibility of the PCDC intervention were examined via interviews and focus groups with HCA and resident participants and the nursing leadership team and resultant themes are summarized in Table 13. Eight HCAs participated in one of two focus groups (four participants per session) and two HCAs agreed to a phone interview as their schedules did not allow for attendance at one of the focus groups. One HCA was not able to participate in either due to illness. Five members of the PCH's leadership team (Director of Care, Assistant Director of Care and Nurse Managers) attended the leadership focus group. Each focus group lasted approximately 45 minutes and the HCA interviews were 20 minutes in length. Only one resident was cognitively able to participate in a post-intervention interview. Lastly, qualitative comments from the HCAs in the post-intervention survey pertaining to improvement in communication and relationship with their resident partner were also considered.

Acceptability of the intervention. Acceptability, or degree of acceptance of the intervention, was examined via four facets: the education session, the video-feedback (VF) session, the overall intervention (i.e. education session plus VF session) and the experience of being video-recorded. Acceptability of the components of the intervention was evaluated both separately and combined to investigate the impact and value-add of the VF approach from the participants' perspective.

Table 13 - Summary of Acceptability, Utility and Feasibility Themes

Acceptability of the Intervention (Degree of Acceptance)

Education Session

- High degree of acceptance by HCAs
- Content was useful and relevant to practice
- Acceptability of session format/learning methods

Video-feedback Session

- High degree of acceptance by HCAs as an effective learning tool
- Acceptability of format (i.e. informal approach, provision of non-threatening feedback, timing/length)
- Emotional impact of VF (i.e. feeling of being evaluated; anticipation of watching self on video better than expected)

Overall Intervention

- High degree of acceptability over previous/typical learning and evaluation methods:
    - Translate theory to practice: ‘Think’ (education session) to ‘Do’ (VF session)
    - Superior to evaluation/feedback by external observer as VF provides a visual learning approach and stimulates self-reflection/evaluation
- Sequencing of intervention components effectual

Experience of Being Video-Recorded

1. **Staff/Provider**
    - Emotional impact:
        - Mixed positive emotional responses (i.e. “nice”, “great”) with negative responses (i.e. “uncomfortable”, “awkward”)
        - Reasons for discomfort: don’t like seeing self on video or feeling of being “watched”
        - Increased comfort with subsequent video session
    - Observer effects:
        - Always aware of video-recording but focused on resident and it did not influence their work/interaction with resident

2. **Resident**
    - HCAs acknowledged potential for resident discomfort in relation to a different person in the room and the video-recording
    - HCAs reported no negative effects on resident partners in study

Utility (Effectiveness of the Intervention)

Education Session

1. Enhanced communication strategies:
   - Use of different communication techniques that work with residents
   - Promotion of reciprocal conversation
   - Using available time with resident to communicate/talk
2. Reflection leading to insight and awareness of communication behaviour (i.e. THINK about what I am doing)
3. Increased awareness of PCCare principles (i.e. VIPS -Value the person, Individualized approach, Perspective of the person with dementia, and Supportive social environment)

Video Feedback Session

1. Understanding of self from a different perspective
2. Reflection leading to change in behaviour (i.e. What do I need to DO differently?)

Overall Intervention

Staff/Provider Outcomes

1. Increased knowledge/skill of PCDC approaches
2. Increased use of relational and positive communication strategies
3. Decreased use of patronizing speech
4. Work life enhancements/satisfaction with work:
   - Positive resident response equates to less stressful work
   - Positive emotional impact on staff
   - Pride in work

Resident Outcomes

1. Increased opportunities and participation in conversation
2. Enhanced psychological well-being
3. Improved quality of life through meaningful interactions

Provider-Resident Relationship Outcomes

1. Quality of provider-resident relationship
   - Improvement in relationship
   - Mutual understanding and respect
   - Building trust

System/Contextual Outcomes

1. Shift from task-oriented to person-centred approach/philosophy:
   - Striving to be person-centred in a task-driven environment
   - Reflection on care philosophy and awareness of new standard of care
   - Enhanced staff engagement

2. **Creation/maintenance of a positive communication climate:**
    - Enhanced positive communication atmosphere
    - HCA as mentor/teacher/coach
    - Peer influence and support
    - Sustainability/broader use of communication approaches/skills beyond study

Feasibility (Ease of Use)

Challenges

Staff/Providers
1. Emotional reactions to being video-recorded
2. Staff attitude towards learning and self-improvement

Residents
1. Resident characteristics (i.e. advanced cognitive impairment/non-verbal, hearing impairment, language barrier)
2. Potential discomfort with video
3. Importance of resident privacy and consent/assent

LTC Contextual Considerations
1. Time considerations:
    - Pressures to complete work within a task-oriented environment
    - Time to learn and practice PCCommunication skills
    - Time/resources to facilitate the intervention/education
2. Confidentiality of videos versus professional reporting responsibilities
3. Colleagues/team-mates not in alignment with approach
4. Continuity of care i.e. vacation, turnover of staff
5. How to sustain the initial momentum

Facilitators
Staff/Providers
1. Advanced preparations:
    - Leadership and union support
    - Provide explanatory information upfront re: purpose/use of videos
    - Development of policy and procedures aligned with privacy legislation, human resource guidelines
2. Facilitator approach (i.e. caring, non-judgemental, non-threatening)
3. Emphasize the benefits/positives (i.e. self-improvement, resident-focused, ease of care, past successes with approach)
4. Acknowledge emotional responses as a normal reaction
5. Peer support/influence (i.e. share own positive experience, seasoned staff supporting newer staff)
6. Training/exposure opportunities and approaches

Resident

1. Preparation of residents prior to and during video experience
2. Personal knowledge about the resident facilitates PCCommunication

Training Structure and Approaches

1. Training exposure opportunities:
   - External to PCH (i.e. entry-level HCA education programs)
   - Internal to PCH (i.e. component of PCCare or orientation training)
2. Intervention/training structure
   - External facilitator or peer-led initiative
   - Use of VF for other education topics
   - Considerations to overcome discomfort of video aspect
3. Low technology/low cost approach (i.e. use of tablet for video-recording and VF session)

Education session. All 11 HCAs attended one of the four-hour education sessions and reported a high degree of acceptance in relation to this aspect of the intervention. In general, HCA participants described the session as “informative”, “helpful” “fun”, “well put-together” and “very interesting”. The session also created a ‘buzz’ and sense of excitement among the HCAs. This was noted by a nursing leadership focus group participant who stated: “They (HCAs) were very excited about the actual education part of it.”

HCAs noted that the content of the session was helpful, specifically in relation to learning new information and techniques to communicate with residents with dementia. They reported that the breakdown of the PCDC information into manageable pieces (i.e. language-based and person-centred strategies or ‘buckets’ and development of a memory-aid/acronym for the person-centred strategies) was an effective learning strategy. When asked for feedback in relation to the session content (i.e. additions or removal of information), all HCA participants noted no suggestions for change.

The HCAs also reported a high degree of acceptability relative to the session format and educational methods utilized. In particular, the participants enjoyed and learned from the critique and discussion of the video vignettes and written conversation examples. They appreciated the role playing activities, although one focus group participant stated that they "felt put on the spot but still learned a lot from them." Indication of the creation of a positive learning environment was evident as one interview participant noted the session allowed for "learning from your classmates and learning what they think". Another focus group attendee also stated they felt it was "a safe place to practice".

Video-feedback session. All 11 HCAs agreed to view their respective video and engaged in a reflective conversation about their communication skills and desired goals for improvement. There was a high degree of acceptance of the VF session as HCA participants described this aspect of the intervention as "good", "helpful" and that it "went well". A nursing leadership focus group participant noted: "It is a powerful learning tool that can be done very quickly". HCAs appreciated the informal approach to the session where they had an opportunity to view the video and then discuss it. They were comfortable with the approach of first being asked to offer comments on their performance (i.e. what they thought they did well and then what areas of PCDC they wished to focus on for improvement), followed by feedback from the facilitator. Responses suggested that this approach was non-confrontational and stimulated self-reflection and self-evaluation. As noted by one participant:

> "You didn't criticize. You asked us what we thought we did good. Then you told me what I did well." (HCA Focus Group participant)

HCAs also felt that the timing and length of the VF session was acceptable (i.e. 30-45 minutes) and that one VF session was sufficient to promote learning in this topic area.

HCAs also discussed the emotional impact of their experience with the VF session. Initial apprehension of viewing themselves on video was expressed by some participants. One HCA experienced some discomfort with the perception of being evaluated:

> "I wanted to get that (VF session) out of the way. I was relieved, after I watched it, and I thought I did okay". (HCA Focus Group participant)

Another theme that emerged was the pre-anticipation and worry of observing oneself on video was greater in comparison to the actual experience. HCA participants commented that watching their video "was better than expected" and "wasn't as bad as I thought it would be".

Overall intervention. The HCAs again reported a high degree of acceptability pertaining to the intervention overall (education session plus VF session) with all noting this approach was better than previous or typical learning methods experienced in their education or employment. The sequencing of the intervention components (i.e. baseline video, education session, VF session and follow-up video) was felt by the participants to be effectual. As expressed by one HCA focus group participant: "The pattern is good. Go with the theoretical and then the video."

The value-add of the VF component to a theory/content-based education session was explored through the focus groups and interviews. Responses from the participants suggest that VF is an essential part of the intervention:

> "The video is kind of crucial." (HCA Interview participant)
>
> "You have to see yourself in action." (HCA Focus Group participant)

> "It (VF) helps to understand the non-verbal part of communication." (Nursing Leadership Focus Group participant)

Participant comments also suggest that this methodology supports the translation of theory into practice as the education session created initial awareness and thought surrounding PCDC strategies, while the VF session stimulated action to improve/change communication behaviour (i.e. 'think' to 'do'). This was evidenced by the following excerpts:

> "The education session gave me a lot to think about. The video showing me what I can do to better myself." (HCA Focus Group participant)
>
> "If people really want to learn how to do their job better…or better communicate with residents…you will see that on the video." (HCA Focus Group participant)

Another participant noted that HCAs are used to receiving external feedback on their performance via observational audit approaches in their work place (i.e. completion of a transfer method safety checklist by management); however, it was felt that the VF approach was a superior feedback technique as it provided a visual learning opportunity and stimulated self-reflection and self-evaluation:

> "During appraisal, they tell us what is our strengths or things that we have to improve. But the videotape, it tells you everything, like, not only the objective things but like…you see it yourself. And it includes the emotional aspect and everything which cannot be written." (HCA Focus Group participant)

Experience of being video-recorded.

HCA acceptability. HCAs reported mixed emotional responses to the experience of being video-recorded in the study. Some HCAs expressed positive feelings associated with the

experience such as “nice” and “great”, while others reported feeling “uncomfortable”, “awkward”, “anxious” or “self-conscious”. Reasons for feelings of discomfort included unfamiliarity with the video-recording process, the prospect of seeing oneself on video and the sense of “being watched”. One participant summed up their emotional response to the initial video-recording session in this statement:

> “At first I was nervous because you don’t know, or you don’t like to see what you look like on TV. And I didn’t know you (the researcher).” (HCA Focus Group participant)

Most HCAs expressed increasing comfort with the subsequent post-intervention video-recording as they had gained familiarity with the process and the researcher, they “knew what to expect”, and felt “it was natural”. One participant reported an opposite experience, feeling increased discomfort during the second video-recording due to perceived performance anxiety:

> “I think I was more nervous for the second one. You’re expected to be better.” (HCA Focus Group participant)

Potential observer effects and awareness of the video recording were also explored with the HCA participants. The HCAs stated they were aware of the presence of the video-recording during the entire care encounter; however, responses indicated that this awareness did not influence their work or interaction with the resident:

> “I was aware but I wasn’t really focused on it. I was focused on the resident.” (HCA Focus Group participant)
>
> “Once you are inside and work, you don’t think much about it.” (HCA Focus Group participant)

> "I felt kind of uncomfortable because I knew I was being watched but it's not like I did anything differently." (HCA Interview participant)

Resident acceptability. Evidence of resident acceptability of the video-recording was gathered via observational measures and post-intervention HCA and resident interview/focus group responses. The results of the observational assessment of resident response conducted at the initiation and conclusion of all 21 videos (42 assessments in total) were as following:

1. Residents were both verbally and non-verbally engaged with the HCAs;
2. Displays of positive mood/affect were present (or comparable to baseline for the resident);
3. Displays of negative mood/affect were absent (or comparable to baseline for the resident); and
4. Displays of responsive behaviours or resistiveness to care were absent.

In regards to information garnered through the interviews and focus groups, HCA participants acknowledged the potential for resident discomfort in relation to an unfamiliar person in the room with them and the video-recording process. Two HCAs noticed some mild discomfort in their resident partner during the video recording; however, this was addressed by the HCA answering the residents' questions and repeating the explanation of the situation. None of the HCAs noted any lasting negative impact on their resident partners' well-being or behaviours during or after the video-recording encounters. Lastly, feedback obtained from the resident interview indicated a positive experience with the video-recording:

> "It was okay and I felt comfortable. It didn't bother me. Everything was okay." (Resident Interview participant)

Summary of acceptability. Comments from the focus group and interview participants indicated a high degree of acceptance in relation to the individual components (i.e. education session and VF) as well as the PCDC intervention overall. There were no suggestions for change or improvements to the content or sequencing of the intervention. HCAs reported some discomfort with the video-recording; however, with most participants this appeared to dissipate with increased familiarity with the expectations and process. Additionally, the video-recording sessions did not appear to cause any distress or untoward effects on the resident partners.

Utility of the intervention. The utility, or effectiveness of the intervention, was examined from three perspectives, i.e. the education session, the VF session, and the overall intervention. Utility of the components of the intervention was analyzed both separately and overall to investigate the potential effectiveness and added-value of the VF approach on HCA, resident and system outcomes from the perspectives of the participants.

Education session. Three themes emerged from the focus group and interview responses that pertained to the utility of the education session alone: 1) enhanced communication strategies; 2) reflection leading to insight and awareness of behaviour; and 3) awareness of person-centred principles.

Enhanced communication strategies. HCAs reported that the content from the education session offered them additional dementia communication strategies to augment their repertoire. In particular, HCAs noted they were able to rephrase their statements to enhance understanding which resulted in positive responses from residents. As one HCA participant described:

> "Just an improvement in general conversations, the way we ask residents to do things just taking effect and it reflects on some of the things we learned and it's

> just, it's good to, like, learn different things. You can talk and say and then they're more responsive to you than just saying, 'Let's go here and let's do this'." (HCA Focus Group participant)

HCAs also noted that the learned communication strategies assisted them to engage the resident in reciprocal conservation:

> "It gave me a better chance to think about trying to get them more involved. Especially with my resident, trying to get her to talk and like feel more comfortable." (HCA Interview participant)

Additionally, the HCAs found that the education session provided a different perspective on how effective communication could occur during their busy workday by utilizing the time during care encounters to converse and connect with residents:

> "So I was focused on the tasks to be done. So usually, when, the two-way communication that I would – I think like we have no time to do that. But after the training, we like to use the available time we have to communicate with the residents while giving care." (HCA Focus Group participant)

Reflection leading to insight and awareness of behaviour. The second emergent theme pertaining to the education session was the creation of an opportunity to reflect upon current communication behaviours and care approaches:

> "So, it gave me, like, to stop and review my routine. Before what I was doing, it was like task oriented….I was not giving attention of what I was saying or what, in fact, it causes on the residents." (HCA Focus Group participant)

> "I didn't realize how much I was, like, kind of just wanting to get the job done and not having a conversation. So, like, flip the switch - it flipped the switched and it gave me a better chance to think about the way I was talking with them." (HCA Focus Group participant)

In turn, this reflection appeared to create a heightened awareness and insight into current communication behaviours and use of "right" and "wrong" phrases and approaches:

> "…you realize when you know these things, like, you see yourself the way you talk to people once you know, but if you don't have an idea or anything, all that…you don't even notice it." (HCA Focus Group participant)
>
> "I catch myself sometimes saying the wrong thing – then I change it over and then it seems to help a little bit better." (HCA Interview participant)

One HCA discussed a specific revelation in relation to the use of a "wrong" phrase. In the past, when speaking with a team member to assist a resident, the common phrase that the HCA used was: "Let's go do <resident name>". The HCA noted that the education session raised awareness that this phrase may seem disrespectful to residents or family members and recognized a need to change this aspect of their language.

Awareness of person-centred principles. The third emerging theme in relation to utility of the education session was a heightened awareness of person-centred care (PCCare) principles as outlined by the VIPS mnemonic (i.e. Value the person, Individualized approach, Perspective of the person with dementia, and Supportive social environment). The first principle, value and respect for the person with dementia recognizing their own unique personhood and history, was evident in HCA comments relating to learnings from the education session:

> "Even though the session is merely like a bird's eye view on how you work with people in a certain way when they have this condition… it's helped to enhance our working ability to them, the way how we treat them… it's just like learning things at the same time helping people the way you want to respect them, even though they are not in their right mind." (HCA Focus Group participant)

> "And so, I gave her the opportunity to say something about herself and her family. Do you know she has 10 children? Do you know they all loved each other? They were good children to her. I kind of learned that. Her husband was a pastor and he loved her. And she loved him. And when she said that, she said it with tears in her face. So I got to know that about her. From herself, not from somebody else, from herself." (HCA Focus Group participant)

HCA responses also suggested that the education session impressed upon the second person-centred principle in the VIPS framework; the importance of individualized approaches, care and personal choices:

> "Now we can learn something that we could reflect from that, this is sort of not the right thing…and then they might have some choices on how we do things for them rather than like forcing them doing things for us." (HCA Focus Group participant)

> "This (education session) helped me to not, like be in a rush with the resident but, like, give the resident the opportunity to maybe like choose clothes and to make decision on it rather than me." (HCA Focus Group participant)

> "So to look at the resident and make sure that I get her permission and let her know exactly what I was going to do." (HCA Focus Group participant)

Awareness of the third VIPS principle, understanding the perspective of the person with dementia, was also evident through the participants' responses. HCAs reported that some of the session activities created an empathic opportunity to see situations through the eyes of the resident:

> "Well, I couldn't even come up with an answer on how to describe the food I ate for dinner (referring to a session activity). And I'm thinking, that's a really hard thing, but that it's good to practice that because that's what the residents are going through then." (HCA Focus Group participant)
>
> "It gave me the opportunity to be in the place of the resident, like, not totally like what they're going through but an idea as to what they are going through." (HCA Focus Group participant)

The fourth VIPS principle, provision of a supportive social environment, relates to the importance of relationships, partnership and facilitation of opportunities for the person with dementia to use their current abilities as well as foster areas for growth. HCAs noted that the session helped them view the resident as a partner in their care:

> "For me it was just, like, give them a chance to, instead of me doing it for them, getting them somehow involved in the care that I was performing. Like, working with them together. With them and not for them." (HCA Focus Group participant)

> "… it might help this resident on how we help them…sort of helping each other rather than, like, doing things like for the sake that you're working." (HCA Focus Group participant)

Utility of the video-feedback session. Two themes arose from the review of the interview and focus group dialogue in respect to the utility of the VF session alone: 1) understanding of self from a different perspective; and 2) reflection leading to behaviour change.

Understanding of self from a different perspective. The HCAs consistently reported that viewing themselves on video during the VF session offered a different viewpoint and awareness of self that they had not experienced previously:

> "…you will see yourself like a mirror that you need to do something…" (HCA Focus Group participant)
>
> "Having our own videos gave us a different perspective." (HCA Interview participant)
>
> "It kind of just makes it into a different light." (HCA Focus Group participant)
>
> "I think everybody should see. Like it does open your eyes when you see how you are on video." (HCA Focus Group participant)

A common realization among the participants was how they might sound when speaking with others:

> "But when we reviewed the video, even my, you know, my tone, my voice, I'm not used to it." (HCA Focus Group participant)

> "The first video, I felt like, oh, I'm doing good. I'm good. Oh, yeah, but when I watched myself, what I was doing and the way that I, like, I was talking too loud." (HCA Focus Group participant)

Reflection leading to behaviour change. The second theme pertaining to the utility of the VF component of the intervention relates to reflection leading to a change in communication behaviour. While the education session appeared to stimulate *thought and insight* relative to the HCA's own communication behaviours, the participants' responses indicated that the VF session resulted in further reflection leading to *action* they wished to take to improve their communication approaches:

> "It (the video) gave you a chance to kind of go back and reflect on that. You see yourself and how you talk with people. And then, if you see the video and then you see yourself, 'Yeah, I'm talking a little bit louder for this resident'… it makes you speak different." (HCA Focus Group participant)
>
> "Continuing the same way and the same pattern, I would have, you know, maybe I would not have accomplished anything had I not seen, you know, seen myself on the video, continue being loud, loud, loud." (HCA Focus Group participant)
>
> "I think we think we present ourselves in a certain way and we think we're doing things right. But once you review it and you look back, you can pick up on some things that you can change." (Nursing Leadership Focus Group participant)

The HCAs also noted that the VF session provided an opportunity to compare their communication approaches to the PCDC strategies outlined in the education session. This appeared to offer additional insight into areas for improvement and positive change:

> "I realized I wasn't doing a lot of the steps in the session when I watched the video. Like, there are things in the video that I saw, like, 'Oh, I could be doing this stuff from the session that I didn't do that time'." (HCA Interview participant)

> "You can see yourself after you learn something from the materials. And then you could process it because you have comparison on what you did before and the things that you learned." (HCA Focus Group participant)

Utility of the overall intervention. Qualitative findings that support the effectiveness of the overall intervention are outlined below. Themes relative to HCA, resident, HCA-resident relationship and system/contextual outcomes are highlighted.

HCA outcomes. Four themes emerged that suggest the PCDC intervention lead to positive outcomes for the individual HCAs in the study: 1) increased knowledge and skill of communication approaches; 2) increased use of relational and positive communication strategies; 3) decreased use of patronizing speech; and 4) work life enhancements.

First, HCAs noted that the intervention increased their knowledge and skill level in relation to communication approaches with residents with dementia which resulted in a change in their communication patterns:

> "I definitely started talking to <resident partner's name> a lot differently. And then when I even got – moved to the other team, I started talking to those residents differently. And like, trying to get them more communicative. I definitely used everything that I learned in that thing." (HCA Interview participant)

> "I see a difference in myself. I see a difference in the residents." (HCA Focus Group participant)

As a specific example of communication behaviour change, the HCA who gained a new perspective of not using the word 'do' in relation to assisting a resident, decided to adjust this language going-forward:

> "I don't use 'do' any more. Instead we say, 'We're going to go and help this person'. It sounds a lot better." (HCA Interview participant)

Responses from the post-intervention survey also suggest an outward change in communication behaviours:

> "My communication is more respectful towards the resident. More listening and responding accordingly - two-way communication." (HCA Survey respondent)
>
> "I have learned to listen to the resident. As I listen, I can understand what is spoken. Asking and giving simple directions, the resident is able to follow train of thought and respond." (HCA Survey respondent)

Additionally, one HCA noted that "not every day is the same" and that what she had learned from the PCDC intervention increased her ability to adapt to fluctuations in residents' behaviour and responses.

Second, the HCAs' responses suggested that the PCDC intervention had also increased their use of relational and positive communication strategies in alignment with the four components of person-centred communication, i.e. recognition, negotiation, validation and facilitation. Recognition of the resident with dementia as a unique person with their own history and story was evident in their comments:

> "I just need to talk and appreciate what people are saying to you." (HCA Focus Group participant).
>
> "You know, you love your residents and we just want to take care of them the best as we can. And treat them like a human being and, you know, they're not little kids. They're adults." (HCA Interview participant)
>
> "You're helping residents, the same human beings that you are…" (HCA Focus Group participant)

Enhanced use of negotiation communication strategies to ask or consult about the resident's preferences and needs was also evident in the participants' responses:

> "We just need to help them the way they're comfortable, not the way we want to." (HCA Focus Group participant)
>
> "And I don't have to take out the resident clothing. I can ask, 'Would you like, what would you like to wear?' or give a choice rather than say, 'Okay, I'm going to get you dressed and so on.'" (HCA Focus Group participant)
>
> "Don't just go ahead and do…wait for permission and give them an opportunity to respond." (HCA Focus Group participant)

The HCAs also expressed a raised awareness of validation through imagination of the resident's perspective and acknowledgement of what they might be feeling and thinking:

> "They have their own feelings too. Some people think that because they are old they don't, they have dementia and they think that they don't have feelings. But they have more sensitive feelings rather than the regular person." (HCA Focus Group participant)

> "Like, the validation I think was in the part about if they can't get the words out, kind of guessing what they might be feeling. So I found I was doing that with the residents. And then they would go, 'Yes, absolutely.'" (HCA Focus Group participant)

Facilitation is the fourth element of PCDC and pertains to approaches that promote a partnership with the resident and work together to complete tasks. One participant's response in particular highlights the essence of facilitation:

> "Or taking over, instead of having the resident involved…there's somebody who can do a lot for themselves and instead of me doing for them, then, okay, what can I do? So instead of helping the resident, I might be hindering them even though I think I may get them dressed, you know, I'm not helping is what I'm saying. If they can comb their hair, then why would I do it for them? If I comb it for them, then I may be hindering them from doing something that they would have loved to do themselves." (HCA Focus Group participant)

The third theme that arose from the interview and focus group dialogue in relation to individual HCA outcomes was the decreased use of patronizing speech towards the residents. Linking to the person-centred value of respect for the person with dementia, it was noted that patronizing speech, such as using terms of endearment, was inappropriate:

> "A lot of them (staff) call them (residents) baby, honey…I don't think that is appropriate." (HCA Interview participant)
>
> "It (using terms of endearment) doesn't sound appropriate, especially when the family is here." (HCA Interview participant)

One HCA additionally noted that she took initiative to influence a positive change in this behaviour when the opportunity arose:

> "You know, and I do see a lot of them (staff) do that (use terms of endearment). You know, you talk to them by their first name. I do see it and I do correct it." (HCA Interview participant)

The final theme pertaining to HCA outcomes related to perceived work life enhancements and increased satisfaction with work. HCAs noted that the LTC environment is often busy and stressful due to a heavy workload and multiple demands on their time. HCAs noted that the communication and care approaches supported by the PCDC intervention resulted in more positive resident responses to their interactions which equated to less stressful work:

> "The job is stressful as it is, then just taking your time and not so task-orientated, just, it makes a difference." (HCA Focus Group participant)
>
> "If you can get them off to a really good day, like, start their day off happy, it just makes all the difference for the rest of the day, right?" (HCA Focus Group participant)
>
> "The benefit is not only the residents; also it's us, because when there is two-way communication, it's going to lighten your job." (HCA Focus Group participant)

HCAs also reported that their enhanced communication approaches supported by the PCDC intervention had a positive emotional impact on them:

> "You get tired. So when the residents laugh, or like smile, or talk with you, it's contagious, right?" (HCA Focus Group participant)

> “So you feel also good. It feels better. So the benefit is two ways.” (HCA Focus Group participant)

Lastly, a member of the nursing leadership team noted a positive change in the HCA’s attitude towards their work:

> “They’re taking that professional pride in what they’re doing.” (Nursing Leadership Focus Group member)

This comment suggests that the use of PCDC communication strategies may enhance care providers’ work-life through enhancing professional pride and accountability in one’s work.

Resident outcomes. Three themes emerged from the data pertaining to the PCDC intervention’s impact on resident outcomes: 1) increased opportunities for and participation in conversation; 2) enhanced psychological well-being; and 3) improved quality of life.

HCAs reported they had taken the initiative to “get the conversation going” with residents and engage them in two-way communication to learn about them as individuals:

> “We were so focused on getting the job done and getting that resident out of the room and into the dining room and then move on to somebody else. So, yeah, we really had to have time to open up a conversation and get to really know that resident. Let them say something about themselves to us.” (HCA Focus Group participant)
>
> “Now, we, we just, we talk a lot more now….when I started going and sitting with her at supper time we got more, more of a communication, you know” (HCA Interview participant)

> "My resident too, she's very quiet anyway but once you open the conversation and get it flowing and, then she will talk more." (HCA Focus Group participant)

Second, comments from the HCAs suggested that approaches learned from the PCDC intervention had the potential to enhance the psychological well-being of their resident partners:

> "When I got to know her, we start singing together. I said, 'Oh, I didn't know that you could sing also. Oh, we can sing together.' She's then – she's happy." (HCA Focus Group participant)
>
> "Even though they might not understand but still they could respond to you in a way that they could...but it still will be better than the usual when you were task-oriented only." (HCA Focus Group participant)
>
> "It definitely made me think about more ways to talk to her differently, and then also, how to involve her more in her care." (HCA Interview participant)

Lastly, HCA participants' comments suggested that a raised awareness of conversation opportunities within care encounters "opened the door" to create a meaningful interaction with the resident during their time spent together. When describing the effect of seeing herself on video and realizing opportunities to improve aspects of her communication, one HCA recognized the positive impact she could have on the residents' quality of life in that moment:

> "How can you just make those 15, 20 minutes a little bit better for them, right?" (HCA Focus Group participant)

HCA-resident relationship outcomes. Comments from the survey respondents and focus group/interview participants also suggested that the PCDC approaches had a positive influence on the quality of the relationship with the resident. Seven of the 11 HCAs that answered the

post-intervention survey question “Did your relationship improve with the resident during the study?” indicated a positive response. The reasons behind the perceived improvement in the relationship included:

- Resident appreciation of and positive response to the HCA’s person-centred communication efforts;
- Increased resident sharing of personal information about family and their life story;
- Understanding the resident’s likes and dislikes and offering choices; and
- Development of a stronger personal connection with the resident:

> “She seems to look for me more often and likes when I can sense what she needs.” (HCA Survey respondent)

Comments from focus group and interview participants also supported the theme of enhanced quality of the relationship with the resident. One HCA described how this improvement became evident to her:

> “With my resident, I have seen an improvement, well, I guess, between our relationship and with others too. Like, she’s a little bit more talkative and I just find her thankful, very thankful. I know whenever I do anything, she’s so thankful. So, you know, appreciative.” (HCA Focus Group participant)

Another described a strengthening in the relationship through the development of mutual understanding and respect:

> “And then there is like a conversation and then respect to each other because you kind of understand what’s going on.” (HCA Focus Group participant)

And finally, one participant noted that the enhanced communication strategies furthered the building of trust between the HCA and resident which improved the quality of their relationship and ability to work effectively with them:

> "It's like having, building trust. They trust us because of the communication. And then, if they will trust us, then it is easy for us to do care." (HCA Focus Group participant)

System/contextual outcomes. The final grouping of outcomes relative to the utility of the overall PCDC intervention pertained to impacts at the system/contextual level. Themes fell into two categories: 1) promotion of a shift from a task-oriented to a person-centred approach/philosophy; and 2) creation and maintenance of a positive communication climate.

HCA participants' comments suggested that the PCDC intervention had not only caused some to reflect upon their current communication with residents, but fostered a shift towards a more person-centred approach to communication overall. One participant recognized that a transition away from task-oriented communication had occurred:

> "Just talking about their everyday lives too or, you know, their family and things they used to do in the past. And it's just, the kind of conversation was not even about the care really. And for me that was good." (HCA Focus Group participant)

Another described her change in viewpoint regarding communication as being patient and allowing the resident time to respond:

> "I just say something and I'm not in a hurry to go... I wait for her response. I know the response is coming, it might take 10 hours, you know, but I wait for her response." (HCA Focus Group participant)

The intervention also appeared to stimulate reflection upon the HCA's care philosophy and values in general:

> "It opened my eyes to what I was doing…what I am doing here and did I really meet that person's needs?" (HCA Focus Group participant)

Participants also vocalized the importance of "knowing a balance" and being able to accomplish a person-centred approach and encourage self-care opportunities for residents within an environment that promotes a task-based orientation. Comments from the nursing leaders also suggested an increased awareness of and shift towards a "new standard of care":

> "People have been so vocal about their expectations, how residents should be cared for." (Nursing Leadership Focus Group participant)
>
> "(They are) much more aware now that this is how they should be communicating and working with residents." (Nursing Leadership Focus Group participant)

And lastly in relation to supporting a shift towards a person-centred philosophy within the LTC environment, as a result of the PCDC intervention nursing leadership noted a palpable increase in staff engagement in their work and interaction with residents:

> "Some people are a little bit more engaged now… asking the resident about what they want to do and what they're doing instead of just, 'Here, this is what you're eating and this is what we're going to give you' type of thing." (Nursing Leadership Focus Group participant)
>
> "I think it's been good for the health care aides to be involved. There is certainly a spark going there…they seem a bit more engaged." (Nursing Leadership Focus Group participant)

The second category of system and contextual influences related to the creation and maintenance of a positive communication climate within the LTC home. Nursing leadership comments suggested that the intervention enhanced the overall communication atmosphere within the home:

> "I've seen a more relaxed approach in the dining room as well…and I see a lot more people sitting (with the residents)." (Nursing Leadership Focus Group participant)
>
> "They are giving residents more choice and they spend more time with them." (Nursing Leadership Focus Group participant)

Additionally, comments from the HCA participants suggested that the influence of the PCDC had spread beyond the HCAs in the study. There was evidence of HCA participants acting as mentors and coaches for other staff:

> "I job orientated somebody over the weekend and even just explaining things to her, different ways to talk to the residents, don't just focus on the job itself." (HCA Focus Group participant)
>
> "I'm teaching, showing other people now." (HCA Interview participant)

There was also an indication that HCAs offered peer support to each other to help sustain this positive communication culture. While describing attempts to sustain a shift in language away from the use of patronizing speech, one HCA noted:

> "They understand this (using terms of endearment) doesn't sound right. We're doing it (reminding each other) every day. We're doing it to each other every day. We're always learning." (HCA Interview participant)

Furthermore, comments from the HCAs suggested that there had been a broader use and evidence of spread of the PCDC approaches beyond the study and original HCA-resident dyads. This translated to further positive outcomes for both staff and residents:

> "I've been practicing with the other residents. And I think it is – it works really good because I've been practicing with one of the residents that complains so much. But seems like he is okay with me. And he even makes jokes with me. And so, he's like, 'So why doesn't he complain about me?' So it looks like he's okay." (HCA Focus Group participant)
>
> "Some of the techniques were working with residents that had more dementia than, like, the study was meant for residents with more a mild dementia, right? So – but I found, because I was practicing on a lot of residents, sometimes you'd be surprised by their answer." (HCA Focus Group participant)

Lastly, in relation to the maintenance of a positive communication climate in the LTC home, HCA comments suggested that the PCDC intervention methodology supported sustainability of the communication learnings and concepts:

> "But (when) the methodology is like a kind of lecture or something like that and you forget it. But if you are involved and see yourself, I think you will not forget it." (HCA Focus Group participant)
>
> "I understand visually usually. So if I see picture or video I easily understand." (HCA Focus Group participant)
>
> "I remember what I see." (HCA Focus Group participant)

Summary of utility. Data from the focus group, interview and survey responses indicate that the PCDC intervention had a positive impact on HCA, resident, provider-resident and system-level outcomes during the course of the study. For outcomes relating to the HCAs, emerging themes suggest that the intervention promoted learning and use of person-centred communication skills and an increased awareness of person-centred principles that lead to improved interactions with residents. To support resident-related outcomes, the impact of the person-centred communication strategies were reported to result in increased opportunities and participation in conversation with the HCAs, creating the potential to positively influence their psychological well-being and quality of life. HCA participant responses also suggested that the quality of the care provider-resident relationship was enhanced in that there was a closer bond between the staff and resident partners with increased knowledge and sharing of resident preferences and life history. Lastly, there was suggestion of broader contextual impact of the intervention in that HCA participant comments indicated the importance of incorporating person-centred communication and care approaches within a traditionally task-focused environment.

Feasibility of the intervention. The feasibility, or ease of use and implementation of the intervention, was also explored through the focus groups and interviews with the HCAs, resident and nursing leadership team members. Feasibility findings will be highlighted in respect to challenges and facilitators to the effective use and implementation of a PCDC intervention that incorporates a video-feedback component.

Challenges. Challenges or potential barriers in relation to the feasibility of the PCDC intervention are described in respect to HCA and resident perspectives as well as considerations pertaining to the overall LTC context.

Health care aides. Two themes emerged from the data pertaining to potential barriers that may deter staff from participation in the intervention or communicate with residents in a person-centred manner: 1) emotional reactions to being video-recorded; and 2) staff attitudes.

First, the HCA participants expressed a range of initial emotional responses to being video-recorded while providing care, both from their perspective and their HCA colleagues who had declined participation in the study. Discomfort at the thought of either being video-recorded or seeing themselves on video was a prevalent emotional reaction for participants and a barrier for some non-participating staff as described by the HCAs in the study:

> "Seeing the camera and feeling uncomfortable or even me feeling uncomfortable in front of the camera, that's the only disadvantage (to the intervention) I see." (HCA Interview participant)
>
> "I think that's maybe why a lot of people didn't want to do it because it's being videoed. They think, 'Oh, I'm going to see myself.'" (HCA Focus Group participant)

Feelings of fear and intimidation relating to the purpose of the video-recording were also noted:

> "Everybody was scared because they thought that it was like a bad thing instead of a good thing." (HCA Focus Group participant)
>
> "They don't want to be videotaped and the other thing is that they think the management or somebody else is going to watch the tape, the video." (HCA Focus Group participant)

One HCA also noted that potential feelings of nervousness may impact performance during the video-recording session:

> "If you're nervous and then you're getting videoed and you might not be in top form." (HCA Focus Group participant)

Dialogue also suggested that the prospect of being video-recorded may create feelings of uncertainty and vulnerability. One HCA noted that the VF component was unfamiliar to staff and a foreign method of learning:

> "We are not used to it. And the other thing from past experience, when we hear about videos, taping someone or something like that, you know – I haven't heard the positive side of it, if someone is videoed." (HCA Focus Group participant)

HCA participants reported that viewing their video caused them to "see themselves in a different light". This direct and visual learning technique may create a level of vulnerability that some care providers may not be willing to experience or expose. In referring to the HCAs who agreed to participate in the study, one nursing leadership team member noted:

> "I was surprised that they would be so willing to be transparent." (Nursing Leadership Focus Group participant)

Participants' comments suggest that these above emotional reactions may pose a barrier to participation in an intervention with a VF component if not acknowledged or addressed effectively.

The second theme that arose pertaining to potential challenges for HCA involvement in the intervention or being able to utilize person-centred communication techniques was the staff person's overall attitude. HCAs expressed that some staff persons are unwilling or unable to learn or self-improve:

> “They don’t care to learn, and they don’t care to better themselves because they’re just there for the paycheck.” (HCA Interview participant)
>
> “You just need to learn…unless you’re not a person who is like taking everything in…then you will not be learning and you will be stuck.” (HCA Focus Group participant)

Another participant suggested that a staff person’s attitude and distrust towards being video-recorded may have been influenced by social context and media outlets:

> “I think it may not be related only to this particular study, but it may be, you know, many years watching the media or something, many things that are related to the idea, you become a skeptic.” (HCA Focus Group participant)

A final thought pertaining to the person’s overall attitude is the suggestion that one needs to be in a stable physical and emotional state to effectively communicate with residents in a person-centred manner:

> “With all this, our heavy work, it’s almost like you do have to be in top form every day to do centered-person communication because, like, some days you just feel, you’re tired yourself or just kind of a rough night or something happened, and you’re just not as talkative or maybe you’re a little emotional yourself, you know, and that’s us.” (HCA Focus Group participant)

These comments suggest that an individual staff person’s overall attitude towards learning, self-improvement, the use of video in society and their personal state of well-being are factors that may influence feasibility of the PCDC intervention.

Residents. Three resident-related themes arose from the focus group and interview data that pertain to potential challenges or barriers to the feasibility of the intervention or using person-centred communication strategies: 1) resident characteristics; 2) resident discomfort with being video-recorded; and 3) resident privacy and consent issues.

In regards to resident characteristics, HCAs noted that challenges in using the PCDC techniques arose when residents had hearing impairments, did not speak English as their first language, or experienced dysphasia or were non-phasic. When asked if there were any barriers to the PCDC strategies being used, one HCA commented:

> "Unless their dementia was like way worse and they don't talk." (HCA Interview participant)

HCAs also noted that the potential for residents to experience discomfort being video-recorded could also be a challenge to the use of video in this setting. Although this was recognized as a potential issue, none of the participants reported this as a concern that arose during the study.

Lastly, comments from the participants supported the importance of respecting residents' privacy and gaining initial informed consent and ongoing assent from the residents. This theme was highlighted by a comment from a nursing leadership team member who emphasized the need to be sensitive to people's change in condition:

> "…and then there's the resident or client and, I know when I am sick, I certainly don't want anybody coming in taking my picture…" (Nursing Leadership Focus Group team member)

LTC contextual considerations. Four potential challenges to the use and implementation of the intervention were relevant to the impact on the broader LTC context: 1) time considerations; 2) consistent approach; 3) confidentiality versus reporting requirements; and 4) sustainability.

Time considerations were a consistent contextual theme that arose throughout the interview and focus group discussions. HCAs noted the challenge of time pressures to complete work in a task-oriented environment:

> "I guess another barrier in the grander scheme of things is time. Because sometimes you feel rushed by other co-workers too. Because there is stuff to get done, right?" (HCA Focus Group participant)

HCAs also noted that initially time was needed to learn and practice person-centred communication techniques, which slowed completion of their tasks:

> "Sometimes it would take me more time because I'm trying to focus on the communication part. It's not so bad but it takes practice, I think." (HCA Focus Group participant)

Nursing leadership team members also noted an impact on the time and internal resources available to facilitate the PCDC intervention, due to limited means to deliver face-to-face education within the LTC setting.

The second theme that arose from the data in respect to contextual considerations related to a consistent approach to person-centred communication. HCAs expressed concern that if their colleagues and team-mates were not in alignment with the same approaches, this could create communication and efficiency challenges within the workplace:

> "But I think it's difficult to, like, see them, my resident who's a two-person and if your partner isn't in-tune and communicating, then it's hard. Because you can't get the task done unfortunately." (HCA Focus Group participant)
>
> "If your coworkers aren't on the same page with you with that either or not understanding towards it, that can make a little challenging thing." (HCA Focus Group participant)

HCAs and nursing leadership team members also expressed the challenge of maintaining a consistent approach to person-centred communication due to continuity of care issues common in the LTC setting. Staff turnover and causal staff substitution for vacation or illness replacement creates the potential for gaps in processes and difficulties in alignment of person-centred care and communication approaches.

The nursing leadership team expressed a third potential challenge of upholding confidentiality agreements (in relation to others not viewing the video) being in conflict with professional reporting responsibilities if unsafe practice was observed:

> "But in nursing, then we're bound by… okay, so whoever does the education you've got nurse X who you view on the video, they have got the stethoscope upside down or whatever they're doing, you could tell that they were really struggling that perhaps are not safe. We have an obligation to report that. So I don't think we can say to people go into a session, that they're going to be videotaped, 'Oh, no worries, we'll never look at it.'" (Nursing Leadership Focus Group participant)

The final contextual challenge related to sustainability of the momentum created by the PCDC intervention within the HCA participants. In seeing the positive change and engagement of the HCAs as advocates for person-centred care, one nursing leadership team member stated:

> "My kind of question is how – what do we do after? What would we do now? How do we keep that going?" (Nursing Leadership Focus Group participant)

Facilitators. Factors that support the facilitation and sustainability of the PCDC intervention were also explored with the focus group and interview participants. Themes in relation to this aspect of the intervention's feasibility were categorized into facilitators that supported approaches relevant to HCAs and residents, as well as considerations in respect to training structure and approaches applicable to the LTC setting.

Health care aides. A number of facilitators relevant to staff approach and support arose from the focus group and interview discussions. The following factors were considered by the participants to be paramount in addressing some of the challenges and barriers mentioned previously: 1) advanced preparations; 2) facilitator approach; 3) emphasize the benefits; 4) acknowledge emotional responses; and 5) peer support and influence.

HCA participants felt that preparatory discussion and groundwork was an important element of successful implementation. First, they indicated that leadership support and messaging was essential. As one HCA participant noted: "It needs to come from the top." Nursing leadership added that upfront union discussions and support were also key considerations:

> "But how would you deal with that when you have the union who says, 'How are you going to use these videos?'" (Nursing Leadership Focus Group participant)

To address concerns surrounding uncertainty of the video usage, HCA participants suggested that key information be clearly articulated in the preparatory phase of the intervention. This information should include the purpose of the videos (i.e. for educational purposes only and not for disciplinary/performance evaluation), confidentiality of the videos (i.e. who will access them), and how the videos will be handled/destroyed. Lastly, in relation to preparatory considerations, both HCAs and nursing leadership suggested that policy and procedures in relation to the capture and handling of videos are in place and aligned with applicable privacy legislation, human resources guidelines and philosophy of the PCH:

> "We are not thinking about only the (this PCH) but we are thinking about Canada, what is the legal view on the, you know, consent and being videotaped or recorded. So these things are, I think, it's a robust thing. It needs a systematic approach, not only on the policy and also it has to be, it has to come from the top too and everybody has to be in a – the same mind." (HCA Focus Group participant)

The second theme to support successful implementation of the PCDC intervention pertained to the facilitator's approach throughout the experience. HCAs noted that a caring, non-judgmental and non-threatening approach by the intervention facilitator helped establish a trusting relationship. This in turn put them at ease and offered a sense of reassurance, particularly in preparation for the video-recording sessions:

> "So, I think, if you had somebody that you don't feel comfortable talking with, then I'm not going to let them video tape me." (HCA Focus Group participant)

> "When you (facilitator) reassured that we were – it wasn't to criticize and nobody else is going to see the video. It was really nice. You know, putting us at ease." (HCA Focus Group participant)

The third theme that arose in respect to staff facilitators for successful implementation and to encourage acceptance of the intervention pertained to emphasizing the benefits of the PCDC approaches. One perceived positive benefit related to the potential for self-improvement and the opportunity "to learn and better" themselves in their ability to provide care for the residents:

> "I would want to be able to do better with my residents, right. So, yeah, that's good (referring to the learning)." (HCA Interview participant)

HCAs also suggested relaying to other HCAs the importance of learning these new approaches as it makes resident care easier:

> "We were just getting some video for training purposes – helping people on how you help people the way it will be better for residents to work with, then they will understand easily and then they will not be sort of afraid of doing it." (HCA Focus Group participant)
>
> "Once you get through it like you're learning so much and it will help with the care of your residents." (HCA Interview participant)

Another HCA suggested the importance of sharing the study results with staff and management as examples of past successes with the approach:

> "After you did this study and some of the findings, if you present it for the staff, you know, for the management and every staff at every level, then they will see the advantage." (HCA Focus Group participant)

The last benefit the HCAs experienced and recommended emphasizing to others included a focus on "the long game". Many of the HCAs shared that although the video-recording portion of the intervention created some temporary discomfort, the resultant learning was indispensable:

> "The benefits of it, I think, are more important than like feeling uncomfortable (being video-recorded)." (HCA Interview participant)
>
> "It's such a great learning experience, so what you're uncomfortable for like five minutes." (HCA Focus Group participant)

The fourth theme that emerged from the focus group and interview conversations pertaining to staff facilitators was to acknowledge the discomfort and other emotions participants may experience in response to the video-recording component. It was recognized that this discomfort related to being "observed" likely couldn't be eliminated completely as it was a normal reaction that should be acknowledged in the moment:

> "When the action happens, the video, we're still a little bit nervous. I think that's human nature." (HCA Focus Group participant)

HCAs also noted that this discomfort and apprehension in anticipation of the video-recording or VF session was over-exaggerated in some cases. When discussing anticipated feelings of watching herself on video, one HCA commented:

> "And I thought that was the biggest thing for me. But after watching the video, it was, I thought…I over-exaggerated on this. Like, you over worry. You just learn as you go." (HCA Focus Group participant)

Another HCA participant described her anticipation of the video-recording session as being "nerve-wracking but you get over it."

The final theme in relation to staff facilitators to promote recruitment and implementation of the PCDC intervention was pertaining to peer support and influence. HCAs shared their own experiences with their peers to spread the word and encourage others to participate:

> "I've told some people about my experience and I'm like, it wasn't like as bad as you thought it was going to be, right?" (HCA Focus Group participant)
>
> "I think just having other people do it and then they could see that they survived it and maybe, maybe they'll try." (HCA Focus Group participant)

Comments also suggested that HCAs with more years of experience felt more confident in their role and thus more comfortable extending themselves into a new method of learning:

> "And I think one thing that really helped… is the experience that we had in our job…If we were newbie we probably would not – would feel, you know, would not know what to do with someone filming. So I think the experience that we had over all these years, that was a great help."

In relation to peer collaboration, this represented an opportunity for more experienced staff to support and encourage newer staff to participate in the intervention.

Residents. In relation to resident-related factors that facilitated the implementation of the intervention, two themes emerged: 1) preparation of residents before and during the video-recording; and 2) personal knowledge about the resident.

Residents were reminded about the intent and process before each video-recording session; however, in some cases during the course of the video-recording, the resident posed questions about the presence of the researcher or video-recording. HCA participants noted that it was important for them to be prepared to answer questions from the resident and be able to reassure them during the recording session, if necessary.

HCAs also noted that a facilitator to successful use of the PCDC strategies was to have personal knowledge about the resident. HCAs reported that some residents had a "storyboard" in their room that provided some details of the resident's life and history and facilitated person-centred communication:

> "It helped that my resident had one of those storyboards too. It talks about her life and, you know, all her travels and sports and family and, you know, and some residents don't have those yet." (HCA Focus Group participant)

Other HCAs noted that they had taken initiative to talk to the resident or their family members to learn more about them to help expand person-centred conversation opportunities and topics.

Training structure and approaches. Themes from the focus groups and interviews also revealed facilitators for the ease of use and implementation of the PCDC relative to contextual considerations of the intervention's structure and delivery. The themes that emerged included: 1) training exposure opportunities; 2) intervention/training structure; and 3) low technology.

Opportunities to facilitate exposure to the PCDC intervention were explored with the focus group and interview participants. One suggestion was to incorporate this method of training into entry-level HCA program curricula:

> "They should have more videos like that for people that are coming onto that field." (HCA Interview participant)
>
> "(People) may be more accepting of it (video-feedback) in an educational environment." (Nursing Leadership Focus Group participant)

In consideration of existing LTC staff, it was suggested that the PCDC be incorporated as part of a larger person-centred care education initiative. The possibility of a mandatory approach to education was discussed and opinions were mixed. Some were in support of this approach, as it was felt that staff would eventually see the benefits:

> "I just think this should be mandatory…because some people might, like, 'Oh, I don't want to.' But if you force them to do it and the later on, they realize, 'Oh, yeah, this is beneficial.'" (HCA Focus Group participant)

Others felt that a mandated approach would not be successful in changing behaviour:

> "If you make it mandatory, those people who are not, who do not want to participate, then they will act, you know. So they don't have this willing…They won't be genuine when you videotape them." (HCA Focus Group participant)

The participants also provided suggestions in relation to the structure of the intervention and training approaches. Training facilitation options were discussed with the nursing leadership team. It was felt that the use of an external facilitator (as opposed to a manager/educator in the home) would promote higher staff involvement in the initiative:

> "If people who are coming in to do the education where it was taken out of the hands of nursing leadership and it was just actually education brought in by nursing leadership that was kind of controlled in the environment might work better than us putting cameras on people." (Nursing Leadership Focus Group participant)

Nursing leadership also identified this initiative as an opportunity to promote staff empowerment and engagement in which HCAs could be enlisted as champions of a staff-driven project:

> "Let them be the teachers to one another and do the observing/co-teaching." (Nursing Leadership Focus Group participant)
>
> "You get people energized and enthusiastic and feeling like they're contributing, their productivity increases too." (Nursing Leadership Focus Group participant)

Video-feedback was also identified by the nursing leadership group to have broader educational potential within the LTC setting for "areas of practice where it would be less threatening". Suggested examples included other person-centred care approaches, body mechanics/posture during transfers or oral care.

Lastly, in relation to training structure enhancements, HCA participants offered considerations to help address the fear and hesitancy of being video-recorded. First, when introducing the intervention, HCAs suggested showing a sample video to "decrease stress and apprehension" and provide some context as to what to expect during the recording sessions. It was also suggested that people might be more accepting of the video component if they were eased into the idea:

> "It's like going into warm water - it's like too hot, people will not jump into it. But if we're putting them into lukewarm, it will be easy. They'll say, 'Oh, yeah, this will be easy.'" (HCA Focus Group participant)

One suggested strategy to acclimate staff to the video aspect of the intervention was to have individuals attend the education session first to generate interest in the PCDC approaches and stress the benefits of video-feedback. The video-feedback component could then be offered as a secondary component of the intervention once participants were "warmed up" to the concept. Another strategy involved having a "practice video" with a peer prior to the recording session with the resident to increase comfort with the process:

> "What do you call this, role modelling and when you're doing it, like practice…You're not even afraid about it because you know what to do." (HCA Focus Group participant)

The third theme relative to contextual facilitators pertained to a low technology/low cost approach to the intervention. The equipment used to record the videos (i.e. tablet) was considered acceptable and accessible by the nursing leadership team participants.

Summary of feasibility. HCA and nursing leadership team member comments revealed some challenges to the feasibility of the PCDC intervention within the LTC setting. From the staff perspective, the most significant perceived barrier was the feeling of discomfort at the prospect of being video-recorded, resulting in a reluctance to voluntarily participate in the intervention. The participants also noted that discomfort might be a barrier from the resident's perspective as well, although this was not experienced during the study. Contextual challenges to implementation included time pressures (to deliver the education and learn to communicate in

a person-centred manner) and lack of a consistent approach due to continuity of care issues and team members that had not received the education.

To address these challenges, both the HCAs and nursing leadership team members provided suggestions for facilitators to promote uptake and successful implementation. Attention to advanced preparations and discussions, as well as emphasizing the benefits and past successes of the VF technique was felt to be paramount to promote participant recruitment and engagement in the intervention. Support during the course of the intervention were also felt to be crucial and included a non-judgmental, trust-building approach of the intervention facilitator, as well as the importance of acknowledging discomfort with the video component as a normal reaction. External and internal training exposure opportunities were also discussed with recommendations to include this approach in entry-level HCA programs for new staff, as well as person-centred training programs for existing staff. To address the challenge of time and resources for internal facilitation of the intervention, a suggestion was raised to encourage peer leaders to champion and lead the program. Lastly, it was felt that the low-technology approach to the intervention facilitated ease of use and implementation.

Conclusion

The section has outlined findings pertaining to the study's specific research questions. Results relative to the effectiveness of the intervention to enhance both the language-based and person-centred components of PCDC behaviour were presented from the paired samples testing of pre- and post-intervention differences and the regression analysis to test for interaction effects of independent resident and HCA variables. Findings of the comparative analysis of each dyad's pre- and post-intervention videos were also described to offer a complimentary perspective of the

intervention's effectiveness and contextual considerations. Lastly, the results from the qualitative analysis of the HCA, resident and nursing leadership interviews and focus groups were reported to address the final research question pertaining to the acceptability, utility and feasibility of the intervention with the LTC setting.

Chapter 6: Discussion, Implications and Conclusions

The results of this pilot study suggest that the communication intervention with a video-feedback (VF) component has the potential to positively influence aspects of health care aide (HCA) person-centred dementia communication (PCDC) behaviour. From a feasibility perspective, the intervention was deemed highly acceptable and effective by HCA and resident participants and an agreeable, low-technology approach by the personal care home's (PCH) nursing leadership. Feasibility challenges included staff resistance to the video-recording component and time/resources to implement the intervention. HCA participants and nursing leadership team members provided suggestions and enablers as to how to address these implementation barriers. This chapter will establish linkages between the study findings, current theoretical perspectives and relevant empirical literature to draw conclusions and support further testing and use of the PCDC intervention in the context of dementia care within the long-term care (LTC) setting. Limitations of the study will also be discussed as well as future implications for practice, education, research and policy.

Intervention Effectiveness

While this interventional study supports many emerging themes from the extent VF literature, the novel outcomes that arise from this research are suggestive improvements in observed communication and relational behaviours within the context of PCDC in long-term care, which has not been reported elsewhere. Of note, the demographic profile of the HCAs and residents in the study was similar compared to previous accounts in the Canadian LTC literature (Estabrooks et al., 2015) and national clinical data reported for Winnipeg PCHs (CIHI, 2019). This suggests that the study sample captured a realistic description of an applicable target group

for eventual broader testing and application of the intervention. Aspects of the intervention's effectiveness can be linked to resident, healthcare provider and system-level outcomes as described in the Person-Centred Communication Enhancement Model (PC-CEM) for LTC (Figure 3) and are highlighted below.

Healthcare provider-level outcomes. The provider-level outcomes addressed in this study included those identified within both the relational and communication categories.

Relational outcomes. The findings from the study provide further support for three relational outcomes as outlined in the PC-CEM: improved quality of the care provider-resident relationship, enhanced self-reflection on the part of the HCA and increased satisfaction with work.

Improved quality of the relationship. The use of personhood strategies and the development and maintenance of a close relationship are believed to facilitate 'good' and meaningful communication between care providers and individuals with dementia (Alsawy et al., 2017). In respect to improvement of the quality of the resident-HCA relationship in this study, the global reports of increased feelings of closeness with the resident aligned with previous research findings (Coleman & Medvene, 2013; Damen, et al., 2011; Gerritsen et al, 2018; James et al., 2012). Despite high internal consistency, scores from the other two self-report scales used to further measure relationship satisfaction and closeness with the resident partner (i.e. Personal Accomplishment and Mutuality Scale) did not reflect a significant change in these outcomes. The lack of change in the Personal Accomplishment scores may have been due to a ceiling effect as a result of high pre-intervention scores (i.e. pre-intervention mean of 42.09 out of a possible score of 48). Based on feedback from the HCAs, the irrelevance of

certain items in the Mutuality Scale may have impacted the ability of the tool to accurately measure relationship closeness within this study environment, thus pre-/post-intervention change may not have been reflected. Of note, pre- to post-intervention lack of change in overall Mutuality Scale scores has also been observed in recent interventional communication research (Williams et al., 2016); therefore, if it possible that this tool may not optimally measure the construct of relationship closeness between HCAs and residents in this context. Lastly, the residents recommended by the HCAs as 'acceptable' partners may have also influenced both of the PA and MS scores, as staff may have identified residents with whom they felt they already had a good relationship or personal connection.

Enhanced self-reflection. As one aim of the intervention was to foster self-reflection and perspective-taking to raise awareness and stimulate behaviour change in respect to PCDC, a suggestive finding in the study was increased global reports of self-reflection and qualitative indications of the HCAs' enhanced ability and desire to understand the residents' perspective. The conceptual and practical linkages between self-reflection and perspective-taking have been drawing recent attention in the literature. Emerging empirical and theoretical research in this field has begun to delineate the relationship between self-reflection and perspective-taking and examine how these processes may be effectively fostered within care provider education and interventions. Research suggests that self-reflection and perspective-taking are interdependent concepts that share similar outcomes (e.g. increased empathic accuracy in understanding another's thoughts, feelings and behaviour) but entail different areas of attention (i.e. self-focus versus other-focus respectively). It is felt that self-reflection, or thinking upon one's thoughts, feelings, behaviours and past experiences, is positively correlated with the ability to take the

perspective of others, suggesting that a balanced approach to awareness of the self and the other's viewpoint are necessary components of perspective-taking (Gerace et al., 2017).

Although perspective-taking has been associated with positive relational and communication outcomes, potential negative effects have also been raised (Hoplock & Lobchuk, 2019). One example that arose from this research and aligned with the literature was the potential for participants to negatively criticize their appearance and/or behaviour after watching their video during the VF session. As self-reflection and perspective-taking stimulate an internal focus on self, these cognitive processes may induce feelings of defensiveness or pose a threat to perceptions of self-worth, especially if an individual views oneself in a negative manner (Critcher & Dunning, 2015; Hoplock & Lobchuk, 2019). For some, this may trigger a self-oppressive and ruminative cycle resulting in a state of emotional distress (Gerace et al., 2017). To mitigate this potential negative outcome, it is recommended to incorporate self-affirmation strategies within interventions where participants have an opportunity to express a positive aspect about themselves that is valued (Critcher & Dunning, 2015). In this study, one self-affirmation strategy was included within the VF session in that participants were first asked to comment on what aspects of their communication behaviour in the video they felt were addressed well prior to discussing desired goals for improvement. Feedback from the study participants indicated that this approach helped establish a non-threatening, non-judgemental learning atmosphere during the VF session. Other suggested strategies to mitigate this risk include encouragement of abstract thinking over concrete examples/situations, peer group dialogue and the support of reflective peers (Hoplock & Lobchuk, 2019).

Increased satisfaction with work. Promotion of an enhanced work-life for health care providers related to increased self-efficacy and empowerment (Cross & Kennedy, 2011; Hall et al., 2016) and heightened feelings of work life satisfaction and happiness (Hansebo & Kihlgren, 2001) is an additional relational outcome noted in the VF literature. Qualitative themes that emerged from this study also suggest PCDC could act as a means to promote a less stressful work environment, create a positive emotional impact on staff, and increase accountability and pride in one's work.

Communication outcomes. In alignment with the findings of previous VF interventional research in person-centred communication approaches, exposure to the PCDC intervention in this study also suggested positive impacts on communication outcomes for the HCA participants.

Communication knowledge, skill and confidence. Study findings in respect to self-reported increases in dementia communication competence and confidence as measured by the Providers' Interaction Comfort Scale (PICS) adds support to the existing body of literature. Similar outcomes have been documented regarding nurses' (McGilton et al., 2010) and care aides' (Passalacqua & Harwood, 2010; Williams et al., 2016) responses to person-centred communication interventions. This is a relevant finding to highlight, as 62% of residents in Canadian LTC homes have dementia (CIHI, 2019) which places an individual at higher risk for social isolation. Thus, it is imperative that communication interventions developed for HCAs support knowledge enhancement, as well as boost confidence and willingness to utilize learned skills and engage residents with dementia in conversation (Williams et al., 2016).

Language-based communication strategies. The suggestive increase in observed use of language-based communication approaches also aligns with existing findings in the literature

(Caris-Verhallen et al., 2000; Gerritsen et al., 2018; Noordman et al., 2014; van Weert et al., 2011). Significant increases in the use of language-based techniques were seen across two of the three sub-categories of PCDC language-based skills (i.e. reciprocity and continuity). As internal consistency of the individual language-based sub-categories was low, it is possible that these items were not grouped adequately to reflect pre- and post-intervention variation. However, the overall increase in use of language-based statements complements previous empirical findings in this area of communication skills development.

Relational communication strategies. Enhancement of the use of relational statements and accommodations that support the VIPS principles of person-centred care (Table 3) were observed in other care settings (Embregts, 2002; James, et al., 2012; James, et al., 2016; van Weert et al., 2011; Zijlmans et al., 2011) and outcomes also suggested by this study. The increased use of person-centred statements and approaches by the HCAs in the study suggest that the VIPS principles of valuing the person with dementia, individualizing care, understanding the perspective of the person with dementia and providing a supportive social environment may be positively impacted by the PCDC intervention.

Of interest, 19% of the HCA statements in this study had overlapping use of relational *and* language-based PCDC strategies as defined by the coding scheme. One common example used ‘greeting’, a language-based strategy, combined with ‘recognition’ (e.g. Good morning, Mary!). Another example involved using an open-ended question (language-based strategy) to validate a resident’s feelings or state (e.g. How do your legs feel today?). This aligns with previous research that also found a portion of analyzed HCA statements (i.e. 29%) to contain both elements of PCDC (Savundranayagam & Moore-Nielsen, 2015). This enhances the

theoretical understanding of PCDC in that these two elemental components may be employed individually or synergistically to meet resident needs and engage them in meaningful conversation.

Empathic communication. Enhanced empathic communication was proposed via an overall increase in the use of validation communication strategies and qualitative comments suggesting an improved empathic understanding of and response to the residents' lived experiences. Specific examples of positive resident behaviours that suggested they felt understood by the HCA included: situation-appropriate emotional reactions and displays (e.g. singing, praying, tearfulness, calmness), increased participation in resident-focused conversation, increased willingness to cooperate with HCA requests and care, and acceptance/completion of independent or shared care tasks. Additionally, HCA reports of building trusting relationships with residents in this study are echoed by research findings within the medical services domain that also indicate effective empathic processes and communication by the care provider can help build trust and partnerships with clients/patients (Kim, Kaplowitz, & Johnston, 2004).

The positive impact of VF techniques on empathy-related responses of carers (i.e. perspective-taking) has been observed but superficially explored within VF-communication research (James et al., 2016; James et al, 2012; van Weert et al., 2011). As discussed above, the results of this study suggest that VF had a positive impact on perspective-taking, considered to be an advanced cognitive empathic process (Davis & Begovie, 2014). As empathy is believed to be a multidimensional concept consisting of cognitive as well as affective and behavioural elements (Devoldre et al., 2010), the impact of the VF intervention on person-centred communication in relation to these additional empathic pathways is currently unknown.

Patronizing speech. The decreased use of patronizing speech as an effective dementia communication strategy is supported by empirical research (Williams et al., 2009; Williams et al., 2016) and included as a provider-related outcome in the PC-CEM. Although this was not an intentional outcome measure of this study, qualitative indications of the reduction of elderspeak toward residents was also noted after exposure to the PCDC intervention.

Covariate influences. Interpretation of the quantitative findings in this study should additionally consider the covariates that may have influenced a change in the pre- to post-intervention scores. HCA variables (i.e. gender, level of education, current position, shift worked, number of shifts worked in the past two weeks, years worked as a HCA and in LTC, first language and country of birth) and resident factors (i.e. age, ISE score, type of dementia and amount of pre-video staff assistance) had significant between-subject, within-subject and/or interaction effects on certain communication and relational outcomes. Of note, the suggestive findings of the covariate analysis in this study appear to be a novel addition to the literature in the field of VF-communication interventional research. While the extant studies in this field gathered demographic information to describe study participants, there was no proffered analysis of care provider or resident/client individual characteristics to examine confounding effects on the outcomes of interest. One study (Coleman & Medvene, 2013) suggested that the education level and ethnicity of the care provider may have had an impact on the findings due to communication competency and comfort in speaking a non-native language; however, no further information or analysis was provided. Other studies (Hansebo & Kihlgren, 2001; Zijlmans et al., 2011) noted gender as a potential confounding factor on study outcomes but again the analyses did not account for this factor. Although this finding was not in alignment with this study, it has

been suggested that gender be tested as a potential confounding variable on outcomes that are relational or empathic in nature, as female care providers have been found to score higher than male care providers in these areas via emotional intelligence testing (Gerits, Derksen, & Verbruggen, 2004; Zijlmans et al., 2011).

In the absence of other corroborative findings in the literature, insights as to the potential impact of the additional HCA and resident covariates on the self-report and PCDC outcomes are offered. For example, a care providers' current position (i.e. full-time versus part-time) or primary shift worked (i.e. days or evenings) could influence any of the PCDC outcome measures as the full-time or day positions may offer more frequent opportunities to practice and use the new techniques compared to the latter. The amount of work experience as a HCA and time spent working within the LTC context could also affect a care provider's communication competency and confidence in conversing with residents with dementia, resulting in differences in use of PCDC skills. The potential impact of resident variables on the study outcomes can also be hypothesized. The resident factor that appeared to have the broadest covariate influence was the level of social engagement (i.e. ISE score). It could be suggested that the resident's level of and comfort with social engagement, could impact a care provider's opportunities and success with person-centred communication attempts over time. A resident's advancing age may reflect individual factors that could impact communication ability, such as the number and progression of chronic conditions. The resident's type of dementia may also impact communication skills and losses differently and impact verbal responses to PCDC approaches by staff. The amount of staff assistance required by the resident (i.e. 1-person versus 2-person assist) is also an important

consideration as the presence of a second carer during a care encounter increases the likelihood of provider-directed statements and conversation.

Lastly, previous interventional communication research has noted that certain staff factors, such as satisfaction, and organizational qualities can influence the likelihood of staff implementing new knowledge and skills (Williams et al., 2016). These factors were not included as covariates in this analysis and may have influenced uptake and use of learned PCDC skills.

Resident-related outcomes. Although the focus of this study was on HCA-related outcomes of intervention effectiveness, suggested evidence of enhanced communication and relational outcomes for residents as outlined in the PC-CEM also arose from the study.

Relational outcomes. Comments from the HCA participants suggested that the application of PCDC approaches may have resulted in aspects of enhanced psychological well-being and improved quality of life for residents in the study. HCAs demonstrated and shared examples of meaningful moments of emotional and personal connection with residents (e.g. singing, praying, and exchanging related life experiences) resulting in an overall improvement of the resident's mood and response. These meaningful interactions support a person-centred dementia care approach that situates a person's life and experiences within a context of relationships and interconnectedness with others (Alsawy, et al., 2017; Brooker, 2007; Cross & Kennedy, 2011; Kitwood, 1997).

Communication outcomes. While the increase in number of resident statements pre-to post-intervention did not reach significance, qualitative findings suggested that the employed PCDC approaches by HCAs increased resident opportunities for and participation in conversation. This outcome is essential to fostering a person-centred approach, as enhanced

two-way communication promotes a supportive social environment where the individual with dementia is encouraged to utilize their communication abilities and engage in meaningful relationships (Brooker, 2007; Kitwood, 1997). Increased resident opportunities for conversation is also integral to the communication enhancement cycle as through improved communication and mutual participation in conversation, individualized care and communication interventions can be developed and implemented (Lanzi et al., 2017; Ryan et al., 1995).

System-level outcomes. Study findings indicated positive outcomes in relation to system-level outcomes as outlined in the PC-CEM. These included the transfer of person-centred principles into daily care/practice and creation and maintenance of a positive communication climate.

Transfer of person-centred principles into daily practice. As described previously, study findings proposed that the HCAs' awareness of person-centred principles and reflection upon their own methods of communicating to residents in comparison to PCDC approaches increased over the course of the study. This awareness-raising and self-reflection then appeared to prompt outward improvements in PCDC behaviour. This finding corresponds to previous studies that applied VF in the context of clients with intellectual disabilities (James et al., 2016; James et al., 2012). As suggested in the person-centred culture change literature, facilitation of outward person-centred behaviour requires a turning inward to reflect upon personal beliefs and values about one's caregiving philosophy (Nolan et al., 2008; Viau-Guay, 2013). In addition to education, it is believed that culture transformation strategies must also include a values-based approach in which healthcare providers have an opportunity to reflect and act upon their current beliefs and values about care provision (Viau-Guay et al., 2013). These study findings suggest

that the addition of VF to a person-centred communication intervention may have facilitated the self-reflective depth of one's own beliefs, values and experiences required to facilitate deep knowledge transfer (Williams & Gallinat, 2011) and behaviour change (Mann et al., 2009).

Promotion and maintenance of a positive communication climate. It is theorized that the creation and maintenance of a communication climate that is empowering (Ryan et al., 1995) and promotes positive interpersonal and intergroup interactions (Coupland et al., 1988) is a macro-level outcome of an enhanced communication model. Qualitative findings from this study point towards a positive influence on the communication culture within the LTC home. From the nursing leadership perspective, this translated into a subtle but overall relaxed communication approach and interactions between staff and residents. In respect to sustainability of the PCDC learnings and concepts, mentoring and support of their non-participating peers and expanded use of PCDC approaches with other residents were means described by the HCAs to promote the integration and spread of the intervention. HCA participants also noted that the method and format of the VF intervention promoted sustained learning and memory of the PCDC concepts. These findings correspond to previous research that suggests educational interventions are more effective and sustainable if they are combined with additional supportive measures such as feedback mechanisms, self-monitoring (Eggenberger et al., 2013) and mentoring (Vasse et al., 2010).

Intervention Acceptability and Feasibility

Acceptability. Feedback from the HCA participants indicated they were highly satisfied with the PCDC intervention overall. Specific aspects of the educational and VF components were also rated positively citing the benefits of learning new communication strategies, having

opportunities to practice in a safe setting, seeing and hearing oneself on video, and receiving meaningful feedback. Comparable to previous reports in the VF literature (Coleman & Medvene, 2013; Gerritsen et al, 2018; Strathie et al., 2011), some participants expressed initial discomfort and hesitancy at the prospect of being video-recorded due to feelings of self-consciousness, nervousness or unfamiliarity with the process. However, once they had engaged in the VF activities, the benefits of the intervention and learning reportedly outweighed the temporary discomfort felt in relation to the video-recording aspect. This is in alignment with care providers' responses in respect to VF approaches reported elsewhere (Embregts, 2002; Damen et al., 2011; Hansebo & Kilhgren, 2001; James et al., 2012; Lobchuk et al., 2016, 2018; Noordman et al., 2014; van Vonderen et al., 2012; van Vonderen et al., 2010). Qualitative findings also supported previous claims that, although care providers may be somewhat cognisant of the presence of the video-recording during care, this awareness did not influence their typical work or interaction with the resident (Caris-Verhallen et al., 1999; Themessl-Huber et al., 2008).

Lastly from the perspective of the resident partners, there were no expressed or observed concerns in relation to the use of video in this study. This is a valuable finding, as it has been previously suggested that the presence of a videographer/video equipment may cause stress or an anxiety response in individuals with dementia (Vanclay, Baines, & Taylor, 2013).

Feasibility. Systematic review findings from the field of implementation science suggest that effective staff intervention planning and design should encompass four principles: 1) barrier identification; 2) linkage of barriers to selection of the intervention components; 3) ground the intervention in theory and; 4) seek input from users as to feasibility and acceptability

of the intervention (Colquhoun et al., 2017). As such, some challenges to broader implementation of the PCDC intervention were observed during the study and elicited from the HCAs and nursing leadership. Feedback was also provided as to potential facilitators that could be employed to counter the barriers.

Provider-related considerations. The most significant provider-centric challenge encountered was the engagement of HCAs to participate in the PCDC intervention. Much persistence and presence at the research site was necessary to gain the trust of staff during the recruitment phase of the study. Despite these efforts, it was not possible to recruit larger numbers of HCAs in this pilot study. This was in relation to a small sampling base (i.e. one moderate-sized PCH with approximately 60 HCAs meeting the study inclusion criteria) and reluctance of staff to be video-recorded. Reasons for apprehension pertaining to the video aspect of the intervention were similar to previous reports in the literature: anxiety and fear (Lindon-Morris & Laidlaw, 2014); concerns about confidentiality of the videos and who would view them (Colemen & Medvene, 2013); concern that the video would be used for performance evaluation (Broyles et al., 2008); and the belief of seeing themselves on video would be too uncomfortable (Noordman et al., 2014).

In respect to facilitators to overcome this barrier, the study findings concur with existing strategies outlined in the literature to increase the acceptance and use of VF, such as discussing benefits of VF in advance (Finlay et al., 2008; Lindon-Morris & Laidlaw, 2014), communicating and adhering to strict confidentiality procedures (Finlay et al., 2008), and ensuring feedback is offered in a respectful manner (Fukkink et al., 2011; James et al, 2012; van Vonderen et al., 2010). Furthermore, based on their experiences in the study, HCA participants and nursing

leadership confirmed additional facilitators to effectively address staff apprehension of VF that have not been reported elsewhere:

- Engage informal leaders (i.e. peer and union leaders) in the initial discussions and preparations around the VF initiative;
- Acknowledge the feelings of discomfort, vulnerability and other emotions (potential) participants may experience in response to the video-recording component as a normal reaction;
- Embody a caring, non-judgmental and non-threatening approach to help establish a trusting relationship throughout the duration of the initiative;
- Anticipate possible negative reactions and self-criticism in response to participants viewing their video and be prepared to reassure and offer a supportive response; and
- Build on past successes and maximize opportunities for peer support by encouraging staff to share their own experiences with VF with the intent to inspire others to participate.

The HCA participants also offered suggestions to modify the training structure and approach to help facilitate participation and ease discomfort with the video component. Recommendations included showing a sample video during recruitment, having staff attend the education session first to generate interest in PCDC approaches and the value of VF, and recording an initial practice video with a peer before recording with a resident. These modifications promote an acclimation approach to the video aspect of the intervention supported by previous research (Coleman & Medvene, 2013).

LTC contextual considerations. Contextual challenges to implementation within the LTC environment are also important aspects to consider from a feasibility perspective. One

barrier raised involved navigating time pressures within the LTC working environment. Although the intent of the intervention was to facilitate a time-efficient approach of utilizing relational, person-centred communication during task-based care activities (Aubry et al., 2013; Vass et al., 2010), it is important to acknowledge the new learning and need for an initial adjustment period where staff can practice inclusion of PCDC approaches into daily conversation with residents (Chamberlain et al., 2016).

Time pressures and lack of internal facilitation resources were also challenges raised from the nursing leadership perspective in respect to the delivery of a PCDC intervention of this nature. These reported barriers to quality education efforts are not uncommon in the LTC setting (Aubry et al., 2013) and are often related to the lack of funded LTC educator positions, the volume of annual education mandated by regulatory bodies, and staff/management time constraints. Strategies to address time and resource challenges and increase feasibility were proposed by study participants and included utilization of an external facilitator and/or an internal peer-led model of education/intervention delivery. The concept of a HCA peer leadership approach is supported by previous empirical research as a strategy to facilitate the adoption and sustainability of new evidence-based care practices in LTC settings (Slaughter et al., 2017). To facilitate sustainability, it was also suggested to include PCDC as a topic within annual education 'refresher' efforts that would include offering staff a shorter, concise version of the information.

Lastly, a contextual barrier to fulsome implementation of PCDC approaches within the LTC setting pertained to the challenge of maintaining consistent approaches between staff members and other departments in the care home. If not all staff members are utilizing PCDC

approaches with residents, care provision can become challenging due to misalignment of care philosophy and communication methods between individual providers. This is a documented barrier to person-centred culture change that has been noted even in LTC facilities that have been successful in implementing and sustaining person-centred care efforts (Engle et al., 2017). This challenge could also be addressed via the training/intervention modifications and alternative delivery strategies identified above to promote intervention acceptability and increase staff exposure.

Study Limitations

Causality of the effects of the PCDC intervention cannot be established within the employed study design and sampling approach. The use of a small convenience sample from one LTC home poses limitations to generalizability of findings to other LTC settings. As well, the inclusion of residents with mild to moderate dementia limits generalizability to individuals with more advanced dementia and those without cognitive impairment. Excluding HCAs that solely worked causal or night shift would also impact generalizability to these staff groups. Additionally, although perceived reasons for declining participation in the study were qualitatively gathered via the study participants, limited information was collected relative to the individual HCAs that refused to participate. It would be useful to better understand non-participant characteristics and rationale to inform strategies to enhance acceptance and participation in future PCDC intervention studies.

In relation to methodological considerations, the researcher’s role as interventionist and data collector may have introduced possible demand characteristics during the post-intervention data collection. However, mitigation strategies to minimize potential influence on participant

responses included maintenance of a neutral but supportive attitude and approach during the intervention and data collection activities and refrainment of any cuing/reminding of communication strategies prior to the video recording.

In respect to HCA communication outcomes, overlapping of language-based and person-centred elements within some statements was observed. This did not adversely affect the analysis of the impact of the intervention on these two dimensions of PCDC. Based on the established coding template and approach, it was acceptable to capture two separate codes within one statement. Both codes were counted within their respective categories and the totals used to assess the impact of the intervention on language-based and person-centred communication outcomes. As the data suggests, the PCDC intervention had an impact on language-based and relational components of PCDC, both separately and when combined as an overall total.

Additionally, as the quantitative analysis was largely focused on the specific language-based and person-centred elements of PCDC, other forms of communication analysis such as behavioral, paralinguistic, emotional tone and content analysis of the dialogue (Williams et al., 2018) was not undertaken in this study. Thus, impact of the PCDC intervention on these areas of HCA communication behaviour is unknown.

Statistical limitations are also noted in relation to the small sample size. Due to the use of a significance level of $p < 0.1$ for the quantitative analysis, the significant pre-/post-intervention changes in outcomes seen in this study should be considered suggestive or trend findings. As a result of the small sample size and large number of covariates and tests included in the regression analysis, the chance of realizing significant results due to chance is increased. The covariate analysis was an important aspect of the investigation, as this has not been addressed in previous

VF empirical work; however, it is recommended that the identified covariates from this study should be further examined within a larger sample to better understand their potential synergistic influences on PCDC outcomes.

Despite these limitations, the study achieved its purpose to pilot test the effectiveness and feasibility of the PCDC intervention in one LTC context involving residents with dementia and to generate baseline information to inform a larger trial. Findings suggest the PCDC intervention upholds a 'promise' of positive influence on HCA and resident outcomes which warrants further investigation of its effectiveness and feasibility enablers. The study offers a unique contribution to the literature in the areas of person-centred dementia care/communication and the novel use of VF as a mechanism to influence care aides' PCDC behaviour change in the LTC/dementia care setting.

Future Implications

A multitude of implications for nursing arise from this study in the areas of practice, education, research, theoretical and policy development. Opportunities for advancement of knowledge and application in these areas are explored below.

Practice implications. Although this study intentionally focused on person-centred communication strategies for residents with dementia, many aspects of this person-centred communication model, in particular the relational elements could be applied more broadly to all residents or individuals in care. As person-centred communication approaches have the potential to weave person-centred principles into the fabric of everyday practice and enhance outcomes on a global basis within a care setting, these concepts are an important consideration in the design of person-centred workforce skill development initiatives. As indicated by the nursing leadership

team, education and awareness-raising around person-centred communication could act as a catalyst in which to initially generate interest and engage staff in person-centred approaches and values. From this introductory platform, a broader person-centred culture transformation initiative could be launched within a care or service environment.

Effective translation of knowledge to practice requires attention to staff and organizational factors, and application of these initiatives should also align with evidence-based dissemination and implementation principles (Colquhoun, et al., 2017; Williams et al., 2016). As an example, leadership and HCA participants noted that efforts to move person-centred principles and approaches into daily practice requires the support of the organization's leadership, as well as formal and informal peer leaders such as union/labour representatives and other staff with visible roles in the workplace community. Additionally, comments from HCA participants indicated that peer support and encouragement was a key facilitator to promote spread of PCDC approaches and knowledge to their colleagues. To support consistency and sustainability of transferring PCDC learning into practice, findings from this study suggest that a peer-led and role modeling approach may be an effective implementation strategy.

Education implications. From an educational perspective, consideration of specific workforce characteristics is necessary to support successful PCDC interventions and integration of these communication approaches into HCA practice. As a significant portion of HCAs working in LTC originate from other countries and do not speak English as their first language (Estabrooks et al., 2015), these are important factors to consider in the development and implementation of education and video feedback interventions. Therefore, content pertaining to potential communication issues with residents due to language barriers, speech

accents/intonations and cultural influences should be included in education interventions. Additionally, sensitivity to communication challenges due to cultural or language differences is an important consideration when facilitating video feedback sessions to promote a positive, self-affirming learning experience. As HCAs working in LTC are often exposed to many other educational topics throughout a year, sustainability of PCDC approaches could be supported by conducting an annual refresher of PCDC competencies, potentially via a peer-led VF process as suggested by the study participants.

The use of VF as a learning technique has unique educational implications for this integral group of care providers. The potential for VF approaches to enhance self-reflection in HCAs is a significant consideration in respect to staff knowledge development and behaviour change. While many health and social services professions have utilized VF as a learning methodology, this approach is not typically employed in entry-level or workforce education for HCAs. Self-reflection is a process theoretically posited to stimulate self-evaluation with resultant enhancements of cognitive and behavioural performance, as well as heightened self-responsibility (Gerace et al. 2017). While some individuals may be more intrinsically motivated to undertake self-reflection, others may not be as naturally inclined or have had the opportunity to learn self-reflective techniques. Providing this learning opportunity to HCAs working in LTC may provide a means to bolster the impact and sustainability of traditional learning techniques. Additionally, increasing self-reflective practice within HCAs may also have a positive effect on resident safety. Research suggests that engaging health care providers in self-reflective learning activities may result in a broader awareness of varied patient safety issues, as well as the need to promote safety for the individuals in their care (Langlois, 2016). As LTC residents have the

potential to be impacted by a variety of safety concerns, (e.g. falls, healthcare-associated infections, responsive behaviours from co-residents, etc.), it is essential that the care providers who are closest to and spend the most time with the residents are safety-aware and feel empowered to act to protect residents.

Future educational opportunities include expansion of the use of VF learning approaches into additional topics and areas of development and training of current HCAs in the LTC workforce, such as safe lifts and transfers and body mechanics. For new staff entering the workforce, HCA certification programs could potentially incorporate VF strategies into existing curricula to promote early-career skill development in person-centred care and communication and self-reflective learning.

Research implications. Future research design implications include conducting additional testing of the PCDC intervention within a larger study using a multi-site design with a comparative group. To further understand the added value of VF, a multi-arm trial or a repeated measures design with measurements taken at baseline, between the education session and VF session, and post-intervention would offer an additional perspective on effectiveness and relevance of the individual intervention components. To gauge sustainability of the intervention's effect, additional repeated measures could be observed at 3-6 months post-intervention.

Research opportunities also present in relation to refining measurement of PCDC and VF outcomes. Based on the findings of this study, further exploration of reliable self-report and observational measures of relationship closeness and satisfaction outcomes is warranted.

Additionally, as self-reflection of feelings and actions at work is an outcome of interest in respect to VF approaches, additional measures to assess this construct more fulsomely are indicated.

Study findings also point towards opportunities to further develop and hone coding and identification of the language-based and relational elements of PCDC. To illustrate, as guided by the study research questions the initial intent of the PCDC video data analysis was to examine if a change was realized in the number of person-centred statements, language-based statements and total PCDC statements overall. However, as coding of the care interactions progressed, certain trends arose from the data that appeared to be important factors to consider in the analysis of the conversations. For example, the number of HCA and resident statements appeared to increase pre- to post-intervention; therefore, these outcome variables were included in the analysis to determine if there was a change in the volume of statements elicited from both conversation partners. Also, it became apparent that HCAs were not only using many of the individual language-based skills more frequently but also demonstrating use of a broader range of strategies within the three different categories (i.e. reciprocity, clarity, and continuity). Thus, both the number of statements and the number of categories used in each of these three language-based areas was incorporated into the analysis. Lastly, the number of uncategorized statements became a variable of interest as it may indicate how efficiently and effectively the HCAs were utilizing their communication skills while maximizing communication opportunities.

Thus, as there were several PCDC outcome measures included in the final analysis, an opportunity presents to refine and clarify the most relevant PCDC outcomes as identified via the coding tool. Internal consistency testing did not support categorization of the language-based skills into the three categories; thus, this aspect of coding may be less important from a research

perspective but more so to inform intervention or education approaches and provide feedback to staff as to what areas could benefit from further development. As such, reporting of outcomes in the research context could focus on the person-centred and language-based elements (separate and overall total), as well as changes in the number of uncategorized statements. An opportunity also exists to expand the coding tool to incorporate the qualitative elements of PCDC observed in the analysis of each dyad's pre-/post-intervention videos (e.g. directness of statements, resident-centric topics of discussion, balanced conversation, non-verbal responses/actions, etc.) that was not captured by the tool. To facilitate use of the PCDC coding approach in a clinical or educational setting, a web-based application could be developed for use on a mobile device or laptop to streamline coding of the conversations.

Theoretical implications. As the theoretical grounding of PCDC is in its formative stages, future research opportunities in this facet are also inspired by this pilot study. The PC-CEM (Figure 3) provided the theoretical foundation for this study and intervention development and is based on person-centred care (PCCare) and PCCommunication theory and empirical literature to date; however, there is an opportunity to further test and refine current antecedents, explore new linkages within the model, and investigate outcomes delineated in the model but not addressed in this study, as well as additional outcomes.

Current antecedents. According to the PC-CEM, a PCCommunication intervention is informed by PCCare principles and empathic dimensions, and incorporates knowledge and skill development, values-based learning and transformation strategies (including self-reflection, perspective-taking and VF) and ongoing support mechanisms. Building on previous research in this field, these study findings support an opportunity to further investigate the relationship

between PCCommunication and empathy. Specifically, more information is needed as to how the process of perspective-taking and other empathic mediators is influenced through care providers' exposure to PCDC interventions and the impact this has on the communication cycle and relationship development with individuals in their care. Additionally, an opportunity exists to test mechanisms of ongoing support and sustainability for PCDC learning and behaviour change including the potential effectiveness of a peer-led implementation and support model.

New linkages. Self-reflection and perspective-taking learning techniques are noted in the PC-CEM as essential elements to inform a PCCommunication intervention and were incorporated into the study's PCDC intervention. Increased self-reflection is also noted as a care provider relational outcome in the model and was a suggestive finding in this study. Thus, it is possible that self-reflection and perspective-taking ability may offer a foundation for PCCommunication approaches, a linkage throughout the stages of the model's communication cycle, and ultimately an outcome of enhanced understanding of the resident's situation and impact of their actions on the resident. Further exploration of these linkages within the model is needed to strengthen understanding of the impact of self-reflection and perspective-taking on PCCommunication processes and outcomes.

Additional aspects of communication not currently addressed in the model but deemed to be important considerations in dementia care are paralingual (e.g. intonation, volume and speed of speech) and non-verbal (e.g. eye contact, body posture) communication approaches. Further research is needed to determine what role (i.e. antecedent, mediator, outcome or combined influence) paralingual and non-verbal communication has within the PC-CEM.

Outcomes. There is also an opportunity to expand study of the impact of the PCDC intervention on care provider, resident and system outcomes included in the PC-CEM but not fulsomely addressed in this research. Suggestions for additional system-level outcomes also arose from this study.

Care provider. In addition to the empathy-related processes and constructs outlined above, care provider outcomes in the PC-CEM that warrant investigation within the context of PCDC include: emotional responses and displays towards the resident, the use of patronizing speech/elderspeak, and satisfaction with work.

Resident. As this study focused on HCA outcomes, resident-related outcomes in response to PCDC approaches also deserve attention. In future research, it would be beneficial to further explore the quantity and quality/content of the resident's verbal statements and non-verbal reactions, as well as quality of life indicators in response to PCDC approaches by staff. Future empirical work could also expand study to additional resident populations such as individuals with advanced levels of dementia.

System. System outcomes and assessment of the environmental impact of PCDC approaches is yet another area that could benefit from future research. The factors that foster or hinder sustainability of PCDC approaches would offer additional knowledge in this field of study. Additional areas relating to workplace health and system cost-drivers, such as sick time use and staff recruitment/retention currently not noted as outcomes in the PC-CEM, could also be evaluated as to potential impact at the system level.

Policy implications. The final nursing implication of this study pertains to policy and procedure development. As VF is a novel learning approach in the LTC setting, it is clear that

appropriate policies and procedures relative to the use of video involving staff and residents need to be developed to support its ongoing use. These documents and approaches should be formulated within the context of applicable privacy legislation and human resource guidelines.

Conclusions

This pilot study demonstrated that the PCDC intervention shows promise as an effective and acceptable means to promote PCDC behaviour in HCAs working in long-term care when communicating with residents with mild to moderate dementia. Within the LTC setting, administrators, clinicians and educators strive to find meaningful education approaches that stimulate desired behaviour change in staff. Often knowledge is imparted through various education or audit-feedback techniques which do not result in a desired outward change in behaviour. It was hypothesized that VF could provide a mechanism to create PCDC behaviour change through its ability to stimulate reflective learning and create an opportunity to examine personal values and care philosophy. The findings from this study suggest that the PCDC intervention with a VF component was able to foster an increased awareness of person-centred communication approaches within the HCA participants. This elevated awareness and knowledge appeared to stimulate an internal process of reflection upon current practices and beliefs which lead to a positive change in outward communication behaviour. Facilitating this shift from ‘thinking’ to ‘doing’ is the desired goal of education efforts within a workplace setting but is often difficult to achieve using traditional training approaches. Additionally, this study contributed to the VF literature pertaining to feasibility as additional facilitators were identified to promote the acceptance and growth of VF as an educational method. Thus, based on the outcomes of this pilot study, the communication intervention with a VF component shows

promise as an effective, acceptable approach to enhance PCDC behaviours in HCAs. These results support undertaking a larger study to assess intervention effectiveness and feasibility enablers more fulsomely in the context of LTC and dementia care.

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Appendix A - Matrix of Person-Centred Care Theoretical Perspectives

Author(s) Date Location	Theoretical Perspective	Disciplinary Lens	Assumptions/ Key Elements	Outcomes	Contributions to Study of PCComm	Limitations/ Gaps
Buber, M. ***I and Thou*** **1923 (original translation)** **1958** **(second edition)** **2000 (reprint)** **Austria**	Buberian Social Existentialist Philosophy	Philosophy; theology	• No *I* or singular person as humans are always in relation to the world and others • Two forms of relations with others: I-It and I-Thou • I-It implies objectification; I-Thou involves investment and investment in the other as a whole person	• Pathway to realize meaningful relationships with others	• Hypothesized connection: I-Thou relationship needs to be present between providers-persons to optimize interactions and quality relational and emotional care	• Only refers to mature and ideal relationships and does not address adversity or unwillingness • Describes I-It and I-Thou as mutually exclusive and at opposite ends of a continuum

Author(s) Date Location	Theoretical Perspective	Disciplinary Lens	Assumptions/ Key Elements	Outcomes	Contributions to Study of PCComm	Limitations/ Gaps
Kitwood, T. **1992; 1993 (early works) 1997 (book)** **UK**	Person-Centred Dementia Care philosophy	Psychology	• Preservation of personhood in dementia; at risk for loss of personhood due to biomedical perspective • Recognition and respect for personhood occurs within the context of social relationships (link to Buber's I-Thou relationship) • Malignant social psychology – actions and attitudes of others that undermine personhood • Positive person work - affirming interactions that promote personhood	• Individual: enhanced well-being and addressed psychosocial and relational needs in addition to physical ones • Care providers: valued and respected as people with unique needs and feelings; also benefit from fulsome relationships • System: transformation away from a disease-oriented culture of care	• Linkage of 5 affirming interactions (recognition, negotiation, Facilitation and validation/ collaboration to PCComm (Ryan et al., 2005)	• PCCare complex concept to operationalize; philosophy does not provide enough direction to implement • Methods of research in development of theory not well articulated • Interpretation of effects of malignant social psychology focused on the individual and does not transfer to broader social influences

Author(s) Date Location	Theoretical Perspective	Disciplinary Lens	Assumptions/ Key Elements	Outcomes	Contributions to Study of PCComm	Limitations/ Gaps
Brooker, D. **2004; 2007** **UK** **Rosvik et al.** **2011** **Norway**	VIPS Framework VIPS Practice Model (VPM)	Psychology Not stated	VIPS offers additional conceptual clarification of Kitwood's PCCare: **V**alue the person, **I**ndividualized approach, **P**erspective of the person with dementia and **S**upportive social environment VPM: set of 24 indicators structured around the VIPS elements outline concrete items to define and benchmark PC dementia care (?outcomes); incorporates implementation and KT considerations	• Individual: VIPS approach would result in improved care and services • Staff: support daily application of PCCare in a practical sense • System: build implementation support for cultural PCCare transformation	• Indicators within the supportive social psychology domain apply to PCComm • VIPS elements has been used as a basis to develop a PCComm intervention for HCAs in LTC (Passalacqua, 2012)	• Not tested outside of Norway (large differences in accommodation and staff ratio (i.e. smaller communities of 20-25 residents, specialized dementia care areas, higher ratio of professional: non-professional staff, i.e. 88/12 split • Acceptability only reported for nurses, not HCAs (Rosvik et al., 2011); implementation model positions nurses with a great deal of supervisory and coordination responsibility

Author(s) Date Location	Theoretical Perspective	Disciplinary Lens	Assumptions/ Key Elements	Outcomes	Contributions to Study of PCComm	Limitations/ Gaps
McCormack & McCance **2006** **UK**	Person-Centred Nursing Framework	Nursing	• Theoretical linkage between caring and person-centred nursing practice (developed from two independent conceptual frameworks) • Comprised of four constructs: pre-requisites; care environment; person-centred processes; expected outcomes • Ordered relationship between constructs – must achieve outer layers to achieve outcomes in the centre of the framework • Applicable to all care settings and domains	• Individual: satisfaction with care, involvement with care, feeling of well-being • Staff and system/ organization: creating a therapeutic culture	• Link between HCP competence/ pre-requisites to interpersonal skills • Delivery of direct care a 'way in' to develop meaningful relationships with individuals	• Too focused on the person-provider relationship without consideration of the broader care/living environment • Not specified as to how the ordering of achievement of the constructs was determined. Is this the correct order? Or is ordering applicable and instead the constructs have a symbiotic relationship?

Author(s) Date Location	Theoretical Perspective	Disciplinary Lens	Assumptions/ Key Elements	Outcomes	Contributions to Study of PCComm	Limitations/ Gaps
Nolan et al. **2006** **UK**	Senses Framework	Nursing	• Emphasizes relationship-focused care or the impact of experiences of all participants, not only the person-provider • 6 senses (security, continuity, belonging, purpose, achievement, significance) • To achieve high quality care, all individuals must experience relationships that promote these senses	• No explicit outcomes • Framework has been used to examine key care and service outcomes and how to create positive relationships	• Could the senses be used as a structure to evaluate relational aspects of PCComm?	• Lack of practical guidance as to actualization of each of the senses • Not specifically used in communication studies to date in this current format (exception: Caring Conversations Model based on the Senses Framework)

Author(s) Date Location	Theoretical Perspective	Disciplinary Lens	Assumptions/ Key Elements	Outcomes	Contributions to Study of PCComm	Limitations/ Gaps
O'Connell et al. **2008** **Australia**	Tri-Focal Model of Care	Nursing	• Emphasis on partnership-centred care (res/families, staff, service providers and students) • Three components: partnership-centred care, positive work environment and evidence-informed practice for LTC • Teaching nursing home concept fosters an effective learning and working environment	• Residents: improved quality of life and care (empowerment, knowing the resident, enhanced communication • Staff: enhanced communication improved work satisfaction, increased skills in evidence-based care, desire for further professional development	• General relevance to the enhancement of interaction between residents-staff	• Only preliminary testing results available • Long-terms effects and sustainability not known • Insufficient theoretical detail to support a PCComm study

Author(s) Date Location	Theoretical Perspective	Disciplinary Lens	Assumptions/ Key Elements	Outcomes	Contributions to Study of PCComm	Limitations/ Gaps
McGilton et al. **2012** **Canada**	Person-Centred Framework in LTC	Nursing	• Structures: nurse competences that include leadership qualities (supervision, mentoring, communication, facilitation) • Processes: REAP (relate well, environmental manipulation, abilities-focused care, personhood)	• Resident: identification of met needs, reduction in responsive behaviours, creation of meaningful moments, enhancement of relationships • Staff: increased meaningful relationships, effective RN-HCA relations, increased work satisfaction	• Acknowledges nurse leadership roles in promoting PCCare • Enhancement of relationships and interactions • Use of REAP model to develop a PCComm workshop	• No testing or use within the empirical literature • Developed solely by nurses for the nursing context; focus on RNs - ? applicability to LPNs and HCAs • Lacks attention to impact of the broader workplace environment

Appendix B - Matrix of Dementia Communication Reviews

Author/Date/ Country	Topic of Interest/ Purpose	Review Methodology/ Search Strategy/ Date Range	Inclusion/ Exclusion Criteria	Sample/N (articles)	Key Findings	Comments/ Critique Relevance
Levy-Storms **2007** **United States**	To critique experimental research and to recommend further directions for research interventions on nursing aides' therapeutic communication with older adults who have cognitive impairment and/or dementia in LTC settings	No formalized review protocol stated Database search: PsychINFO, PubMed, CINAHL, Ageline Dates: Jan 1999-Dec 2006	<u>Inclusion:</u> experimentally-based studies with some type of control; subjects included LTC aides; intervention addressed therapeutic communication <u>Exclusion:</u> not explicitly stated	13 studies (7 RCTs; 6 quasi-experimental)	Paucity of experimental studies on training care aides to communicate with LTC residents Lack of theoretical framework in communication studies to date Evidence for the following communication strategies: <u>Verbal</u>: increase in positive statements, one-step instructions, open-ended questions, information topics, validation, agreement, sensory topics <u>Non-verbal:</u> eye contact, touch, smiling	<u>Adds:</u> Evidence to support some linguistic (verbal, non-verbal) aspects of care aides' dementia communication skills Recommendations to improve therapeutic communication interventions: include psychosocial approaches and use of 'real-world' training with feedback from supervisors Recommend use of conceptual model to structure communication education One VF study included in the review (Caris-Verhallen et al., 2000) <u>Critique/Limitations:</u> Does not address relational/person-centred aspects of communication

Author/Date/ Country	Topic of Interest/ Purpose	Review Methodology/ Search Strategy/ Date Range	Inclusion/ Exclusion Criteria	Sample/N (articles)	Key Findings	Comments/ Critique Relevance
McGilton, Boscart, Fox, Sidani, Rochon & Sorin-Peters **2009** **Canada**	To describe the theoretical grounding, components, duration, mode of delivery and outcomes of communication interventions for HCPs in LTC	Cochrane approach to systematic reviews Database search: EBM Reviews, Cochrane Library, PsychINFO, PubMed, CINAHL, MEDLINE, EMBASE; Hand search Dates: Jan 1985 – Dec 2007	Inclusion: primary research, evaluated a HCP communication intervention; HCP outcomes; institutional setting; published in English Exclusion: intervention with specific focus on communication outcomes, post-test only outcomes; aimed to enhance communication between HCP and family dyads	6 studies (3 RCTs; 3 quasi-experimental)	Only half of the studies used a theoretical grounding Most commonly used components of communication intervention were: 1) Cognitive (teaching about communication) 2) Behavioural – opportunity to practice the new skills/behaviour 3) Psychological – ongoing support and encouragement Multiple educational modes utilized; need controlled studies to assess the effectiveness of individual components of an intervention Both resident and staff outcomes assessed: Staff: positive change in HCP communication behaviour, skills and knowledge (positive statements, information-giving, open-ended questions, more involved, warmer, less patronizing) Residents: increase in responsiveness and eye contact with HCP, decrease anger and agitation	Adds: A framework to consider/identify the components of a communication intervention Support for the use of feedback mechanisms to address the psychological aspects of an intervention All studies were conducted in the LTC setting; 4 studies involved residents with dementia One VF study included in the review (Caris-Verhallen et al., 2000) Critique/Limitations: Does not address relational/person-centred aspects of communication Narrative account only due to diverse interventions and measurement approaches

Author/Date/ Country	Topic of Interest/ Purpose	Review Methodology/ Search Strategy/ Date Range	Inclusion/ Exclusion Criteria	Sample/N (articles)	Key Findings	Comments/ Critique Relevance
Egan, Berube, Racine, Leonard, & Rochon **2010** **Canada**	To investigate the effectiveness of methods to improve the verbal communication of individuals with Alzheimer's disease (AD) with their formal or informal caregivers Outcome of interest: verbal communication behaviour of the person with dementia	No formalized review protocol used Database search: PsychINFO, CINAHL, EMBASE, MEDLINE, REHABDATA, COMDIS Dates: Up to June 2009 Effect sizes calculated using Cohen's d Strength of Recommendation Taxonomy (SORT) used to summarize recommendations	All experimental studies Inclusion: experimentally-based; quantitative results; intervention specifically designed to improve verbal communication; at least 50% individuals sampled have AD Exclusion: published in a language other than English or French; communication outcomes exclusively directed at the caregiver	13 studies (4 RCTs; 9 quasi-experimental)	Three types of interventions found and analyzed: 1) Memory books with caregiver training: Rating strength - B Improved topic maintenance (time on topic, words per topic and fewer topic changes) but did not encourage generalization to other conversation topics 2) Education and training for the communication partner: Rating strength - C No firm evidence of effect 3) Activity-based programming: Walking and talking intervention not supported by evidence Breakfast-based activity club: Rating strength - B	Adds: Expands systematic reviews to date in that it also included informal as well as formal caregivers across community and residential settings Critique/Limitations: Outcomes and some interventions focused on communication behaviour of person with dementia, not staff Difficult to determine in some included studies if person had a diagnosis of dementia; had to refer to MMSE scores in some instances Mention of *a prior* determination of effect sizes but ES could not be calculated due to data presentation limitations Differences across community and LTC settings not discussed No studies included on VF Does not address relational/person-centred aspects of communication

Author/Date/ Country	Topic of Interest/ Purpose	Review Methodology/ Search Strategy/ Date Range	Inclusion/ Exclusion Criteria	Sample/N (articles)	Key Findings	Comments/ Critique Relevance
Vasse, Vernooij-Dassen, Spijker, Rikkert, & Koopmans **2010** **The Netherlands**	To study the effects of non-pharmalogical interventions in LTC homes on: 1) communication between residents and staff, and 2) neuropsychiatric symptoms of residents with dementia	Data pooled and subjected to meta-analysis using Cochrane Collaboration Group's Review Manager Database search: PubMed, PsychINFO, Web of Science, Cochrane Library; hand search Dates: 1980 – Feb 2007	Inclusion: randomized or non-randomized experimental control trial; caregivers/people with dementia in LTC; intervention aimed at improving communication skills of participants; at least one outcome to address communication performance Exclusion: not explicitly stated	19 intervention studies (9 RCTs and 10 quasi-experimental CT)	Two categories of interventions identified: 1) Structured and communicative sessions at *set-times* for residents (e.g. walking program, life review program, etc.) - meta-analysis found no significant effects for communication or neuropsychiatric symptoms - positive effects shown in individual studies when interventions were single-task sessions, i.e. life review, 1:1 conversations 2) Communication techniques in activities of *daily care* enacted by staff (e.g. training programs to improve HCP communication) - positive effects on verbal and non-verbal HCP communication (i.e. interactive behaviours, nurse-resident cooperation, maintenance of communication skills) - positive effects for residents (i.e. affect and interactive behaviour) - marginal effect on neuropsychiatric symptoms Many communication training programs were multi-faceted	Adds: Further support for training programs to enhance HCPs verbal and non-verbal dementia communication Support for embedding communication strategies in daily care activities Conducted in LTC in relation to HCPs and individuals with dementia Strong statistical analysis Critique/Limitations: Examined outcomes more so in relation to *quantity* of interaction between staff and residents as opposed to the *quality* No studies included on VF Not specific to person-centred and relational aspects of communication

Author/Date/ Country	Topic of Interest/ Purpose	Review Methodology/ Search Strategy/ Date Range	Inclusion/ Exclusion Criteria	Sample/N (articles)	Key Findings	Comments/ Critique Relevance
Eggenberger, Heimerl, & Bennett **2013** **Europe**	To identify existing interventions to enhance communication in dementia care in various relevant settings	Cochrane Collaboration review recommendations AMED, PsychINFO, CINAHL, EMBASE, MEDLINE, Cochrane Library, Gerolit, Web of Science Dates: inception to Jan 2010	Inclusion: randomized or non-randomized experimental control trial ; persons with dementia; intervention designed to enhance dementia communication in any setting; studies in English and German Exclusion: expressive and creative interventions (e.g. cognitive stimulation, walking/talking programs, etc.)	12 studies (7 RCTs; 5 quasi-experimental) representing 831 persons with dementia, 519 professional caregivers and 162 informal caregivers	Training methods: hands-on training (face-to-face), small group discussions, watching and analysis of educational videos/vignettes Content of training varied: verbal skills, non-verbal behaviour, attitudes towards people with dementia, behavioural management skills, use of memory aid tools, self-experiences, theoretical knowledge Positive staff communication outcomes (based on observational and self-report): increased knowledge, positive statements and emotional tone; higher levels of satisfaction with communication with people with dementia Outcomes on resident behaviour and quality of life were mixed Sustainability with feedback mechanism, self-monitoring	Adds: Support for communication education interventions being more effective and sustainable when combined with supportive measures Further support for effectiveness of feedback as a sustainability mechanism Critique/Limitations: Not all studies provided information on cognitive status or confirmation of dementia Did not include any studies on VF Does not address relational/person-centred aspects of communication

Author/Date/ Country	Topic of Interest/ Purpose	Review Methodology/ Search Strategy/ Date Range	Inclusion/ Exclusion Criteria	Sample/N (articles)	Key Findings	Comments/ Critique Relevance
Machiels, Metzelthin, Hamers, & Zwakhalen **2017** **The Netherlands**	To provide an updated overview of communication interventions that are applicable during daily nursing care activities, irregardless of setting To describe the effects on communication outcomes in people with dementia and nursing staff	Cochrane Guidelines for Systematic Reviews Database search: PsychINFO, CINAHL, PubMed, Cochrane Library Dates: inception to Feb 2016	Inclusion: RCT design; communication intervention aimed to improve communication between nursing staff and persons with dementia; intervention applicable to daily nursing care; articles in English, Dutch or German Exclusion: Not explicitly indicated	6 studies representing 382 people with dementia and 235 nursing staff (majority care aides)	Theoretical basis of interventions not clearly articulated Poor methodological quality of studies and wide variation in interventions and outcome measures made it impossible to draw any general conclusions, or recommend one strategy over another Individual study outcomes: - Four studies measured non-verbal skills and all found positive effects in some communication outcomes - Four studies measured verbal communication and three found positive effects in at least one measure	Adds: All included studies were conducted in LTC; specific to dementia Specifically looked at interventions appropriate to daily care Further support that communication interventions improve verbal and non-verbal dementia communication skills Support for use of behavioural change theory to underpin HCP communication interventions Critique/Limitations: Not all studies provided information on cognitive status or confirmation of dementia Did not include any studies on VF Does not address relational/person-centred aspects of communication

Appendix C – Matrix of Person-Centred Communication Theoretical Perspectives

Author(s) Date Location	Theoretical Perspective	Disciplinary Lens	Assumptions/ Key Elements	Outcomes	Contributions to Study of PC-Communication	Limitations/ Gaps
Coupland et al. **1988** **UK**	Communication Accommodation Theory (CAT)	Linguistics/ Language Studies	• People modify communication based on their perception and belief of the other's communication abilities • We tend to accommodate people we respect/admire and non-accommodate those we dislike or wish to diverge from; can manifest as either under-/ over-accom. • Both occur via 5 sociolinguistic strategies: approximation, interpretability, control, discourse management, emotional expression	• Overall: positive interpersonal and intergroup interactions; resolution of conflict • Individual: improved healthcare outcomes and psychological well-being • Relational: formation of equal role relations and rapport • In dementia -OA care: Staff - less patronizing speech, improved emotional tone; Residents - increased interaction • System: reduce negative aging stereotypes	• Addresses both linguistic and relational aspects of effective communication • Broad application but applicable to healthcare settings	• Not enough detail or structure to sufficiently distinguish between different forms of linguistic and psychological accom.

Author(s) Date Location	Theoretical Perspective	Disciplinary Lens	Assumptions/ Key Elements	Outcomes	Contributions to Study of PC-Communication	Limitations/ Gaps
Ryan et al. **1986** **Canada**	Communication Predicaments of Aging Model (CPAM)	Psychology of Aging	• HCP often accommodate speech when conversing with OAs based on distorted perspectives of dependence and incompetency • OAs experience communication predicaments – discrepancies between perceived and actual abilities • Depicted as a cyclical process that begins with an encounter with an OA, recognition of cues, stereotyped expectations, modified speech, negative outcomes for both, reinforced cues/views	• Individual: reduction or restraint of communication opportunities, reduced self-esteem, reduced participation in activities • PWD: increased dependency; loss of communication skills/abilities • HCP: reinforce stereotypical behaviour/speech and views • Relational: lack of respect and jeopardizes opportunity to form authentic, caring relationships • System: reinforce negative aging stereotypes	• Outlines negative consequences of a non-PCComm approach • Mechanism to raise awareness of communication predicaments in aging	• No theoretical or practice guidance on how to break the cycle • Neglects to address the broader environment or context

Author(s) Date Location	Theoretical Perspective	Disciplinary Lens	Assumptions/ Key Elements	Outcomes	Contributions to Study of PC-Communication	Limitations/ Gaps
Ryan et al. **1995** **Canada**	Communication Enhancement Model (CEM)	Psychology of aging	• Addresses negative outcomes of CPAM through: creating awareness (HCP), creating higher expectations (OA) and recognition of supportive environment • Action-oriented health promotion approach for change at individual and system levels • Cyclical process that starts with encounter with OA, recognition of cues (individual), modified communication to accommodate needs, individual assessment, and outcomes	• Overall: communication climate that is empowering and satisfying for both partners • Individual: empowerment, enhanced health/ well-being, maximized communication competence and opportunities • HCP: improved communication knowledge and skills, enhanced assessment and intervention, empowerment, work satisfaction • Relational: improved quality of relationships • System: modify environment to support HCP-OA communication	• Could support both linguistic and relational aspects of PCComm • Model could form the basis of a conceptual model in which specific linguist and person-centred (relational) elements and outcomes could be incorporated • Generally applicable to all staff that would work in LTC	• Specific aspects of PCComm (i.e. relational and linguistic) not overtly evident • Need to expand model to include more specific details

Author(s) Date Location	Theoretical Perspective	Disciplinary Lens	Assumptions/ Key Elements	Outcomes	Contributions to Study of PC-Communication	Limitations/ Gaps
Kagan et al. **2008** **Canada**	Aphasia Framework for Outcome Measurement (A-FROM)	Speech Language Pathology	• Broad organizing structure for measurement of aphasia-related outcomes • Person's experience of living with aphasia and their quality of life are central created by 4 over-lapping domains • Domains represent outcomes that are important to individuals, families, clinicians, researchers, policy-makers and provide a common language	• 4 outcome domains: aphasia severity, participation in life situations, personal factors, and commun. environment • Intended to be broad to capture many possible outcomes of interest	• Used as the theoretical basis for McGilton et al. (2011) pilot study and subsequent larger study (McGilton et al., 2017) in individuals with aphasia as a result of a stroke	• No linkage to PCCare theoretical perspective • Focused on the experience of the person and not the broader context of relationships • Has not yet been used to study aphasia in the context of dementia

Author(s) Date Location	Theoretical Perspective	Disciplinary Lens	Assumptions/ Key Elements	Outcomes	Contributions to Study of PC-Communication	Limitations/ Gaps
Dewar & Nolan **2013** **UK**	Caring Conversations Model	Nursing	• Excellence in older adult care is through achievement of the 6 Senses, supported by development of skilled interaction • 3 key relational dimensions: know who I am/ what matters, understand how I feel, work with me to shape how things are done • 7 elements: courageous, connecting emotionally, curiosity, collaborative, considering perspectives, compromising, celebratory	• Specific resident, family, staff outcomes not identified	• Incorporates aspects of PCComm based on the Senses Framework • Focus on relational aspect of communication	• Relevance has been established in acute and long-term settings in the care of older adults • Not been used to underpin a study • Does not provide any theoretical support for linguistic commun. strategies in dementia

Appendix D – HCA Study Invitation Letter

INVITATION TO TAKE PART IN A STUDY

Dear Health Care Aide Staff Member,

As part of my nursing PhD studies, I am running a study at <name of PCH>. The reason for the study is to test a program for HCAs that includes training and video-feedback to help increase communication and relations between residents with dementia and HCAs.

Nearly half of the residents who live in long-term care homes have very little or no social interaction with others. Dementia can cause further communication problems for residents resulting in loneliness and isolation. HCAs in long-term care report that they would like to spend more time talking with residents to build personal relationships but have trouble finding time within their busy day. The goal of the program is to teach person-centred and dementia communication skills that can be used *while* providing daily care to residents.

I am writing to ask you to take part in the study. With your help the program can be tested to see if it can make a different in improving communication and relations between HCAs and residents with dementia in long-term care.

If you agree to take part of the study, you will be asked to: 1) fill out two surveys of questions (10-15 minutes each), 2) have two video-recordings taken with you and a resident in your care during a daily care activity (12 minutes each), 3) come to a half-day education session on person-centred dementia communication (you will be paid to attend), and 4) meet one-on-one with the researcher to watch and talk about a video-tape of you and the resident (30 minutes during one of your shifts).

Your decision to take part is voluntary. You may withdraw or quit the study at any time and this would not affect your job or work in any way. Any information you provide will be kept confidential and private and no one at <name of PCH> will see your answers or the videos. If you would like to take part or get more information about the study, please call or email me at the information below.

I look forward to hearing from you!

Sincerely,

Deanne O'Rourke, Nursing PhD Candidate

College of Nursing, Faculty of Rady Health Sciences, University of Manitoba

Telephone: [redacted]; Email: [redacted]

Appendix E – Resident Study Invitation Letter

INVITATION TO TAKE PART IN A STUDY

Dear Resident/Family Member/Substitute Decision-Maker,

As part of my nursing PhD studies, I am conducting a study at <name of PCH>. The purpose of the study is to test a program for health care aides (HCAs) that includes education and video-feedback to help increase communication and relationships between residents with dementia and HCAs.

Nearly half of the residents who live in long-term care homes have very little or no social interaction with others. Dementia can cause further communication problems for residents resulting in loneliness and isolation. HCAs in long-term care report that they would like to spend more time talking with residents to build personal relationships but have trouble finding time within their busy day. The goal of the program is to teach person-centred and dementia communication skills that can be used *while* providing daily care to residents.

I am writing to ask you (or the resident for whom you are the substitute decision-maker) to take part in the study. With your help the program can be tested to see if it can make a different in improving communication and relationships between HCAs and residents with dementia in long-term care.

Residents who take part in the study will be asked to: 1) have two video-recordings taken with a HCA during a usual daily care activity (examples could be providing help with meals, transfers/walking, shaving, hair care, mouth care); and 2) participate in a one-on-one interview with the researcher after the study is finished to talk about communication with the HCA and their feelings and experience about being video-recorded. Some health information would also be collected by the researcher from the resident's chart.

The decision to take part in the study is completely voluntary. Residents may withdraw from the study or quit at any time and this would not affect care provided in any way. The videos and health information collected from the charts will be kept confidential and private. If you (or the resident for whom you are the substitute decision-maker) would like to take part or get more information about the study, I would be happy to speak with you further.

I look forward to speaking with you!

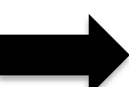
Sincerely,

Deanne O'Rourke, R.N., M.N., GNC(C), Nursing PhD Candidate
College of Nursing, Faculty of Rady Health Sciences, University of Manitoba
Telephone: ; Email:

Appendix F – Study Poster

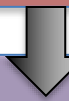
What is this all about?

- My name is Deanne O'Rourke
- I am a nursing PhD student at the University of Manitoba
- I am running a research study at <name of PCH>
- I am looking for HCAs to join



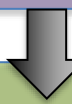
What is this research study about?

I am testing a program for HCAs to see if communication and relations between residents with dementia and HCAs can be made even better and stronger than they are now!



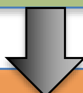
Why is this important?

- Nearly half of the residents who live in long-term care homes have very little or no social interaction with others.
- Dementia can cause further communication problems for residents resulting in loneliness and isolation.
- HCAs in long-term care report that they would like to spend more time talking with residents to build personal relationships but have trouble finding time within their busy day.
- The goal of the program is to teach person-centred and dementia communication skills that can be used *while* providing daily care to residents.



What would I be asked to do?

1. Fill out two surveys of questions (10-15 minutes each)
2. Have two video-recordings taken with you and a resident in your care during a daily care activity (12 minutes each)
3. Come to a half-day education session on person-centred dementia communication (you will be paid to attend)
4. Meet one-on-one with the researcher to watch and talk about a video-recording of you and the resident (30 minutes during one of your shifts)



What's the 'Catch'?

- There is no cost to take part in the study
- All answers on the survey and the videos are kept private and confidential
- Your choice to take part in the study is voluntary
- You can withdraw (quit) the study at any time

How can I sign up or where do I get more Information?

Contact me (Deanne) at
Telephone: [redacted];
Email: [redacted]

- I would be happy to talk further and answer any questions you have
- I look forward to hearing from you!

Appendix G – Staff Newsletter Excerpt

Dear Health Care Aides,

Over the next few months, I will be running a study for my PhD research at <name of PCH>. The reason for the study is to test a program for HCAs that includes training and video-feedback to help increase communication and relations between residents with dementia and HCAs. I am looking for both HCA staff and residents in the early to middle stages of dementia to take part in the study.

If you agree to take part of the study, you will be asked to: 1) fill out two surveys of questions (10-15 minutes each), 2) have two video-recordings taken with you and a resident in your care during a daily care activity (12 minutes each), 3) come to a half-day education session on person-centred dementia communication (you will be paid to attend), and 4) meet one-on-one with the researcher to watch and talk about a video of you and the resident (30 minutes during one of your shifts).

Your decision to take part is voluntary. You may withdraw or quit the study at any time and this would not affect your job or work in any way. Any information you provide will be kept confidential and private and no one at <name of PCH> will see your answers or the videos. If you would like to take part or get more information about the study, please call [redacted] or email me at [redacted]. You can also contact my advisor, Dr. Michelle Lobchuk from the University of Manitoba College of Nursing at [redacted] or [redacted] This study has been approved by the UofM Education Nursing Research Ethics Board (ENREB).

I look forward to hearing from you!

Deanne O'Rourke, R.N., M.N., GNC(C), PhD Candidate
College of Nursing, Faculty of Rady Health Sciences, University of Manitoba

Appendix H – Resident/Family Newsletter Excerpt

Dear Resident/Family Members,

Over the next few months, I will be running a study for my PhD research at <name of PCH>. The reason for the study is to test a program for health care aides (HCAs) that includes training and video-feedback to help increase communication and relations between residents with dementia and HCAs.

I am looking for both HCA staff and residents in the early to middle stages of dementia to take part in the study.

Residents who take part in the study will be asked to: 1) have two video-recordings taken with a HCA during a usual daily care activity (examples could be providing help with meals, transfers/walking, shaving, hair care, mouth care); and 2) participate in a one-on-one interview with the researcher after the study is finished to talk about communication with the HCA and their feelings and experience about being video-recorded. Some health information would also be collected by the researcher from the resident's chart.
Some health information would also be gathered from the resident's chart.

The choice to take part in the study is voluntary. Residents can withdraw or quit the study at any time and this would not affect their care in any way. All information and videos from the study will be kept private and confidential. The nursing leadership will be aware of residents who are asked to join the study.

If you or your family member would like to take part or get more information about the study, please call or email me at You can also contact my advisor, Dr. Michelle Lobchuk from the University of Manitoba College of Nursing at or . This study has been approved by the UofM Education Nursing Research Ethics Board (ENREB).

I look forward to hearing from you!

Deanne O'Rourke, R.N., M.N., GNC(C), PhD Candidate
College of Nursing, Faculty of Rady Health Sciences, University of Manitoba

Appendix I – HCA Consent Form

HEALTH CARE AIDE INFORMED CONSENT

Research Project Title: A Pilot Study of a Video-feedback Intervention to Enhance Long-Term Care Aides' Person-Centred Dementia Communication

Principal Investigator: Deanne O'Rourke, PhD Candidate, College of Nursing, Rady Faculty of Health Sciences, University of Manitoba
Telephone: [redacted], Email: [redacted]

Advisor: Dr. Michelle Lobchuk, College of Nursing, Rady Faculty of Health Sciences, University of Manitoba
Telephone: [redacted], Email: [redacted]

You are being invited to join a research study. This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

What is the Purpose of the study?
Nearly half of the residents who live in long-term care homes have very little or no social interaction with others. Dementia can cause further communication problems for residents resulting in loneliness and isolation. Health care aides (HCAs) in long-term care report that they would like to spend more time talking with residents to build personal relationships but have trouble finding time within their busy day.

The purpose of this study is to test a new program for HCAs that includes training and video-feedback to help increase communication and relations between residents with dementia and HCAs. Video-feedback is a teaching method where learners watch a video of them doing a task, like talking to a resident, and then reflecting or thinking about the things they did well or could do better. The goal of the new program is to teach person-centred and dementia communication skills that can be used *while* providing daily care to residents.

What will I be asked to do?
As a HCA, you will be asked to take part in a program that includes training and video-feedback to help increase communication and relations between residents with dementia and HCAs. It is important for you to know that you are being asked to take part in a study where video of you will be taken and used in the study. Video information is felt to be personal information as you could be recognized (or known to others). Although you could be recognized on the video, your confidentiality can be protected by controlling who can see the video.
Please take your time to read this consent form carefully. If you have any questions or would like more information, feel free to ask the researcher, Deanne O'Rourke.

HCAs and residents with early to middle stages of dementia will be asked to take part in the study. As HCAs agree to be a part of the study, resident 'partners' with who they often work with, will be asked if they would also like to be a part of the study.

If you agree to take part in this study, you will be asked to do these things:

1. Fill out a short survey to collect some general information about you (age, gender, level of schooling, first language, and country of birth), your work (shifts worked, full- or part-time, and how long you have worked as a HCA), and how you feel about your relationship with your resident partner and communicating with residents who have dementia. The survey has short-answer questions and questions that ask you provide a number rating on a scale. The survey would take about 10-15 minutes to fill out.

2. Have a video taken with you and your resident partner during a daily care activity that you would normally provide for the resident. The timing of the video and type of care activity to be videoed will be decided by talking with you and the resident/family. Examples could be providing help with meals, transfers/walking, shaving, hair care or mouth care. The video would be taken in either the resident's room or a common area in the care home. The time of the video would be no more than 12 minutes.

3. Come to a half-day training session provided by Deanne for the HCAs in the study on person-centred dementia communication where you would learn and practice communication skills. The training activities will include listening and talking about dementia communication skills, watching videos of others and talking about good and bad examples of communication, practicing communication skills with a partner, and learning about how to think (reflect upon) and learn from your thoughts and actions at work. At the end of the training, you will also be given a take-home activity to do over the next 2 weeks that asks to you think about how the residents you work with might be feeling. This activity should take about 15 minutes to finish.

4. About 2 weeks after the training, meet one-on-one with Deanne for a video-feedback session to watch and talk about the video of you and your resident partner. You will first be asked to talk for a few minutes about your take-home activity. You will then be asked to watch the video of you and your resident partner and check off examples of dementia communication skills on a check-list. After watching the video, you will be asked to talk about your thoughts on the video and communication skills you did well and areas where you think you could do better. Deanne may also give you some feedback on your communication skills. This meeting would take about 30 minutes during one of your regular shifts.

5. About 2 weeks after the video-feedback session, have a second video-recording of a care activity taken with you and your resident partner. This video would be the same as the first video in terms of the care activity, place and time (12 minutes long).

6. Soon after the last video has been taken, fill out a follow-up survey with similar questions to the first one about how you feel about your relationship with your resident partner and

communicating with residents who have dementia. This survey would take about 10 minutes to fill out.

7. Soon after filling out the survey, you will be invited to either a small group meeting with other HCAs in the study (a focus group) or a one-on-one interview (your choice) with Deanne to talk about how the study and the communication program went.

What recording equipment will be used?
A password-protected, portable electronic device (tablet) will be used to video-record the two care activities with the HCA and resident partner.
A password-protected tablet will also be used to audio-record the focus group and interviews.

How will the video be used in the study?
The videos of you and the resident will be used for two reasons. 1) The first video will be used as part of your training in the video-feedback session with Deanne. 2) Both videos of you and the resident will be viewed by Deanne and a Research Assistant (helper) who will both 'code' the videos by looking for examples of dementia communication skills to see if there is a difference before and after the training. The videos will also be seen by a typist who will type out the conversations between the HCA and resident into a paper record that will be also be used when coding the videos.
Deanne will take the videos of you and the resident in the care home using a password-protected tablet with a built-in video camera. The videos will be viewed and edited by Deanne before use in the study to hide/mask other staff, residents or visitors that might have been caught on the video by mistake.

How will the information be handled during and after the study?
The paper-based information gathered during the study (surveys, coding sheets from the videos, and typed records of the videos/focus group/interviews) will be anonymous. This means that your name will not be on these papers and instead, you will be assigned a code number that protects your identity. This code number will only be known to Deanne and be kept in a password-protected computer file, away from the paper surveys and forms. The surveys and coding sheets from the videos will be gathered and the information entered into a software program by Deanne. The typed records of the videos/focus group/interviews will be examined by Deanne and/or her advisor, Dr. Lobchuk. The surveys, coding sheets, typed records and consent forms will be kept in a locked office at the University of Manitoba College of Nursing building during the study and then will then be scanned and saved to a secure data system at the University of Manitoba in which only Deanne will have access. The paper copies will then be destroyed by shredding them.

Although you could be recognized on the video, your confidentiality can be protected by controlling who can see the video and how the video will be handled and kept. Only a few people will be allowed to see the videos. This includes Deanne, the Research Assistant and the typist. The Research Assistant and typist will sign a form which explains their duties to protect the videos and the identity/confidentiality of the people on the videos. In the care home, you are the only staff person that will see the videos taken of you and your resident partner. Videos will

not be shared with other HCAs in the study, or other staff or managers at Donwood Manor. Both HCAs and residents will be offered the chance to see their video right after the recording if they wish but they will not get a copy of the video.
Right after the videos have been taken, they will be saved as a password-protected file on the tablet. The edited videos will then be saved to the secure data system at the University of Manitoba, and available only to Deanne. The videos on the tablet will be deleted by Deanne as soon as they have been shown during the video-feedback session or saved to the secure data system. Videos will be passed between Deanne and the Research Assistant and typist on an encrypted memory stick. The videos will not be seen or used by anyone other than the research staff listed above for the purposes of the study and no other copies of the videos would be made. The audio-recordings from the focus group/interviews will be handled and kept in the same way as the videos.

At the end of the study, the video and audio-recordings will be erased from the secure data system and the memory sticks will be destroyed. The information from the paper forms (surveys, coding sheets and consent forms) will be kept for 7 years after the study and then erased from the secure data system in June 2026. Notes taken during the study by Deanne will be kept for an unlimited time to be used for future training and to write articles.

The results of this study will be written up and printed in a journal article and may be presented at local meetings and professional conferences. The results will be presented in a general form and your name will not be used or identity made public. Any quotes from the focus group or interviews used in presentations or write-up will not contain any names or information to identify you.

It is important for you to know that if possible abuse or neglect towards a resident in care is discovered during this study, the current law requires the researcher to report this to the Manitoba Protection for Persons in Care Office.

What are the benefits and risks of taking part in the study?
By taking part in the study, there is a benefit to you to learn more about communicating with residents with dementia, and how to talk to residents in a person-centred way. There is also a chance to improve communication or relations with a specific resident that you often work with. The skills learned through this program might also help you improve communication and relations with other residents that you work with. Also, by taking part in the study, the new program can be tested to see if it could help improve communication and relationships with residents with dementia for other staff working in long-term care.

There are no known physical risks to you and no cost to take part in the study. If you choose to take part, it is likely that other staff and residents at <name of PCH> will know that you are part of the study (for example, know you are attending the training session or being videoed with a resident). Even though people might know you are part of the study, any information you provide during the study, including the surveys and videos, will be kept private and confidential. You can also withdraw from the study (or quit) at any time if you feel too uncomfortable about others knowing you are in the study.

It is also possible that the feeling of being video-taped or watching yourself on video might be uncomfortable. Other studies have shown that people usually forget about the video a couple of minutes after it starts. But, before each video is taken Deanne will ask if you still agree to the video. If you feel uncomfortable at any time, you have the right to ask Deanne questions and talk about your feelings with her or another support person of your choice. You also have the right to delay, stop or refuse to do any other study activities at any time without any effect on your job or work.

Will I receive anything for taking part in the study?
If you choose to take part in the study, you will be paid $75 cash to attend the half-day education session. You will also receive a small gift (value of $25) as a thank-you for your time.

Do I have to take part in the study?
Taking part in this study is voluntary. This means you can choose whether to take part or not. If you choose to take part, you can withdraw from the study (or quit) at any time. Your choice not to take part or to withdraw from the study will not affect your job or work.

How do I find out the results of the study?
Short presentations about the study results will be made to the HCAs in the study and the staff and residents of <name of PCH> within 2 months of the end of the study. Also, if you would like to receive a written summary of results after the study is finished, you can provide your name and contact information at the end of this informed consent form.

Who can I talk to if I have questions?
If you have any questions or concerns about the study, you can contact the researcher, Deanne O'Rourke at [redacted] or [redacted] or her advisor Dr. Michelle Lobchuk at [redacted] or [redacted].
If you have any questions or concerns about your rights as a person taking part in a study, you can contact the University of Manitoba Human Ethics Coordinator at [redacted] or [redacted].

Statement of Consent

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and/or refrain from answering any questions they prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

The University of Manitoba may look at your research records to see that the research is being done in a safe and proper way.

This research has been approved by the Education/Nursing Ethics Review Board (ENREB). If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Coordinator at [redacted] or [redacted]. A copy of this consent form has been given to you to keep for your records and reference.

Participant signature: ____________________________________

Participant printed name: ____________________________________

Date (day/month/year): ____/____/____

If you would like to receive a summary of the study results, please fill in the information on the next page.

I, the undersigned, have fully explained the relevant details of this research study to the participant named above and believe that the participant has understood and has knowingly given their consent.

Researcher signature: ____________________________________

Researcher printed name: ____________________________________

Date (day/month/year): ____/____/____

Do you wish to receive a summary of the results of this study? Yes ☐ No ☐

If yes, please provide name of who the results should be sent to and how you want to receive the results (mail or email):

Name: ____

Mailing Address: ____

Email Address: ____

Appendix J – HCA and Resident Inclusion/Exclusion Checklist

Resident Inclusion/Exclusion Criteria

Step 1: Determine eligibility for study:

Inclusion Criteria (check all that apply):

- ☐ Diagnosis of dementia (any subtype)
- ☐ Mild to moderate stage of dementia [defined as a current Cognitive Performance Scale (CPS) score of 1, 2 or 3 – refer to table on reverse]
- ☐ Capability to provide informed consent or has a substitute decision-maker (SDM) who can provide consent.

Exclusion Criteria (check any that apply):

- ☐ Cognitively well (CPS score of 0) or severe (late) stage of dementia (CPS score of 4 or higher)
- ☐ Extreme responsive behaviours that prevent the ability to converse with care providers during daily care
- ☐ Unable to communicate in English
- ☐ Not available for the anticipated duration of the study – approximately 2-3 months (e.g. receiving end-of-life care, planned transfer to hospital or other setting).

☐ All inclusion criteria met and no exclusion criteria – continue to Step 2
☐ Does not meet study criteria – do not continue with Step 2

Step 2: Gain Permission for Researcher to Contact

Residents meeting study criteria:

☐ Resident or SDM given permission for researcher to contact them to discuss interest in study participation

Contact information:

Resident name: ______________________________

Resident Room # and Home Area: ______________________________

SDM name (if applicable): ______________________________

Preferred contact person (resident or SDM): ______________________________

Preferred contact method and information:

- ☐ Phone – Phone number: ______________________________
- ☐ Email – Address: ______________________________
- ☐ In-person – Preferred time/day: ______________________________

The Cognitive Performance Scale (CPS)

The Cognitive Performance Scale is a hierarchical index used to rate the cognitive status of residents. It is based on five items:

B1 (Persistent vegetative state/no discernible consciousness):
0=No 1=Yes

B2a (Short-term memory OK—seems/appears to recall after 5 minutes)
0=Memory OK 1=Memory problem

B4 (Made decisions regarding tasks of daily life)
0=INDEPENDENT —decisions consistent/reasonable
1=MODIFIED INDEPENDENCE —some difficulty in new situations only
2=MODERATELY IMPAIRED —decisions poor; cues/supervision required
3=SEVERELY IMPAIRED —never/rarely made decisions

C4 (Making self understood—however able)
0=UNDERSTOOD
1=USUALLY UNDERSTOOD —difficulty finding words or finishing thoughts
2=SOMETIMES UNDERSTOOD —ability is limited to making concrete requests
3=RARELY/NEVER UNDERSTOOD

G1ha (eating self performance)
0=INDEPENDENT 1=SUPERVISION 2=LIMITED ASSISTANCE
3=EXTENSIVE ASSISTANCE 4=TOTAL DEPENDENCE

To calculate the CPS score, first **an impairment count** (‘impairment’ in table below) is created in which the score can take on values of 0,1, 2 or 3 depending on how many of the following are met:
● B4=1,2 ● C4=1,2 or 3 ● B2a=1

Next, a **severe impairment score** (‘severe impairment’ in table below) is created in which the score can take on values of 0,1 or 2 depending on how many of the following are met:
● B4=2 ● C4=2 or 3

CPS score	*Description*	*Specification*
0	Intact	B1=0 AND B4=0,1,2 AND impairment=0
1	**Borderline intact**	**B1=0 AND B4=0,1 or 2 AND impairment=1**
2	**Mild impairment**	**B1=0 AND B4=0,1 or 2 AND impairment=2 or 3 AND severe impairment=0**
3	**Moderate impairment**	**B1=0 AND B4=0,1 or 2 AND impairment=2or 3 AND severe impairment=1**
4	Moderate/severe impairment	B1=0 AND B4=0,1,2 AND impairment=2,3 AND severe impairment=2
5	Severe impairment	B1=0 AND B4=3 AND G1ha=0,1,2,3
6	Very severe impairment	B1=1 or (B4=3 AND G1ha=4)

Inclusion/Exclusion Criteria - HCA

Inclusion Criteria:

- Provides regular care and/or assistance to residents in the PCH
- Holds a position of either full-time or part-time status
- Schedule includes either day or evening shifts
- Able to speak and read English to fulfil their duties as a HCA

Exclusion Criteria:

- Causal or return-to-work (i.e. modified duties) position
- Scheduled exclusively for night shifts

Not available for the anticipated length of the study (e.g. planned leave of absence, etc.

Appendix K – Resident/SDM Consent Form

RESIDENT/SUBSTITUTE DECISION-MAKER INFORMED CONSENT

Research Project Title: A Pilot Study of a Video-feedback Intervention to Enhance Long-Term Care Aides' Person-Centred Dementia Communication

Principal Investigator: Deanne O'Rourke, PhD Candidate, College of Nursing, Rady Faculty of Health Sciences, University of Manitoba
Telephone: [redacted], Email: [redacted]

Advisor: Dr. Michelle Lobchuk, College of Nursing, Rady Faculty of Health Sciences, University of Manitoba
Telephone: [redacted], Email: [redacted]

You are (or the resident for whom you are the substitute decision-maker is) being invited to join a research study. This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

HCAs and residents with early to middle stages of dementia at <name of PCH> are being asked to take part in the study. As HCAs agree to be a part of the study, they are asked to identify residents with whom they work, that might also be interested in being in the study. This is why you are (or the resident for whom you are the substitute decision-maker is) being asked to take part in the study.

What is the purpose of the study?
Nearly half of the residents who live in long-term care homes have very little or no social interaction with others. Dementia can cause further communication problems for residents resulting in loneliness and isolation. Health care aides (HCAs) in long-term care report that they would like to spend more time talking with residents to build personal relationships but have trouble finding time within their busy day.

The purpose of this study is to test a new program for HCAs that includes training and video-feedback to help increase communication and relations between residents with dementia and HCAs. Video-feedback is a teaching method where learners watch a video of them doing a task, like talking to a resident, and then reflecting or thinking about the things they did well or could do better. The goal of the new program is to teach person-centred and dementia communication skills that can be used *while* providing daily care to residents.

What will residents in the study be asked to do?
It is important to know that you are (or the resident for whom you are the substitute decision-maker is) being asked to take part in a study where video of the resident participants will be

taken and used in the study. Video information is felt to be personal information as individuals could be recognized (or known to others). Although you (or the resident in which you are the substitute decision-maker) could be recognized on the video, confidentiality can be protected by controlling who can see the video and how the video is handled during the study. Please take your time to read this consent form carefully. If you have any questions or would like more information, feel free to ask the researcher, Deanne O'Rourke.

If you agree (or the resident for whom you are the substitute decision-maker agrees) to take part in this study, the following will be asked of the resident participants:

1. Have two videos taken of you and one HCA during a normal daily care activity. The timing of the video and type of care activity to be videoed will be decided by talking with you/your family member and the HCA. Examples could be providing help with meals, transfers/walking, shaving, hair care or mouth care. The video would be taken in either your room or a common area in the care home. The time of each video would be no more than 12 minutes. The videos would be taken about a month apart from each other and will be recorded using a password-protected portable electronic device (tablet).

2. Right after the last video is taken (same day if possible), you will be invited to participate in a one-on-one interview with Deanne to talk about communication with the HCA, how the study went and what it felt like to be videoed. The interviews will be audio-recorded using a password-protected tablet.

Some health information would also be gathered from your (or the resident for whom you are the substitute decision-maker) chart at Donwood Manor. This information would include age, gender, type of dementia (if available), number of active medical diagnoses, number of medications taken in the last month, current Cognitive Performance Scale score (a measure of cognitive level), current Index of Social Engagement score (a measure of social interaction).

How will the video be used in the study?
The videos of you (or the resident for whom you are the substitute decision-maker) will be used for two reasons. 1) The first video will be used as part of a training session with the HCA in the video. 2) Both videos will be viewed by Deanne and a Research Assistant (helper) who will 'code' the videos by looking for examples of dementia communication skills to see if there is a difference before and after the HCA training. The videos will also be seen by a typist who will type out the conversations between the HCA and resident into a paper record that will be also be used when coding the videos.
Deanne will take the videos of you (or the resident for whom you are the substitute decision-maker) and the HCA in the care home using a password-protected tablet with a built-in video camera. The videos will be viewed and edited by Deanne before use in the study to hide/mask other staff, residents or visitors that might have been caught on the video by mistake.

How will the information be handled during and after the study?
The paper-based information gathered during the study (forms used to record the health information from the chart and typed records of the videos and interviews) will be anonymous. This means that your (or the resident's) name will not be on these papers and instead, a code

number will be assigned to each participant that protects their identity. This code number will only be known to Deanne and be kept in a password-protected computer file, away from the paper forms and records. The forms with the health information will be gathered and the information entered into a software program by Deanne. The typed records of the interviews will be examined by Deanne and/or her advisor, Dr. Lobchuk. The health information forms, typed records of the interviews and consent forms will be kept in a locked office at the University of Manitoba College of Nursing building during the study and then will then be scanned and saved to a secure data system at the University of Manitoba in which only Deanne will have access. The paper copies will then be destroyed by shredding them.

Although you (or the resident for whom you are the substitute decision-maker) could be recognized on the video, confidentiality can be protected by controlling who can see the video and how the video will be handled and kept. Only a few people will be allowed to see the videos. This includes Deanne, the Research Assistant and the typist. The Research Assistant and typist will sign a form which explains their duties to protect the videos and the identity/confidentiality of the people on the videos. In the care home, the only staff person that will see the videos is the HCA that will be in the video with you (or the resident for whom you are the substitute decision-maker). Videos will not be shared with other HCAs in the study, or other staff or managers at Donwood Manor. Both residents and HCAs will be offered the chance to see their video right after the recording if they wish but they will not get a copy of the video.

Right after the videos have been taken, they will be saved as a password-protected file on the tablet. The edited videos will then be saved to the secure data system at the University of Manitoba, and available only to Deanne. The videos on the tablet will be erased by Deanne as soon as they have been shown to the HCA during the video-feedback session or saved to the secure data system. Videos will be passed between Deanne and the Research Assistant and typist on an encrypted memory stick. The videos will not be seen or used by anyone other than the research staff listed above for the purposes of the study and no other copies of the videos would be made. The audio-recordings from the interviews will be handled and kept in the same way as the videos.

At the end of the study, the video and audio-recordings will be erased from the secure data system and the memory sticks will be destroyed. The information from the paper forms (health information forms, typed records of interviews and consent forms) will be kept for 7 years after the study and then erased from the secure data system in June 2026. Notes taken during the study by Deanne will be kept for an unlimited time to be used for future training and to write articles.

The results of this study will be written up and printed in a journal article and may be presented at local meetings and professional conferences. The results will be presented in a general form and your (or the resident's) name will not be used or identity made public. Any quotes from the focus group or interviews used in presentations or write-up will not contain any names or information to identify you.

It is important for you to know that if possible abuse or neglect towards a resident in care is discovered during this study, the current law requires the researcher to report this to the Manitoba Protection for Persons in Care Office.

What are the benefits and risks of taking part in the study?
By taking part in the study, there is a chance that the communication and relationship between you (or the resident for whom you are the substitute decision-maker) and the HCA will become better and stronger. The program may also help the HCA better understand your (or the resident for whom you are the substitute decision-maker) situation and perspective. Having better communication and relations with the HCA might increase your (or the resident for whom you are the substitute decision-maker) feelings of well-being. Also, by taking part in the study, the new program can be tested to see if it could help improve communication and relationships with residents with dementia for other staff working in long-term care.

There are no known physical risks to you (or the resident for whom you are the substitute decision-maker) and no cost to take part in the study. If you choose to take part, it is likely that other staff and residents at <name of PCH> will know that you are part of the study (for example, may see you being videoed with the HCA). Even though people might know you are part of the study, any information gathered during the study, including the health information from the chart and the videos will be kept private and confidential. You (or the resident for whom you are the substitute decision-maker) can also withdraw from the study (or quit) at any time if you feel too uncomfortable about others knowing you are in the study.
It is also possible that the feeling of being video-taped might be uncomfortable. Other studies have shown that people usually forget about the video a couple of minutes after it starts. But, before each video is taken Deanne will ask if you still agree to the video. If you feel (or the resident for whom you are the substitute decision-maker feels) uncomfortable at any time, you have the right to ask Deanne questions and talk about your feelings with her or another support person/family member. You also have the right to delay, stop or refuse the video-recording at any time without any effect on the care you receive (or the resident for whom you are the substitute decision-maker receives).

Will residents receive anything for taking part in the study?
If you agree (or the resident for whom you are the substitute decision-maker agrees) to take part in the study, you will receive a small gift (value $25) as a thank-you for your time.

Is there a choice to take part in the study?
Taking part in this study is voluntary. This means you (or the resident for whom you are the substitute decision-maker) can choose whether to take part or not. Residents who choose to take part can withdraw from the study (or quit) at any time. The choice not to take part or to withdraw from the study will not affect the care you receive (or the resident for whom you are the substitute decision-maker receives).

Will the results of the study be made available?
Short presentations about the study results will be made to the staff and residents of Donwood Manor within 2 months of the end of the study. Also, if you (or your family member/substitute

decision-maker) would like to receive a written summary of results after the study is finished, a name and contact information can be provided at the end of this informed consent form.

Who can I talk to if I have questions?
If you have any questions or concerns about the study, you can contact the researcher, Deanne O'Rourke at [redacted] or [redacted] or her advisor Dr. Michelle Lobchuk at [redacted] or [redacted].
If you have any questions or concerns about your rights as a person taking part in a study, you can contact the University of Manitoba Human Ethics Coordinator at [redacted] or [redacted].

Statement of Consent
Your signature on this form indicates that you have understood to your satisfaction the information regarding your (or the resident for whom you are the substitute decision-maker) participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are (or the resident for whom you are the substitute decision-maker is) free to withdraw from the study at any time, and/or refrain from answering any questions they prefer to omit, without prejudice or consequence. Your (or the resident for whom you are the substitute decision-maker) continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your (or the resident for whom you are the substitute decision-maker) participation.

The University of Manitoba may look at your research records to see that the research is being done in a safe and proper way. This research has been approved by the Education/Nursing Ethics Review Board (ENREB). If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Coordinator at [redacted] or [redacted] A copy of this consent form has been given to you to keep for your records and reference.

Your signature on this form indicates that you assent (agree) to participate in this research study:

Signature of resident: ____________________________________

Printed name of resident: ____________________________________

Date (day/month/year): ____/____/____

Your signature on this form indicates that you have understood to your satisfaction the information regarding the resident's (for whom you are the substitute decision-maker) participation.

Signature of substitute decision-maker: ____________________________________

Printed name of substitute decision-maker: ____________________________________

Legal relationship to resident named above: ____________________________________

Date (day/month/year): ____/____/____

I, the undersigned, have fully explained the relevant details of this research study to the participant named above and believe that the participant has understood and has knowingly given their consent.

Signature of researcher: ____________________________________
Printed name of researcher: ____________________________________
Date (day/month/year): ____/____/____

Do you wish to receive a summary of the results of this study? Yes ☐ No ☐

If yes, please provide name of who the results should be sent to and how you want to receive the results (mail or email):

Name: ____

Mailing Address: ____

Email Address: ____

Appendix L – PCDC Session Plan

Introduction/Goals for the Session (10 min)

Overview of Communication (20 min)

- Purpose
- Components of good communication
- Challenges
- Communication in Dementia

Person-Centred Dementia Communication (60 min)

- Components
- Person-Centred (Relational) Communication
  - VIPS (Person-Centred Care) Framework
  - How to talk in person-centred way (4 person-centred communication methods)
  - Video and role-play practice

Break (15 min)

- Language-based Dementia Communication Skills (60 min)
  - 3 conversation goals and associated strategies
  - Practice activity and discussion – Part 1 and 2
- Non-verbal communication

Reflective Learning/Practice (10 min)

Next-steps/wrap-up (5 min)

Appendix M – Person-Centred Dementia Communication Checklist

	Person-Centred (Relationship) Skills	Examples	Checkmark ✓ (when you see an example)
Recognize (Greet)	Acknowledge or greet the resident as a person, known by their preferred name Talk about things related to the resident's family, life, or day	"Hello Jane. Are you ready for lunch?" "How was your visit with Henry (husband) today?"	
Negotiate (Ask)	Ask or consult about the resident's preferences, wants, needs • Can take place over simple everyday things, such as whether a person feels ready to get up, or have a meal, etc. • Helps give choices and control to a person with dementia	Maria: "I don't want to go for supper right now. I'm not hungry." Staff: "OK, Maria. Would you like to go for a walk with me instead? That might help you feel hungry for supper."	
Validate (Imagine/Check Feelings)	Think about (imagine) how a person might be feeling Check it out with them (confirm) Accept that how a person feels is real to them React to how a person is feeling • Recognize and name the feeling • Act upon their needs or wishes in the moment (if needed)	Mr. Lawton: "Where's Mary? Isn't she supposed to be here?" Staff: "Mary will be at work now, and she knows you're here. You have managed well this morning since you've been worried about Mary."	
Facilitate (Work-together)	Provide care with the resident, instead of for the resident Work together to get a task done Encourage use of their current abilities Help a person to do what he/she wouldn't be able to do by themselves by filling in the 'gaps' Help to get something started and/or keep it going	Mrs. Smith: (wanders into the dining room) "Have you seen ... have you seen it?" Staff: "What are you looking for, Mrs. Smith? Tell me what it is and we can look for it together.	

	Language (Talking) Skills	Examples	Checkmark ✓ (when you see an example)
Two-way Conversation TWO WAY	1. Greet with preferred name	"Good morning, Sarah."	
	2. Take turns; give time to respond; don't interrupt	Pauses in conversation to allow time to respond.	
	3. Asked questions that rely on general information, not specific times/places	"What dessert do you like more, pie or Jello?"	
	4. Use statements that show you agree	"Yes", "Mm-hmm", "I understand."	
	5. Be polite if the person resists or refuses	"Please don't hit my hand when I try to help you. Do you hurt anywhere right now?"	
Clear Conversation	6. Ask them to repeat what they said	"Can you say that again?" "Pardon me?"	
	7. Re-state back to the resident what they said	"Let me see if I understand (repeat what resident said)…"	
	8. Ask them to clarify	"Are you saying that you would like to…?"	
	9. Tell them exactly what you don't understand	"I don't understand what ___ means."	
	10. Repeat your request/sentence	Repeating the same statement	
	11. Say your question/sentence in a different way	Staff: "Would you like to go listen to the school choir?" Resident: "The what?" Staff: "Would you like to go listen to the children sing?"	
	12. Put the important part of the message first	Right: "You need to put on your coat before going outside." Wrong: "Before going outside, you need to put on your coat."	
	13. Put words that are meant to help explain after nouns and verbs	"Do you want a sandwich, beef or egg?" or "Walk slowly with me."	

	Language (Talking) Skills	Examples	Checkmark ✓ (when you see an example)
Continue the Conversation	14. Let the person know when the topic is changing	"Now let's talk about…"	
	15. Encourage the person to finish a sentence	"Your favorite TV show is _____?"	
	16. Match a person's comment with the same comment (matching comment) 17. Match a person's comment with one from your experience that is like theirs (matching association)	Resident: "I like the Family Feud." Staff: "You like The Family Feud? (matching comment) My favorite game show has always been The Price is Right. I remember watching Bob Barker when I was a kid (matching association). Do you like that show?"	
	18. Use news-marks: a saying of importance about something the person said	"Really?" "Wow, that's great!" "Oh my!"	

Appendix N – Person-Centred Communication Practice (Role Play)

First Situation:

Person #1: Pretend you are May, an 80-year old female resident on the second floor. You are feeling very sad and down this morning, as your daughter told you yesterday that your husband passed away. You didn't sleep much last night and are mixed-up about the news you heard yesterday and not sure if it is true. When the HCA comes in to help you get ready and up for the day, you don't really feel like it.

Person #2: You are the HCA on days partnered with May. You are about to enter May's room to help her with morning care and get up for the day. You heard during shift report that she had been confused and up and down all night, and she got news yesterday that her husband passed away.

Person #2: Using person-centred communication methods, talk with May about helping her with morning care. What could you say to;

- Recognize (greet) her
- Negotiate (ask) with her to get up
- Validate (imagine/check) her feelings
- Facilitate (work together) to meet her needs

Second Situation:

Person #2: Pretend you are Jack, a 92-year old male resident on the first floor. Your stomach has not been feeling very good the past few days but you can't find the right words to tell this to the staff. They keep trying to get you to eat something but it just makes you feel like you are going to be sick. It is now suppertime and the evening HCA has come to your room to walk with you to the dining room. You still don't feel well and don't want to go.

Person #1: You are an HCA working on evenings tonight on John's team. The day staff asked you to keep an eye out on John this evening, as he didn't eat much the last few days. His family and the staff are worried he is going to lose weight. You come to his room to help get him to the dining room for supper.

Person #1: Using person-centred communication methods, talk to John about coming for supper. What could you say to;

- Recognize (greet) him
- Negotiate (ask) with him to go for supper
- Validate (imagine/check) his feelings
- Facilitate (work together) to meet his needs

Appendix O - Dementia Communication (Language) Skills Practice

Using the Person-Centred Dementia Communication Checklist as a guide, find examples of **language (talking) skills** in the conversation below. Write the number of the skill (1 through 18) you find beside the sentence.

Jan (HCA): (Knocks on resident's room door). Good morning Anna. It's Jan, the health care aide. Can I come in?

Anna (Resident): Umm…okay.

Jan: It's 8:30 in the morning. How did you sleep last night?

Anna: (mumbles something)

Jan: I'm sorry Anna. I didn't hear that. Can you say it again?

Anna: I am….uhh…uhhh…

Jan: (pauses to see if Anna can find the words). Are you feeling sick this morning?

Anna: No, not sick. Tired…I feel tired.

Jan: I am sorry to hear that, Anna. Can you tell me why you are tired?

Anna: Yelling…lots of yelling last night. Couldn't sleep.

Jan: I understand. I heard that one of the other residents down the hall was upset and yelling a lot last night. That would keep me awake. Is that what kept you from sleeping?

Anna: Mm-hmm.

Jan: Ok, do you feel like getting dressed and up now?

Anna: I don't know.

Jan: Are you hungry for breakfast now?

Anna: Yes…hungry.

Jan: Ok. How about I help you get dressed and up for breakfast now and then if you are tired, you can lie down for a nap later?

Anna: Ok.

(While helping Anna with AM care…)

Jan: What shirt do you want to wear today, blue or pink?

Anna: Blue, I think.

Jan: Ok. Here it is. Can you put it on? Oh, I saw your grand-daughter, Wendy here yesterday. How is she doing?

Anna: Good. She is…she is…

Jan: Wendy is….?

Anna: Going to have a baby.

Jan: Wow, that's great news! Are you happy to be a great-grandmother?

Anna: Yes, I like babies.

Jan: I like babies too. I like the smell of their skin and hair. What do you like about babies?

Anna: To hold them.

Jan: Me too. Now Anna, I need to ask you one other thing. How do you want your hair styled?

Anna: What?

Jan: Your hair. How would you like it done today?

Anna: Oh. Just wet a bit and brushed back.

Jan: Ok. Now it would be good to put on a sweater before you go to breakfast.

Anna: No, I'm not cold (slaps Jan's hand away as she lifts Anna's hand to help put sweater on)

Jan: Anna, please don't hit me when I try to help you. Does your arm hurt today?

Anna: Yes, it hurts.

Jan: Ok. I will let Mark, the nurse know that your arm hurts today.

Anna: Mm-hmmm.

Jan: Are you ready to move into your wheelchair?

Anna: Mm-hmmm.

Jan: Ok. Stand-up slowly with me. (Anna rises from the bed.) Now turn and sit in your chair. (Anna sits.) You are ready to go to breakfast. Do you want me to help you to the dining room?

Anna: Yes.

(In the dining room, Anna is seated at her table.)

Jan: Ok Anna. Breakfast will be ready in a few minutes. Do you want a drink, coffee or tea?

Anna: What?

Jan: Do you want coffee or tea?

Anna: Coffee.

Jan: Ok, here is some coffee. I will check on you when breakfast comes Anna.

Anna: Mm-hmmm.

Part 2:

Now let's practice how you could use these language skills when talking with residents with dementia. Here are some examples of resident statements or reactions that might show they are having trouble communicating. Write down what you would you say and which language skill(s) you would use to help you understand what they are trying to communicate?

1. Martha wanders into the dining room an hour before lunch time looking confused and upset. She says: "Have you seen ... have you seen it?"

   Write down/practice what you would say to Mrs. Johnson to help understand what she is trying to say:

   ____
   ____
   ____
   ____
   ____

   What language-based dementia communication skills would you be using?

   ____
   ____
   ____
   ____

2. You go to check on Karl in his room after a visit with his wife, who comes every day to play games or attend an activity. You ask him what they did during the visit and he says: "She knew I didn't want to go to bingo and instead we uhh..."

   Write down/practice what you would say to Karl to help understand what he is trying to say :

   ____
   ____
   ____
   ____
   ____

   What language-based dementia communication skills would you be using?

   ____
   ____
   ____
   ____

Appendix P – Questions for Reflection and Learning

Description of the experience
What happened?
Reflection
How do I feel about what happened?
Other factors
What did I know? What do I need to know?
Other options
What other choices did I have?
Learning
What will I do differently the next time?

Appendix Q – Take-home Resident Reflection Activity

The purpose of this activity is to help you think about what it is like for residents with dementia who have a hard time communicating with others and getting their message across. This activity should help you have a better understanding of how the residents experience this from their viewpoint. This activity has 3 steps and a few questions that you will be asked to think about and write a few things down. Please take a few minutes over the next 1-2 weeks to complete the activity and then bring it to your video-feedback session.

Step 1. Understand that your viewpoint may not be the same as the resident's viewpoint.

There are many ways that people can look at the same thing. For example, think of a situation when you felt upset or angry. Did others around you feel the same way? Did you wish that they could understand how you were feeling?

____
____
____

Now, think of a time when a resident displayed a behaviour or response that you had trouble understanding? What do you think were some of the possible causes? (examples: pain, hunger, frustrated, sad…) . This is your viewpoint, but the resident's might be different.

____
____
____

Step 2. Take the resident's viewpoint NOT your viewpoint.

The approach you are to think about before the video-feedback session is to imagine how THE RESIDENT feels about his or her communication troubles, NOT FROM YOUR POINT OF VIEW, but the resident's point of view. Another way to think of this is putting yourself "in the other person's shoes" each time you are trying to understand how they feel about a situation.

Over the next two weeks when you are talking with residents, take note of any signs of trouble they are having with communication (examples: forgetting words, using the wrong words, not remembering what they want to say, getting ideas/thoughts mixed up…).
Putting yourself in their shoes, how do you think this makes them feel?

____
____
____

Step 3: Check out (validate) your thoughts with the resident.

Ask the resident if what you are noticing is close to what they are feeling or thinking.
How you might say this is: "I get the sense that when you have trouble remembering words, this makes you feel angry (or frustrated or sad…). Am I right?"

Please write a few notes about how this approach worked over the past two weeks. Were your thoughts about how the resident was feeling correct?

____

____

____

(Adapted from Lobchuk et al., 2016, 2018)

Appendix R – HCA Demographic Information and Pre-Intervention Questionnaire

HCA Participant ID#________
Date:____________________

All of your answers will be keep private and confidential.
To start, please tell us some information about yourself.

1. What is your age? ________________years

2. What is your gender (check one)? Male ☐ Female ☐ Not applicable ☐

3. What is the highest level of schooling you completed (check one)?
   High school ☐ College program ☐ University degree ☐ Not applicable ☐

4. Did you complete a HCA Certificate program? Yes ☐ No ☐

5. What shift do you work most of the time (check one)? Days ☐ Evenings ☐ Nights ☐

6. What is your current position? Full-time ☐ Part-time ☐

7. What is your first language? English ☐ Other ☐ If other, which language? __________

8. Were you born in Canada? Yes ☐ No ☐ If not, what country? ____________________

9. How many full shifts have you worked in the past two weeks? ___________ # shifts

10. How many years have you worked on the current unit/floor? _________# years

11. How many years have you worked in long-term care (nursing home)? ______# years

12. How many years in total have you worked as a HCA? _________#years

<Please turn page>

13. Have you ever had training or education on how to talk to people with dementia (examples: P.I.E.C.E.S training, Alzheimer's Society in-service, etc.)? Yes ☐ No ☐

    If yes, what training/education? ____

Now thinking about the resident that will be video-taped with you in the study:

14. Rate how close your relationship is with the resident by drawing a mark | across the line below:

    ____

    Not at all close relationship **Very close relationship**

15. How long have your been working with the resident? ________________ months

16. Would you like to improve your relationship with the resident? Yes ☐ No ☐

17. Have you experienced any problems communicating with the resident?
    Yes ☐ No ☐
    If yes, please answer the two questions below:
    a. What communication problems have you had?
    ____
    ____
    ____

    b. How long have you had these communication problems with the resident?
    ________________ months

18. How often do you reflect upon (or think deeply) about your feelings and actions at work to help you understand the resident's situation?
    Draw a mark | across the line below:

    ____

    Never **All the time**

<Please turn page>

The reason for the next questions is to understand how comfortable you feel talking to residents with dementia. Please circle one number as an answer for each of the 6 questions below.

Note: The word 'troubled' in the questions can mean a resident who is upset, worried or unhappy, or is having problems getting along with staff and other residents.

1. **How competent (having the know-how, ability or skill) do you feel in talking to residents with dementia who are troubled?**

0 1 2 3 4 5 6 7 8 9 10
Not at all Extremely

2. **How confident (or how sure) do you feel in talking to residents with dementia who are troubled?**

0 1 2 3 4 5 6 7 8 9 10
Not at all Extremely

3. **How willing (or ready and prepared) are you to talk to residents with dementia who are troubled?**

0 1 2 3 4 5 6 7 8 9 10
Not at all Extremely

4. **How often do you talk to residents with dementia who are troubled?**

0 1 2 3 4 5 6 7 8 9 10
Not at all All the time

5. **How tolerant (or forgiving) are your team-mates (HCAs, nurses, etc.) when you talk to residents with dementia who are troubled?**

0 1 2 3 4 5 6 7 8 9 10
Not at all Extremely

6. **Does your role (or job) as a HCA allow you to talk to residents with dementia who are troubled?**

0 1 2 3 4 5 6 7 8 9 10
Not at all Extremely

<Please turn page>

The reason for these next questions is to understand how you view your job and the resident in your care. When answering these questions, please think about the resident that will be video-taped with you in the study.

Please circle one number as an answer for each of the 8 questions below.

1. **I can easily understand how the resident feels about things.**
   How often:

0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

2. **I deal very well with the resident's problems.**
   How often:

0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

3. **I feel I'm positively influencing the resident's life through my work.**
   How often:

0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

4. **I feel very energetic (or have lots of energy).**
   How often:

0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

<Please turn page>

5. I can easily create a relaxed (or calm) atmosphere for the resident.
How often:

0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

6. I feel exhilarated (or very happy, excited) after working closely with the resident.
How often:

0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

7. I have accomplished (or achieved, completed) many worthwhile things in my job.
How often:

0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

8. In my work, I deal with emotional problems very calmly.
How often:

0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

<Please turn page>

The reason for these next questions is to understand your view of your relationship with the resident. <u>When answering these questions, please think about the resident that will be video-taped with you in the study.</u>

Please circle one number as an answer for each of the 15 questions below.

1. **How often do the two of your see eye-to-eye?**

0 1 2 3 4
Not at all A great deal

2. **How close do you feel to the resident?**

0 1 2 3 4
Not at all A great deal

3. **How often do you enjoy sharing past experiences or memories with the resident?**

0 1 2 3 4
Not at all A great deal

4. **How often does the resident express appreciation (or thanks) for you and the things that you do?**

0 1 2 3 4
Not at all A great deal

5. **How attached are you to the resident?**

0 1 2 3 4
Not at all A great deal

6. **How often does the resident help you?**

0 1 2 3 4
Not at all A great deal

7. **How often do you sit and talk with the resident?**

0 1 2 3 4
Not at all A great deal

<Please turn page>

8. How much love do you feel for the resident?

0	1	2	3	4
Not at all				A great deal

9. To what extent (or how much) do the two of you share the same values?

0	1	2	3	4
Not at all				A great deal

10. When you really need it, how much does the resident comfort you?

0	1	2	3	4
Not at all				A great deal

11. How often do the two of you laugh together?

0	1	2	3	4
Not at all				A great deal

12. How often do you confide (or tell something private) in the resident?

0	1	2	3	4
Not at all				A great deal

13. How much emotional support does the resident give to you?

0	1	2	3	4
Not at all				A great deal

14. To what extent (or how much) do you enjoy the time the two of you spend together?

0	1	2	3	4
Not at all				A great deal

15. How often does the resident express feelings of warmth towards you?

0	1	2	3	4
Not at all				A great deal

You are finished! Thank you very much for answering the questions.

Appendix S – Resident Demographic Data Collection Tool

Resident Participant ID#________

Date:______________________

Age: _______ (years)

Gender: Male ☐ Female ☐ Not applicable ☐

Number of active medical diagnoses: ________

Number of medications received during the past month: __________

Sub-type of dementia: Alzheimer ☐ Vascular ☐ Lewy-Body ☐ Frontotemporal ☐
Unknown ☐ Other ☐ Describe: _________________________

Current Cognitive Performance Scale (CPS) score (0-6): _______

Current Index of Social Engagement (ISE) score (0-6): _______

Appendix T - HCA Post-Intervention Questionnaire

HCA Participant ID#________
Date:____________________

All of your answers will be keep private and confidential.

When answering the 4 questions below, please think about the resident that was video-taped with you in the study.

1. Rate how close your relationship is with the resident by placing a mark | across the line below:

____

Not at all close relationship — **Very close relationship**

2. Did your relationship with the resident improve during the study? Yes ☐ No ☐

   Why or why not? ____
   ____
   ____

3. Did your communication with the resident improve during the study? Yes ☐ No ☐

   If yes, how did it improve? ____
   ____
   ____

   If no, why do you think it didn't improve? __________________________________
   ____
   ____

4. How often do you reflect upon (or think deeply) about your feelings and actions at work to help you understand the resident's situation?
   Draw a mark | across the line below:

____

Never — **All the time**

<Please turn page>

The reason for the next questions is to understand how comfortable you feel talking to residents with dementia. Please circle one number as an answer for each of the 6 questions below.

Note: The word 'troubled' in the questions can mean a resident who is upset, worried or unhappy, or is having problems getting along with staff and other residents.

7. How competent (having the know-how, ability or skill) do you feel in talking to residents with dementia who are troubled?

0	1	2	3	4	5	6	7	8	9	10
Not at all										Extremely

8. How confident (or how sure) do you feel in talking to residents with dementia who are troubled?

0	1	2	3	4	5	6	7	8	9	10
Not at all										Extremely

9. How willing (or ready and prepared) are you to talk to residents with dementia who are troubled?

0	1	2	3	4	5	6	7	8	9	10
Not at all										Extremely

10. How often do you talk to residents with dementia who are troubled?

0	1	2	3	4	5	6	7	8	9	10
Not at all										All the time

11. How tolerant (or forgiving) are your team-mates (HCAs, nurses, etc.) when you talk to residents with dementia who are troubled?

0	1	2	3	4	5	6	7	8	9	10
Not at all										Extremely

12. Does your role (or job) as a HCA allow you to talk to residents with dementia who are troubled?

0	1	2	3	4	5	6	7	8	9	10
Not at all										Extremely

<Please turn page>

The reason for these next questions is to understand how you view your job and the resident in your care. <u>When answering these questions, please think about the resident that was video-taped with you in the study.</u>

Please circle one number as an answer for each of the 8 questions below.

9. I can easily understand how the resident feels about things.
How often:

0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

10. I deal very well with the resident's problems.
How often:

0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

11. I feel I'm positively influencing the resident's life through my work.
How often:

0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

12. I feel very energetic (or have lots of energy).
How often:

0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

<Please turn page>

13. I can easily create a relaxed (or calm) atmosphere for the resident.
How often:

0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

14. I feel exhilarated (or very happy, excited) after working closely with the resident.
How often:

0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

15. I have accomplished (or achieved, completed) many worthwhile things in my job.
How often:

0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

16. In my work, I deal with emotional problems very calmly.
How often:

0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

<Please turn page>

The reason for these next questions is to understand your view of your relationship with the resident. <u>When answering these questions, please think about the resident that was video-taped with you in the study.</u>

Please circle one number as an answer for each of the 15 questions below.

16. How often do the two of your see eye-to-eye?

0 1 2 3 4
Not at all A great deal

17. How close do you feel to the resident?

0 1 2 3 4
Not at all A great deal

18. How often do you enjoy sharing past experiences or memories with the resident?

0 1 2 3 4
Not at all A great deal

19. How often does the resident express appreciation (or thanks) for you and the things that you do?

0 1 2 3 4
Not at all A great deal

20. How attached are you to the resident?

0 1 2 3 4
Not at all A great deal

21. How often does the resident help you?

0 1 2 3 4
Not at all A great deal

22. How often do you sit and talk with the resident?

0 1 2 3 4
Not at all A great deal

<Please turn page>

23. How much love do you feel for the resident?

0 1 2 3 4
Not at all A great deal

24. To what extent (or how much) do the two of you share the same values?

0 1 2 3 4
Not at all A great deal

25. When you really need it, how much does the resident comfort you?

0 1 2 3 4
Not at all A great deal

26. How often do the two of you laugh together?

0 1 2 3 4
Not at all A great deal

27. How often do you confide (or tell something private) in the resident?

0 1 2 3 4
Not at all A great deal

28. How much emotional support does the resident give to you?

0 1 2 3 4
Not at all A great deal

29. To what extent (or how much) do you enjoy the time the two of you spend together?

0 1 2 3 4
Not at all A great deal

30. How often does the resident express feelings of warmth towards you?

0 1 2 3 4
Not at all A great deal

You are finished! Thank you very much for answering the questions.

Appendix U – Person-Centred Dementia Communication Coding Sheet

Video Name:	Coder Initials:
Length of video (minutes):	Number of minutes coded:
Number utterances: Number utterances coded: Number resident utterances:	

Communication Goal	Language –Based Communication Skills	Number of Observations
Reciprocity	1. Greeting 2. Completion of turns; giving time for the person to respond; do not interrupt 3. Open-ended questions that rely on semantic memory, not episodic memory 4. Choice questions that rely on semantic memory, not episodic memory 5. Yes/No questions that rely on semantic memory, not episodic memory 6. Affirmation: statements that indicate agreement, acknowledge feelings or are used with requests/instructions 7. Politeness to address resistiveness	
Sub-Total Reciprocity:		
Clarity/ Coherence	8. Announce intent clearly; inform about a topic change 9. Confirm understanding through restating what the resident said, summary of prior talk 10. Confirm understanding by asking for clarification 11. Statements that inform what is misunderstood 12. Rephrase to add clarity to a statement 13. Verbatim repetition 14. Ask the other person to repeat what they said 15. Use right-branching sentences; avoid left-branching sentences 16. Place modifiers after nouns 17. Place modifiers after verbs	
Sub-Total Clarity/Coherence:		
Continuity	1. Unfinished sentences that the resident is encouraged to complete 2. Matching comment 3. Matching association; offer one's opinion or information about a personal experience 4. Newsmarks: emphasis on the noteworthiness of the resident's prior statement	
Sub-Total Continuity:		
Total # Language-Based Skills Observations		

Element	**Person-Centred Communication Skills**	**Number of Observations**
Recognize	• To acknowledge the resident as a person, known by name, affirmed in a unique way (e.g. greeting, direct eye contact) *Note: Can also include Biographical Statements. Code when the staff member refers to something the resident's family, life, or day. This category is coded BY TOPIC, not by individual statement. DO NOT code general statements such as statements about the current weather situation	
Negotiate	• To consult about their preferences, desires, needs. o Much negotiation takes place over simple everyday issues, such as whether a person feels ready to get up, or have a meal, or go outdoors. o Negotiation gives a sense of control to a person with dementia	
Validate	• To acknowledge the reality of a person's emotions/feelings, and give a response on the feeling level • To appreciate and respond to the desire or need that a person may be expressing; to help if necessary, to convert it to an intention • To use empathy and gain some sense of what a person may be experiencing • To understand a person's definition of the situation • To respond sensitively to any signs that a person's definition of the situation is changing, and to move with any changes that occur ∗Note: to distinguish between validation and facilitation, statements that are more feeling-oriented should be categorized under validation and those that are more action-oriented should be categorized under facilitation.	
Facilitate	• To work together • To involve the person's initiative and abilities in a shared task, with a definite aim in view. • To enable a person to do what otherwise he/she wouldn't be able to do, by providing the missing parts of the action. • To enable interaction to get started, to amplify it and to help the person gradually fill it out with meaning • To enable a person to sustain his or her action; to keep it from falling into the void because of memory failure	

	• To be ready either to initiate or respond to the resident; neither rushing in too quickly, nor holding back for too long. • To enable the use of remaining abilities by requesting that the resident perform an activity of daily living. • To fill gaps in meaning (note: explaining the task to the resident is only facilitation if it is filling a gap in understanding and the resident prompted the explanation).	
Total # PCCommunication Skills Observations		
Total # Statements Uncategorized		

General observations and/or contextual comments about the video:

Appendix V – Providers' Interaction Comfort Scale (PICS)

Please circle one number as an answer for each of the 6 questions below.

Note: The word 'troubled' in the questions below can mean someone who is upset, worried or unhappy, or is having problems talking or getting along with staff and other residents..

1. **How competent* do you feel in talking to residents with dementia who are troubled? (* having the ability, knowledge, or skill)**

0	1	2	3	4	5	6	7	8	9	10
Not at all										Extremely

2. **How confident* do you feel in talking to residents with dementia who are troubled? (* feeling certain about something)**

0	1	2	3	4	5	6	7	8	9	10
Not at all										Extremely

3. **How willing* are you to talk to residents with dementia who are troubled? (* ready or prepared)**

0	1	2	3	4	5	6	7	8	9	10
Not at all										Extremely

4. **How often do you talk to residents with dementia who are troubled?**

0	1	2	3	4	5	6	7	8	9	10
Not at all										All the time

5. **How tolerant are your team-mates (HCAs, nurses, etc.) when you talk to residents with dementia who are troubled?**

0	1	2	3	4	5	6	7	8	9	10
Not at all										Extremely

6. **Does your role as a HCA allow you to talk to residents with dementia who are troubled?**

0	1	2	3	4	5	6	7	8	9	10
Not at all										Extremely

(Bowles et al., 2001)

Appendix W – Personal Accomplishment (PA) Scale

Please circle one number as an answer for each of the 8 questions below.

1. **I can easily understand how the resident feels about things.**
   How often:

0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

2. **I deal very well with the resident's problems.**
   How often:

0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

3. **I feel I'm positively influencing the resident's life through my work.**
   How often:

0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

4. **I feel very energetic (have lots of energy).**
   How often:

0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

5. I can easily create a relaxed atmosphere for the resident.
How often:

0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

6. I feel exhilarated (very happy or excited) after working closely with the resident.
How often:

0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

7. I have accomplished (achieved or completed) many worthwhile things in my job.
How often:

0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

8. In my work, I deal with emotional problems very calmly.
How often:

0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

(Maslach & Jackson, 1981; Maslach et al., 2016)

Appendix X – Mutuality Scale (MS)

Please circle one number as an answer for each of the 15 questions below.

1. **How often do the two of your see eye-to-eye?**

0	1	2	3	4
Not at all				A great deal

2. **How close do you feel to the resident?**

0	1	2	3	4
Not at all				A great deal

3. **How often do you enjoy sharing past experiences with the resident?**

0	1	2	3	4
Not at all				A great deal

4. **How often does the resident express appreciation (thanks) for you and the things that you do?**

0	1	2	3	4
Not at all				A great deal

5. **How attached are you to the resident?**

0	1	2	3	4
Not at all				A great deal

6. **How often does the resident help you?**

0	1	2	3	4
Not at all				A great deal

7. **How often do you sit and talk with the resident?**

0	1	2	3	4
Not at all				A great deal

8. **How much love do you feel for the resident?**

0	1	2	3	4
Not at all				A great deal

9. To what extent (how much) do the two of you share the same values?

0	1	2	3	4
Not at all				A great deal

10. When you really need it, how much does the resident comfort you?

0	1	2	3	4
Not at all				A great deal

11. How often do the two of you laugh together?

0	1	2	3	4
Not at all				A great deal

12. How often do you confide (tell them something private) in the resident?

0	1	2	3	4
Not at all				A great deal

13. How much emotional support does the resident give to you?

0	1	2	3	4
Not at all				A great deal

14. To what extent (how much) do you enjoy the time the two of you spend together?

0	1	2	3	4
Not at all				A great deal

15. How often does the resident express feelings of warmth towards you?

0	1	2	3	4
Not at all				A great deal

(Archbold et al., 1990; Pucciarelli et al., 2016)

Appendix Y – Interview and Focus Group Guides

Health Care Aides:

Thank you for agreeing to be a part of this interview/focus group. The purpose of this interview/focus group is to get your opinion about how things went during the study and the communication intervention overall. Before we start, I would like to remind you that anything that is said during the interview/focus group is confidential and individuals will not be identified by their comments. The focus group/interview will be audio-recorded so that it can be typed out into a paper record that can be read over for general ideas and themes. It should last around 30 minutes. Are there any questions before we start?

First, let's talk about the education session on communication.

1. Do you feel that the content/information covered met your learning needs about communication with residents with dementia? Describe how it did/didn't meet your needs. Prompt: What information was helpful/not helpful?
2. Was the format (e.g. length of the session, learning activities) acceptable to you and helpful to your learning? Why was/wasn't it acceptable/helpful?
3. Do you feel the education session helped you improve your communication and/or relationship with residents with dementia? Describe how it did/didn't help. Prompt: Do you have any specific examples of how it helped your communication/relationship?
4. Would you change or improve the session in any way? If so, how would you change it?

Now, let's talk about your experiences with the video and the video-feedback session.

5. How did you find the experience of being videoed during the care activity with the resident? Prompts: Did you or the resident feel comfortable/uncomfortable? If uncomfortable, what would make it easier for you/the resident?
6. Was the format of the one-on-one video-feedback session (e.g. length of the session, learning activities) acceptable to you and helpful to your learning? Why was/wasn't it acceptable/helpful?
7. Do you feel the video-feedback helped you improve your communication and relationship with the resident? Describe how it did/didn't help.
8. Would you change or improve the video-feedback session in any way? If so, how would you change it?

Now, thinking about the communication learning/intervention in this study overall (i.e. education session plus video-feedback):

9. Compared to your past learning methods/opportunities at work, how would you rate this teaching approach? Better, worse, the same? Describe why you feel that way.

10. Do you feel there are benefits or disadvantages of this teaching approach compared to other learning methods that you are used to? If so, what are they?

11. During the study, was there anything that helped the communication approach with residents work? If so, please explain.

12. During the study, was there anything the stopped/prevented the communication approach with residents from working. If so, please explain.

13. Do you have any other comments or feedback that you would like to talk about?

<u>Residents</u>

Thank you for agreeing to be interviewed. The reason for this interview is to get your opinion about how things went for you during the video-taping for the study. Before we start, I would like to remind you that anything you say to me is confidential and you will not be identified by anything you say. The interview will be audio-recorded so that it can be typed out into a paper record that can be read over for general ideas and themes. The focus interview should last around 10-15 minutes. Do you have any questions before we start?

1. How did you find the experience of being video-taped with the HCA? Prompts: Did you feel comfortable or did it bother you? If it bothered you, why did you feel that way? What would make it easier?
2. Recently, have you noticed any change in *(the HCA's name)* ability to talk to you or understand you? If so, please explain.
3. Recently, have you felt any closer to *(the HCA's name)*? If so, please explain why. Prompts: Have you felt a stronger relationship, bond or closeness with them?
4. Is there anything else about the video-taping that you would like to talk about?

Thank you very much for your time today.

Nursing Leadership

Thank you for agreeing to be a part of this focus group. The purpose of the focus group is to get your opinion about how things went during the study and the communication learning/intervention overall. Before we start, I would like to remind you that anything that is said during the focus group is confidential and individuals will not be identified by their comments. The focus group will be audio-recorded so that it can be transcribed and reviewed/analyzed for general ideas and themes. The focus group should last around 30 minutes. Does anyone have any questions before we start?

1. Describe your perception of the overall effectiveness or impact of the intervention (i.e. education session plus video-feedback) on the HCAs' communication approaches and relational interactions with residents. Prompts: Have you noticed/heard about any improvements in communication, interactions relationships between the HCAs and residents?
2. From a leadership perspective, what are your thoughts in regards to the ease of use and implementation of a communication intervention that uses video-feedback?
3. Do you feel there are benefits or disadvantages of using video-feedback compared to other learning methods that are used in LTC? If so, what are they?
4. During the study, were there any factors that facilitated/supported the communication intervention overall? If so, please explain.
5. During the study, were there any factors that hindered the communication intervention overall? If so, please explain.
6. Thinking about sustainability, what are the facilitators or barriers you see to the use of video-feedback to improve communication approaches between staff and residents? Is this a viable approach to education in LTC?
7. Do you have any other comments or feedback that you would like to put forward that we haven't discussed?

Thank you very much for your time today.