IMPLEMENTING PERSON CENTERED CARE IN NURSING HOMES

Cheryl Ann Rosemond

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Approved by:

Susan Ennett

Laura Hanson

Bryan Weiner

Lynn Blanchard

Anna Schenck

ABSTRACT

Cheryl Ann Rosemond
Implementing Person Centered Care in Nursing Homes
(Under the direction of Susan Ennett)

Despite numerous clinical and regulatory initiatives to improve the quality of nursing home care, serious problems persist. A 2007 national study found that 17% of the 1.7 million residents living in nursing homes received care that either caused harm or could lead to death or serious injury. In contrast to the current focus on operational efficiency, person centered care represents an innovation in the delivery of nursing home care by focusing daily routines on residents' needs and preferences. This dissertation applies innovation implementation theory to understand what might help or hinder the implementation of person centered care in nursing homes.

Two complementary methodologies were used. Study 1 used 24 semi-structured interviews and content analytic methods to understand direct caregivers' views about the climate for implementation of person centered care in their nursing home. Study 2 employed a multiple case study design and pattern matching logic to determine why some nursing homes were more effective than others in implementing person centered care. Secondary data came from eight nursing homes participating in the North Carolina Person Centered Care Program. Rival hypothesis testing was conducted to examine data

that could have provided alternative explanations for the implementation effectiveness of nursing homes.

Implementation effectiveness was positively associated with the quality of management communications to workers about person centered care and with implementation climate as viewed by direct caregivers. Implementation was more effective when leaders communicated about the innovation in a way that demonstrated cultural sensitivity to the attributes of workers and when characteristics of the innovation fostered smooth operations in the daily routines of direct caregivers. Counter to theoretical predictions, implementation effectiveness was positively associated with the scope of the person centered care project each home implemented. Implementation effectiveness was not associated with the presence of financial resources, management support, organizational stability, or the amount of time and training offered to workers to learn about person centered care.

To David and Lila,

who provide daily reminders that step follows step and hope follows courage.

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CHAPTER 1

STUDY OVERVIEW

Introduction

Despite longstanding public concern about the quality of nursing home care, serious problems persist (Institute of Medicine Committee on Improving Quality in Long-Term Care, 2001). For instance, a federally funded national study showed that 17% of the 1.7 million residents living in nursing homes received care that either caused harm or could have lead to death or serious injury (U.S. Government Accountability Office, 2007). Even though many clinical and regulatory initiatives to improve care have been undertaken, two themes pervade the research literature on nursing homes: 1) many residents receive poor care; and 2) caregivers have low quality jobs and work environments (Eaton, 2000).

By focusing on the resident rather than institutional routines, person centered care is an innovative model aimed at improving quality of care and enhancing caregiver job satisfaction by changing the organizational culture of nursing homes. In contrast to the prevalent institutional model of care where daily routines are based on maximizing operational efficiency, person centered care is based on positive relationships between caregivers and residents, where work practices, care practices and the environment are tailored to residents' life experiences and preferences (Gerteis et al., 1993, Kane, 2001, Laine & Davidoff, 1996). The adoption and implementation of person centered care

requires significant organization-wide change in care delivery and workplace practices.

The purpose of this dissertation is to apply innovation implementation theory to understand what might help or hinder the implementation of organizational level change that promotes person centered care in nursing homes (Klein, Conn & Sorra, 2001). Accordingly, the research was guided by a theoretical framework of innovation implementation developed by researchers at the University of Maryland (Klein & Sorra, 1996, Klein et al., 2001). The framework, fully elaborated in Chapter Two, offered guidance to the research by identifying constructs and relationships at the organization level salient to the implementation of the innovation: person centered care. The framework posits that the constructs of **management support**, **financial resources**, **implementation policies and procedures**, and **implementation climate** are directly or indirectly related to the **implementation effectiveness** of the innovation. According to the Klein et al. framework, the effects of management support and financial resources on implementation effectiveness are mediated, first, by the organization's implementation policies and practices, and subsequently by worker perceptions of the organizational priority of the innovation: this is called the **implementation climate**. Although originally used to test the implementation of new software in the manufacturing industry, the Klein et al. framework has also been used to study innovation implementation in complex health services organizations (Helfrich, Weiner, McKinney & Minasian, 2007).

Because of factors specific to the nursing home setting that will be discussed in Chapter 2, the basic framework was adapted by adding four constructs. The additional constructs are: 1) **innovation characteristics**, added to account for differences in the scope of the project each nursing home implemented; 2) **organizational stability**, needed

to examine the effect of high worker turnover prevalent in the average nursing home; 3) **innovation-values fit,** a construct that addresses the fit between the core tenets of person centered care and the values held by the worker group most affected by its implementation; and 4) **innovation-operations fit**, a construct that focuses on the extent to which implementing person centered care in nursing homes adds additional burden to the daily operations of already overworked caregivers, and thereby may undermine implementation.

Based on this modified framework, two studies were conducted to examine the innovation characteristics, organizational contexts, policies and practices, and worker perceptions associated with effective implementation of person centered care. The first study focused on the relationships between implementation climate and innovation fit through analysis of direct caregivers' values and views on the implementation climate for person centered care in their facility. Guided by the results of this first study, the second study examined the contributions of innovation characteristics, organizational context, implementation policies and practices, and implementation climate to the outcome of interest: implementation effectiveness. This second study used secondary analysis of qualitative and quantitative data derived from the implementation records of the Person Centered Care (PCC) Program, an initiative of The Carolinas Center for Medical Excellence (CCME), North Carolina's Quality Improvement Organization. The PCC Program was funded by the Centers for Medicare & Medicaid Services in an effort to introduce an innovation aimed at improving care through changing nursing homes' organizational practices. The program was piloted in 22 states from September 2004 through August 2005, and included eight North Carolina nursing homes.

A brief overview of the aims of each study and the methodological approaches is described below and elaborated in Chapter Three.

Study 1: Direct caregivers' views about the implementation of person centered care

The aim of Study 1 was to understand direct caregivers' views about the implementation of person centered care in their workplace, and the fit between the climate for implementation in their home and their values and daily routines. To investigate the views of direct caregivers about implementation, semi-structured telephone interview data from 24 direct caregivers was coded and content analyzed using a standard qualitative method: directed content analysis (Hsieh & Shannon, 2005). Guided by constructs from the theoretical framework, directed content analysis strategies were used to offer supporting or non-supporting evidence relative to the research questions (Klein & Sorra, 1996). The goal of using directed content analysis was to accurately portray the views of direct caregivers, examined through the lens of innovation implementation theory.

Study 2: Innovation characteristics, organizational context, processes, and worker views related to implementation effectiveness of person centered care in nursing homes

The aim of Study 2 was to determine why some nursing homes are more effective than others in implementing person centered care. The study focused on identifying the innovation characteristics, organizational attributes, processes, and worker perceptions that distinguished nursing homes that were more effective from those that were less

effective in implementing person centered care. To investigate the research questions posed in Study 2, a holistic, multiple case study strategy was used (Yin, 2003). Each of the eight participating nursing homes comprised a case. A within-case narrative, guided by constructs from the Klein et al. framework, was used to test the theoretical framework. Then, using an extreme case comparison strategy, cases were categorized based on the outcome: implementation effectiveness. Three cases rated by expert opinion as HIGH in implementation effectiveness were compared with two cases ranked LOW in implementation effectiveness. Data analysis from the three "partially effective" nursing homes permitted a more nuanced understanding of the markers of successful innovation implementation. Data matrices were constructed to display the data relative to the study constructs. Using pattern matching logic, a cross-case analysis was employed to test how consistently the hypothesized relationships were supported or refuted by the data (Yin, 2003).

Significance

Implementing new practices in healthcare organizations is demanding, time-consuming and expensive. Resnick, Quinn & Baxter (2004) reported that less than half (45%) of nursing homes were successful at implementing one change in clinical practice, such as falls reduction or pain management, even when their leadership expressed an intent to change. If less than half of nursing homes could successfully implement a change in one clinical care practice, even fewer organizations are poised to successfully implement organization level change such as person centered care. This research provides a unique opportunity to examine how eight North Carolina nursing homes, purposefully

chosen for their previous success in implementing a change in one clinical care practice, implemented changes in organizational practices that promoted person centered care. By changing work practices, care practices, and the physical environment, nursing homes that successfully implement person centered care may improve the daily life experience of nursing home residents and the workers who care for them. This research is poised to: 1) advance theory by applying a previously tested framework of implementation effectiveness in a new context; and 2) address an important gap in our scientific understanding of what innovation characteristics, organizational attributes, processes and worker perceptions characterize nursing homes that are effective in implementing person centered care. The results have the potential to be directly applied by nursing home leaders who are engaging in organization-wide efforts to improve resident care and the workplace environment.

CHAPTER 2

LITERATURE REVIEW

THE IMPERATIVE FOR EXPANDED AND IMPROVED NURSING HOME CARE

Introduction

Individuals and families often approach nursing home placement with great apprehension, largely because of fears about the quality of care they will receive. One study of hospitalized elders showed that more than 50% were "very unwilling" or "would rather die" than move permanently into a nursing home (Mattimore et al., 1997). This perception of nursing home placement is understandable given media portrayals of the loneliness, boredom, and hopelessness that residents experience in nursing homes ("Nursing homes business as usual," 2006). Historical factors only reinforce this negative public image. The nursing homes of today grew out of the poorhouses of the early 1900s, in which the physical environment was often filthy and corrupt management practices were commonplace (Winzelberg, 2003). Institutional care such as that received in the poorhouses, or the nursing homes of today, is often considered a last resort for individuals and families, yet an estimated 42% of the U.S. population aged 70 years and older will spend some time in a nursing home before they die (Murtaugh, Kemper,

Spillman & Carlson, 1997). Nursing homes are likely the most complex of all the healthcare organizations in the United States. While caring for a population of 1.7 million frail and disabled elders, all of the approximately 17,000 United States nursing homes operate under difficult organizational stresses (Walshe & Harrington, 2002). Compounding the existing organizational stresses, the population of residents in many nursing homes is divided into two groups requiring different approaches to care: 1) those residents receiving rehabilitation with the expectation of going home; and 2) those who intend to live and die in the nursing home. Workers to care for both resident groups are in short supply, resident acuity is high, costs are increasing, caregivers have low quality jobs, and the quality of care for residents is substandard (Eaton, 2000). This current situation, if not ameliorated, is poised to worsen as a rapidly expanding population of older adults requires more nursing home care.

Projections for nursing home care

By 2030, the population size of those people over 65 is expected to double. By 2020, the population size of those over 85, and the group most likely to require nursing home care, is also expected to double (Ouslander, Osterweil & Morley, 1997). While forecasting the need for an increased number of nursing home beds is complicated by the difficulties of predicting disability rates, improvements in medical technology, and both social and economic trends, it is estimated that the nursing home industry will need to grow 10-25% to meet the demand created by future cohorts of elders with increasing rates of disability (Lakdawalla et al., 2003).

Projected caregiver shortages

This expected growth in the need for nursing homes will put increasing demands on a workforce that is already in crisis (National Commission for Quality Long-Term Care, 2006). Currently, the nursing home industry is experiencing shortages and high turnover in nurses and nursing assistants, the worker groups that provide the majority of hands-on care for residents. Nationally, average annual turnover for nurses is 55.4% and average turnover for nursing assistants is 85.8% (Castle & Engberg, 2005). Compounding these problems, it is estimated that between 2000 and 2030, the number of trained direct caregivers is projected to decrease by 50% (U.S. Government Accountability Office, 2002). This projected shortage is noteworthy because numerous previous studies have shown that an adequate number of trained workers is essential for the provision of quality nursing home care (Barry, Brannon & Mor, 2005, Castle & Engberg, 2005, Harrington, Zimmerman, Karon, Robinson & Beutel, 2000). In addition to the challenges presented by the projected need for more nursing homes and the need for more workers to provide care, issues around the dominant—institutional—model and quality of care in nursing homes deserve further attention.

Institutional model of care

In the institutional model of care, disengagement among residents in nursing homes is encouraged indirectly through cost containment efforts to promote operational efficiency and resident manageability (Kane et al., 1997). For example, rigidly scheduled bathing, eating, and activity times may not maximize residents' interests or their participation. Residents are likely to be labeled as disinterested or non-compliant if their

own preferences for when to do activities of daily living conflict with organizational activity schedules (Avorn & Langer, 1982).

The institutional model may also hinder the efforts of workers to do what they came to do: care (Bowers, Esmond & Jacobson, 2000). Providing care to frail elders requires workers to demonstrate patience, compassion, and an understanding of the unique qualities of the person being cared for. With the institutional model's high value on operational efficiency, workers who complete caregiving tasks in a timely manner are recognized as "good" workers, while those who accomplish fewer tasks, but take the time to build relationships with their residents, are perceived as impeding operations (Colon-Emeric et al., 2006). Because caregivers distinguish themselves by their caring, and caring takes time, the institutional model may be a source of job dissatisfaction in nursing homes (Bowers, Esmond & Jacobson, 2003, Sung, Chang & Tsai, 2005). However, there have been attempts to improve the quality of nursing home care. To date, the federal government has adopted two primary approaches to promote quality care in nursing homes: regulatory and quality improvement approaches (Castle & Engberg, 2005, Anderson, Issel & McDaniel, 2003).

Regulatory attempts to improve care

Regulatory approaches have a long history in nursing homes. These approaches require state and federal legislation affecting all nursing homes to be enacted. For instance, a regulatory approach enacted in 1987, the federal Omnibus Budget Reconciliation Act (OBRA87), explicitly focused on instituting regulations to improve the health, safety, and well-being of nursing home residents (National Long Term Care

Ombudsman Resource Center, 2001). These regulations were aimed at ensuring the quality of bedside care for individual residents, such as requiring certain protocols for medication administration, care planning, and nutrition. With the application of this legislation, the mandatory annual state inspection process—called "survey"—resulted in comprehensive and complicated rules that established nursing homes as the most highly regulated industry in the United States health care system (Walshe & Harrington, 2002).

Today, nursing homes receive an unannounced site visit to survey the organization. During the survey, three to five state officials spend several days inspecting the facility, reviewing resident charts, and questioning staff and residents about work policies and care practices. Results of the surveys are largely punitive, in that substandard care practices called "deficiencies" are made publicly available on the Internet. In addition, facilities determined to be out of compliance with OBRA87 standards may have to pay fines, implement a correction plan, or forego payment for service (Castle & Engberg, 2005). Accordingly, the survey process is viewed as burdensome to nursing homes and frequently requires additional staff to ensure regulatory adherence (Ouslander et al., 1997).

Quality improvement approaches

Like regulatory initiatives, quality improvement initiatives are aimed at improving the quality of resident care. Unlike regulatory approaches, more recent quality improvement approaches rely on voluntary participation from individual homes that want to improve their publicly reported performance on a set of quality measures. Quality measures provide the public with standardized indicators of individual level nursing

home characteristics such as: 1) the number of residents in restraints; 2) the number of residents with pressure ulcers; or 3) the number of residents with chronic pain. While the federal government funded the Nursing Home Quality Initiative in 2002 (Centers for Medicare & Medicaid Services, 2005), the subsequent activities of government funded quality improvement initiatives are centralized in each state. A state's Quality Improvement Organization (QIO) is contracted by the Centers for Medicare & Medicaid Services to enlist the voluntary participation of nursing homes across the state who want to improve the quality of their care. Homes receive technical assistance in the form of training and individual consultation from the QIO, usually for one year. During the year, the participating homes plan for change, collect data about their intended change, and implement new policies and practices around the desired change. Every nursing home's performance on a set quality measures, regardless of whether they participated in quality improvement, are available to the public on a web site entitled Nursing Home Compare (Centers for Medicare & Medicaid Services, 2008).

Limits to Improving Quality of Care

Taken together, both regulatory and quality improvement approaches begin with the intent to achieve better care for individual nursing home residents. However, as reported by a committee of experts appointed by the Institute of Medicine, there is no strong evidence that these approaches have solved major quality problems in nursing home care (Institute of Medicine Committee on Improving Quality in Long-Term Care, 2001). Nearly twenty years after OBRA87, the average number of deficiencies per home was 4.7 and 40% of surveyed facilities failed to maintain passing scores on basic

standards of care over a four-year period (U.S. Government Accountability Office, 1999). While some improvements in care have occurred in the last ten years, such as the reduction of restraint use, many nursing home residents still experience pain, pressure sores, and malnutrition—all preventable conditions (Centers for Medicare & Medicaid Services, 2007, Anderson, Corazzini & McDaniel, 2004). The Institute of Medicine committee concluded that the goals of individual level approaches were difficult to achieve because organizational level factors in nursing homes, such as models of care, caregiver shortages, or ineffective management practices prevented broad-based, sustainable change (Institute of Medicine Committee on Improving Quality in Long-Term Care, 2001).

Alternative Approaches: Person Centered Care

A new model of care in nursing homes—person centered care—represents a third approach to improving both the quality of care and the workplace environment in nursing homes. Because the nursing home environment is truly their home, this model is primarily aimed at improving the care for long-stay nursing home residents. Person centered care is based on positive relationships between caregivers and residents: work practices, care practices and the environment are tailored to residents' life experiences and preferences (Happ, Williams, Strumpf & Burger, 1996, Kane, 2001). This approach is unlike the more prevalent institutional model of nursing home care where "one size fits all" and where daily routines such as cleaning, feeding and keeping residents dry in a timely and efficient manner continue to rank among the primary expectations for caregivers (Evans, 1996, Kane, 2001).

Person centered care puts people and their social experiences at the heart of everyday care practices in nursing homes and supports caregiving practices by valuing both relationships and the time it takes to form them (Anderson et al., 2005). A person centered approach to caregiving in nursing homes does not mean that caregivers discount clinical approaches or lack skills that support feeding, bathing, and toileting. Rather, these tasks are performed in the context of residents' distinct physical abilities, values and preferences. Person centered care is built upon three critical attributes that caregivers need to care for frail elders residing in nursing homes: 1) knowing the resident; 2) having a relationship with the resident; and 3) offering choices about care routines that are based on resident preferences (Happ et al., 1996).

Private consultants such as the Pioneer Network, Green House Project, Wellspring, and Quality Improvement Organizations are providing nursing homes with technical assistance to implement this innovative approach to care (The Pioneer Network, 2007, The Green House Project Team and NCB Capital Impact, 2007, Reinhard & Stone, 2001). Moreover, the Centers for Medicare & Medicaid Services piloted person centered care in 2004. By extending the focus of attention beyond the bedside to address the organizational changes needed to support caregiving relationships, person centered care is poised to address the shortcomings of previous approaches to improving the quality of care in nursing homes.

THEORETICAL BACKGROUND

While the imperative for improvements in the quality of nursing home care is clear and the tenets of person centered care are favorably regarded by leaders in the

nursing home industry, the feasibility of implementing such a broad based shift from the prevalent model of care is unknown (National Commission for Quality Long-Term Care, 2006). Theories of innovation implementation may inform this gap in understanding. The theoretical underpinning of innovation implementation in complex organizations such as nursing homes has its roots in the diffusion of innovation (Rogers, 2003). Although early diffusion theory relates to how individuals adopt change, later research addresses the nature of the change process in organizations (Greenhalgh, Robert, Macfarlane, Bate & Kyriakidou, 2004). Concomitantly, organizational theories have furthered an understanding of the change process in complex organizations where a variety of worker groups may have different values and goals (Klein & Sorra, 1996, Anderson et al., 2004). What follows is: 1) a brief overview of diffusion of innovation theory; 2) a discussion of current research on innovation implementation in the nursing home setting; 3) presentation of the Klein et al. framework and the rationale for its use in this research; and 4) modifications to the Klein et al. framework, made to more aptly apply it to the nursing home setting.

Diffusion of Innovation

In a classic work, (Rogers, 1995) defines the diffusion of innovation as the study of how ideas, services, or products are adopted and used by individuals. Rogers describes the diffusion process as largely sequential and occurring over several distinct phases. The first phase, adoption, occurs as potential users first learn about the innovation and decide whether to adopt or reject it. The second phase, implementation, occurs when users experiment with the innovation and begin to put it to use. The third

phase, called confirmation, commitment or institutionalization, occurs when the innovation becomes part of a familiar routine and is used over time. While in practice, the lines between adoption, implementation, and institutionalization are often blurry, Roger's descriptions of the diffusion phases are useful to researchers studying individual or organizational change.

Nature of the change process

Roger's early work focused on characteristics of the innovation—such as trialability, observability, and compatibility—as determinants of the diffusion process. Later research focused on the characteristics of individual adopters, such as "early adopters" or laggards, in an attempt to further explain the diffusion process (Rogers, 1995). More recent research has considered the dynamic interplay between innovation characteristics and adopter characteristics as providing a more robust explanation of the diffusion process (Ferlie & Shortell, 2001). This concept of dynamic interplay, or mutual adaptation, suggests that a stronger "fit" between the innovation characteristics and the values and norms of the adopters improves the implementation of innovations (Klein & Sorra, 1996, Denis, Hebert, Langley, Lozeau & Trottier, 2002).

Change in organizations

While early work in the diffusion of innovation examined how individuals adopted innovations, similar concepts were later applied to understand which factors influenced diffusion in organizations (Klein & Sorra, 1996, Frambach & Schillewaert, 2002). As diffusion concepts were applied to organizations, several factors distinguished

themselves as deserving consideration. First, it became important to understand the influences of power balances in organizations (Ferlie & Shortell, 2001), and to identify whether the decision to adopt an innovation was mandated at the level of management or was voluntary for organizational members (Helfrich, 2004). For instance, in the Person Centered Care Program referred to in Chapter 1 and fully described in Chapter 4, consent to participate was given at the local level by administrators who, based on information provided by an external quality improvement organization, made the decision to adopt on behalf of their nursing homes.

Second, the mechanisms of diffusion through an organization could be characterized as being on a continuum from "let it happen," where diffusion of the innovation is largely a passive process that occurs through social networks, or "make it happen," where spread is planned, orderly, and introduced to users through knowledge transfer or "re-engineering" organizational practices (Greenhalgh et al., 2004). In the Person Centered Care Program, person centered care was conceptualized as a planned, social (as opposed to technical or managerial) innovation adapted to the nursing home with the tailored technical assistance of an external agency (the QIO).

Third, the levels of complexity in both the organization and the innovation may influence the implementation process. As opposed to simple organizations where there may be only one category of workers, complex organizations include a variety of worker groups that may have different values and goals (McDonald, 2005). These differing values and goals may make for differing judgments about innovation characteristics, such as its relative advantage or observability. In turn, these differing judgments may affect the use of an innovation. For example, in complex organizations such as nursing homes,

direct caregivers may use an innovation that supports their values by increasing the time available for hands-on resident care while nursing supervisors begrudge such an innovation because their staff's work efficiency is decreased.

Complex innovations require the coordinated use of multiple worker groups (Klein & Sorra, 1996, Gallivan, 2001). Examples of complex innovations in complex healthcare organizations include clinical practice guidelines in long term care (Resnick et al., 2004), clinical information systems in integrated delivery systems (Weiner, Savitz, Bernard & Pucci, 2004), and clinical process innovations in integrated delivery systems (Savitz & Kaluzny, 2000). Characteristic of each of these complex innovations is their dependence on coordination between worker groups to achieve effective implementation. For example, because the introduction of new technologies requires re-design of clinical processes, administrators and clinicians in integrated delivery systems must coordinate their efforts if effective implementation of clinical information systems is to be realized (Weiner et al., 2004). In general, implementing complex innovations into complex organizations is an adaptive process whereby the organization, and its individual members, change in response to the innovation, and the innovation is adapted to the organization over time (Anderson et al., 2004, Denis et al., 2002). As a complex innovation introduced into a complex organization, the implementation of person centered care into nursing homes is an example of the most challenging, and least understood diffusion process.

INNOVATION IMPLEMENTATION IN NURSING HOMES: CURRENT RESEARCH

The current literature contains only a few studies whose purpose was explicitly to examine the implementation of organizational change to improve the quality of care in the nursing home setting. Studies typically examined interventions aimed at individual level change in resident care, not organization level change, such as person centered care. Collectively, research conducted on introducing change in nursing homes suggests that inquiry into three broad aspects of the implementation phase deserve focused attention: 1) organizational context; 2) implementation processes; and 3) worker perceptions.

Organizational Context

Many conditions in the nursing home industry act as potential barriers to the implementation of organization-wide change such as person centered care. Nursing homes serve a vulnerable and often invisible population of frail and disabled elders while operating with limited financial resources and an unstable workforce (Barry et al., 2005). The above challenges are amplified by a broader context of high regulatory scrutiny and public distrust (Walshe & Harrington, 2002, Mattimore et al., 1997).

Empirical research in nursing homes has demonstrated that contextual factors such as how committed management is to the change effort, the amount of financial support that is made available to support change, and the overall agreement between worker groups about change, influence implementation effectiveness (Resnick et al., 2004, Schrijnemaekers, van Rossum, van Heusden & Widdershoven, 2002). Resnick (2004) reported that less than half (45%) of nursing homes were successful at

implementing only one change in bedside care, such as falls reduction or pain management, even when management expressed an intent to change. A Scandinavian study of *snoezelen* (tailored sensory stimulation) implementation for nursing home residents with dementia identified worker shortages in the nursing home as a major barrier to implementation (van Weert et al., 2004). The combined problems of low staff to resident ratios and high staff turnover mean caregiver workloads are high (Harrington & Swan, 2003). By limiting the time, energy, and resources available for change, contextual factors within the organization may limit direct caregivers' ability to tailor care to their residents' preferences and capabilities, the cornerstone of person centered care (Bowers et al., 2003). Because nursing homes operate against a backdrop of high organizational stress, understanding the context into which person centered care is implemented is key to understanding implementation effectiveness.

Implementation Processes

Implementing change in nursing homes is difficult because barriers exist to administering effective processes, such as policies and practices, to support the innovation. Because time to learn new skills is short and training a workforce that frequently turns over are consistent challenges to implementation, understanding the extent to which nursing homes were successful in putting policies and practices in place to give staff needed training and time to try out person centered care is key to understanding implementation effectiveness.

Process factors consistently cited in the nursing home literature point to the importance of management providing high quality training to all worker groups across all

shifts, enacting strategies to increase the participation level of workers in training initiatives, and tailoring the innovation to the unique characteristics of the organization (Resnick et al., 2004, van Weert et al., 2004). For instance, one mixed method study examined the implementation of clinical practice guidelines related to pain and falls in a nursing home. Process factors that explained the poor implementation outcomes were cited as: the presence of multiple competing demands, such as the burden of required documentation; the difficulty of conveying consistent messages to staff who turn over frequently; and maintaining ongoing communication about the program among shift workers (Resnick et al., 2004). As suggested by empirical research, facilities that are effective in implementing policies and practices to support an innovation, such as training, or providing time are more likely to have high implementation effectiveness.

Worker perceptions

In nursing homes, licensed staff typically decides upon the plan of resident care while direct caregivers actually deliver the care. Because they deliver the vast majority of hands-on care, it is the direct caregiver who is most likely to form a relationship with the resident and know about the resident's habits and preferences (Bowers et al., 2000). Thus, in the person centered care model, the role of the direct caregiver is elevated. Because of their elevated role, direct caregivers' perceptions about the implementation of person centered care are key to understanding implementation effectiveness in nursing homes.

Research in nursing homes suggests that direct caregivers' perceptions about how the innovation will affect their daily routines and how important the innovation is to the

organization influence implementation effectiveness. For example, Lekan-Rutledge (1998) attributes nursing assistants' negative perceptions about a program designed to improve residents' toileting patterns as a primary explanation for the poor implementation of this innovation. When nursing assistants were surveyed about their views on the barriers to implementation of prompted voiding, impersonal communications and poor supervisor support were voiced as major barriers to the implementation and maintenance of the new program.

This investigator identified only a single study that examined the implementation of organization-wide change in nursing homes and focused on worker perceptions about implementation. The study examined the implementation of a new model of emotion-oriented care within psycho-geriatric facilities in the Netherlands. Employing field observations and semi-structured interview strategies, Schrijnemaekers and colleagues (2002) found no difference between treatment and control facilities in the organization level implementation of the emotion-centered care. Follow-up interviews with different worker groups revealed that the managers had higher expectations about the intervention than the caregivers themselves. The researchers speculated that these differing perceptions about the innovation may have created tensions between worker groups that resulted in poor attendance at trainings and lack of buy-in from caregivers, thereby negatively affecting implementation outcomes (Schrijnemaekers et al., 2002).

Summary

Viewed broadly, interventions in nursing homes often fall short of their goals in the implementation phase. Although current literature suggests that understanding the

innovation characteristics, organizational context, processes that support implementation, and worker perceptions about the innovation are important, the paucity of research on the implementation of innovations in nursing homes means that nursing homes have little guidance from research on how to effectively implement organization wide change. The research presented here addresses this gap in understanding by conducting a theory-guided analysis of innovation and organizational factors associated with the implementation effectiveness of person centered care.

THE KLEIN et al. FRAMEWORK OF INNOVATION IMPLEMENTATION

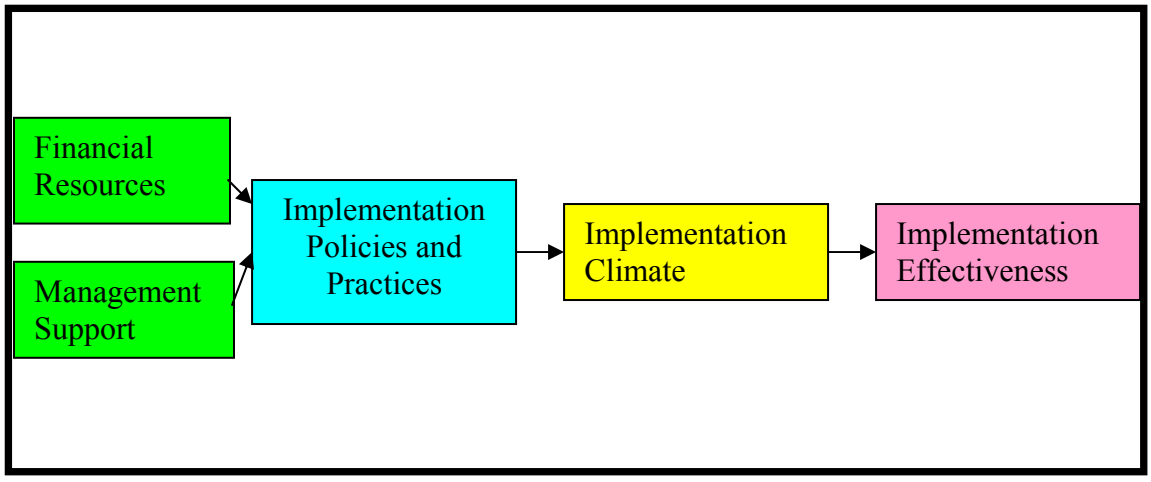
This research was guided by a framework of innovation implementation developed by Kathleen Klein, Amy Conn, and Joann Sorra at the University of Maryland (Klein & Sorra, 1996, Klein et al., 2001). The innovation framework, although, originally used to test the implementation of new software in the manufacturing industry, has since been used to study innovation implementation in complex health services organizations (Helfrich et al, 2007).

Construct definitions

The framework posits that the organizational constructs of management support, financial resources, implementation policies and procedures, and implementation climate are directly or indirectly related to the outcome of interest: implementation effectiveness (Figure 1). **Implementation effectiveness** is defined as the quality and consistency of organizational members' use of a specific innovation (Klein & Sorra, 1996). According

to the framework, the effects of management support and the financial resources on implementation effectiveness are mediated, first, by the organization's implementation policies and practices, and subsequently by worker perceptions of the organizational priority of the innovation: implementation climate. **Management support** refers to the level of management commitment to conduct transformation of the organization and **financial resources** entail the dedicated monetary resources that allow an organization to adapt to change successfully. **Implementation policies and practices,** a process related construct**,** entails rewards, restructuring, communications, training, or time provided to support implementation. **Implementation climate** is defined as shared, summary perceptions of the extent to which key worker groups' use of a specific innovation is rewarded, supported, and expected within their organization (Klein et al., 2001). The framework suggests that when key worker groups, such as direct caregivers, perceive that the implementation climate is favorable; implementation effectiveness is likely to be high.

Figure 2.1: Klein et al.'s (2001) Framework of Innovation Implementation



Rationale for use of the Klein et al. framework

Constructs from the Klein et al. framework can be re-cast into the broader categories of contextual, process, and perceptual factors that have been shown by empirical research to influence implementation effectiveness in nursing homes. Reading from left to right in the original Klein et al. framework, the first two constructs, management support and financial resources, represent a broader category, organizational context, into which person centered care is introduced. The third construct shown in the model, implementation policies and practices, represents the processes of implementation where workers are trained and time is provided to experiment with new organizational operations and care routines. The fourth construct, implementation climate, represents shared worker perceptions about the innovation, indicating how important person centered care is perceived to be within the nursing home.

In addition to naming and organizing the constructs that empirical research in nursing homes suggests are relevant to innovation implementation, the Klein et al. framework is appealing because the constructs are measurable using qualitative and quantitative research strategies. However, further refinement of the Klein et al. framework is needed to account for the influence of innovation characteristics and high worker turnover and to explore more fully the construct of implementation climate in the nursing home.

Modified Klein et al. Framework for the Nursing Home Setting

Because of factors specific to the nature of the project and the nursing home setting, this investigator adapted the basic framework to the nursing home by adding four

constructs. The additional constructs are: 1) **innovation characteristics**: a construct that measured the scope of the project, which, in this research varied by home; 2) **organizational stability**, needed to examine the effect of high worker turnover prevalent in the average nursing home; 3) **innovation-values fit**, a construct identified in earlier work by Rogers (1995) and Klein & Sorra (1996), that is relevant to the fit of person-centered care with the values of caregivers who have direct responsibility for implementation; and 4) **innovation-operations fit,** a construct that measures the extent to which person centered care disrupts the daily operations of direct caregivers and thereby may undermine implementation.

Innovation characteristics

In this research, the innovation was conceptualized as person centered care, operationalized as the individual project representing person centered care that was chosen by each home's leadership team. Because a project that was more ambitious in scope would likely be more difficult to implement, ***scope of the project*** was the **innovation characteristic** assessed.

Three possible viewpoints could inform decisions about how to integrate information about innovation characteristics into this research. First, Roger's (2003) work in diffusion of innovation suggests that characteristics of the innovation influence the extent of diffusion. Second, more recent work in diffusion of innovation in health services organizations suggests that rather than innovation characteristics, it is the "fit" of the organization with the innovation that determines diffusion (Denis, Hebert, Langley, Lozeau & Trottier, 2002). Finally, literature suggests that the organizational change

process is conceptualized as dynamic: during implementation, the innovation and the organization change over time (Ferlie & Shortell, 2001).

Limitations in the data prevented an examination of the fit or the dynamic interplay between innovation characteristics and implementation effectiveness. Thus, assessing the differences in the scope of each home's project using Rogers' (2003) conceptualization contributed to the interpretation of implementation effectiveness in a single case, and was included as another construct in the theoretical framework to explain implementation effectiveness in the cross-case analysis.

Organizational stability

Effectively implementing organization-wide change into a workforce that turns over frequently presents a challenge that is unique to nursing homes. With turnover of direct caregivers often exceeding 100% annually (Harmuth, 2002), a second contextual factor is needed to account for the particular challenges faced by training this key worker group to employ person centered care practices. Thus, **organizational stability,** defined as the level of permanence of worker groups within the nursing home, was added to the model to account for the influence of high worker turnover.

Innovation-values fit

Because the work of direct caregivers gains value under person centered care, their perceptions in particular are key to understanding the implementation climate in nursing homes. In their formative work, Klein & Sorra (1996) introduced the construct of **innovation-values fit,** defined as the extent to which targeted users perceive that the

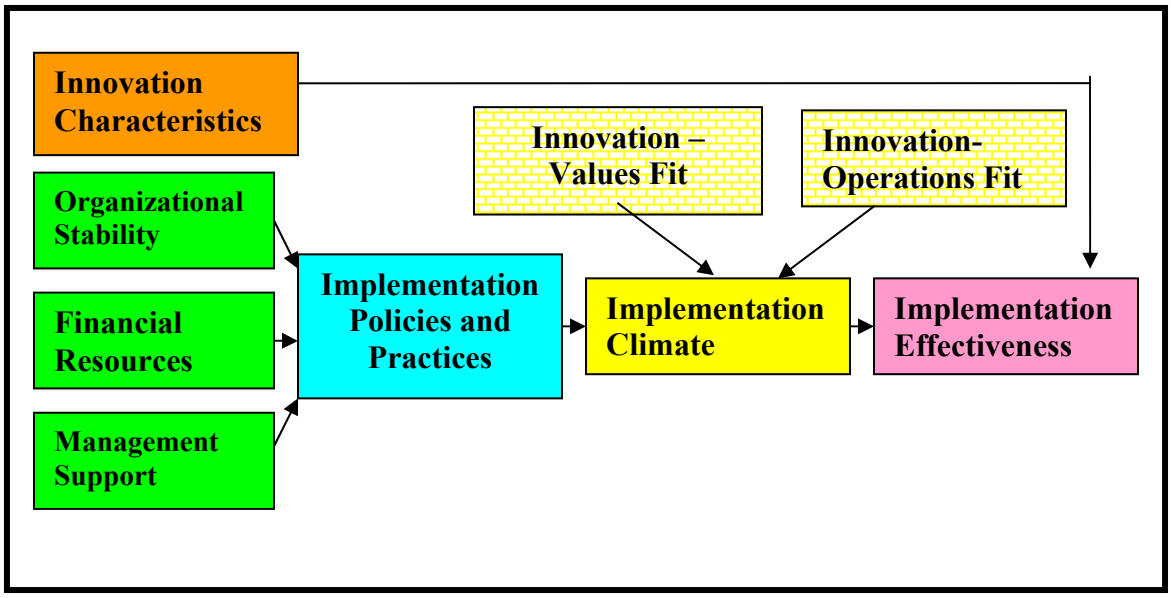
use of the innovation would foster or inhibit the fulfillment of their values. Klein & Sorra (1996) use the definition of values described in Kabanoff, Waldersee & Cohen (1995, p. 1076). Values are defined as "generalized and enduring beliefs about the personal and social desirability of modes of conduct or end-states of existence." Klein & Sorra (1996) posited that the better the fit between characteristics of the innovation and key user groups' values, the more favorable the implementation climate will be. In nursing homes, direct caregivers are the group most responsible for the implementation of person centered care practices, yet their values and views are rarely solicited during the implementation of new programs. Thus, the construct of **innovation-values fit**, as described by direct caregivers, was added to the original model.

Innovation-operations fit

The concept of "fit" between person centered care and the participating nursing homes was further explored in this research by introducing another construct, called **innovation-operations fit**, to the original framework. Research suggests that if an innovation is workable, given the tasks at hand, as well as easy to use, its implementation will be enhanced (Foy et al., 2002, Dobbins, Cockerill, Barnsley & Ciliska, 2001). In nursing homes, the disruption of direct caregivers' daily routines is identified as a source of resistance to the implementation of new programs (Lekan-Rutledge, Palmer, & Belyea, 1998). In the setting of high workloads and tight schedules common in nursing homes, direct caregivers may perceive the climate for implementation of person centered care unfavorably when their workload is increased or established daily operations are disrupted. Thus, direct caregivers' perceptions about innovation-operations fit was added

to the original framework and explored relative to implementation climate. The modified framework, adapted to account for factors specific to the nursing home setting, is presented in Figure 2.2 below.

Figure 2.2: Adapted Framework of Innovation Implementation



Contribution

This research focuses on the relatively early (within one year) implementation phase of person centered care as an organizational innovation in nursing home care. By examining how individual nursing homes manifested person centered care in their particular context and by exploring the "fit" between person centered care practices and the values and operations of direct caregivers in the nursing home, this research tests current thinking about the implementation of innovations.

In two primary ways this research offers an important opportunity to expand the paucity of existing literature on organizational level innovation implementation in nursing homes. First, by examining the implementation effectiveness of person centered care in nursing homes, the process of introducing new models of care into complex health services organizations that received guidance from an outside agency may be better understood. Using theory based constructs to assess factors that potentially helped or hindered the implementation of person centered care could result in a more nuanced understanding of the implementation of change in nursing homes. Second, by exploring the views of direct caregivers about the implementation of person centered care, this research is poised to address a gap in our understanding of how the fit between a new model of nursing home care and a key worker group affects implementation effectiveness.

CHAPTER 3

AIMS, RESEARCH QUESTIONS AND HYPOTHESES

This research is comprised of two distinct but related studies. The results of Study 1 were used, in part, to inform Study 2. The specific aims and research questions for each study are outlined below. Additionally, the conceptual models guiding each study are presented, as are the hypotheses for Study 2.

STUDY 1

AIM: To understand direct caregivers' views about the implementation of person centered care in their nursing home, and the fit between the person centered care project and their work related values and daily routines.

RESEARCH QUESTIONS:

The research questions in Study 1 are divided into two sections. In Section 1, six research questions are addressed descriptively. This description accomplishes one goal of this research, which is to help nursing home leaders understand direct caregivers' views about the policies and practices that were put into place to make way for person centered care. In Section 2, two research questions focus on the determinants of

implementation climate. Using case study methods, analytic approaches were applied to understand the association between **innovation-values fit** and **implementation climate** and between **innovation-operations fit** and **implementation climate** in the nursing home.

Section 1: Description of direct caregivers' views and understandings about the implementation of person centered care

1. **How did direct care workers learn about person centered care?**
2. **Were direct caregivers aware of the PCC Program in their home?**

Rationale: Understanding differences between the instructional approaches used to introduce person centered care concepts in homes with HIGH vs. LOW implementation effectiveness could have applications for nursing home leaders embarking on the change process.

3. **What policies and practices did management implement that signaled to direct caregivers that the PCC Program was a priority in their nursing home (Policies and Practices)?**
4. **What management behaviors signaled to direct caregivers that the PCC Program was a priority in their nursing home?**

Rationale: Examining what policies and practices caregivers viewed as signaling the importance of person centered care in homes with HIGH vs. LOW implementation effectiveness could be applied by nursing home leaders embarking on the implementation

process. This information could help nursing home leaders tailor their implementation strategies to the worker group most affected by organizational change.

5. In what ways did person centered care promote or hinder the values of direct caregivers (Innovation-values fit)?

Rationale: Exploring the alignment between the values held by direct caregivers in nursing homes and the key activities and tenets of person centered care could contribute to a more nuanced understanding of implementation climate, a theoretical determinant of implementation effectiveness (Klein and Sorra, 1996).

6. What attributes of the person centered care project promoted or hindered smooth operations in the daily routines of direct care workers?

Rationale: Examining the program attributes of person centered care relative to daily routines in the nursing home will address gaps in the literature identified by numerous researchers (Lekan-Rutledge et al., 1998, Harrington & Swan, 2003, Bowers et al., 2003, Resnick et al., 2004).

Section 2: The association between innovation fit and implementation climate

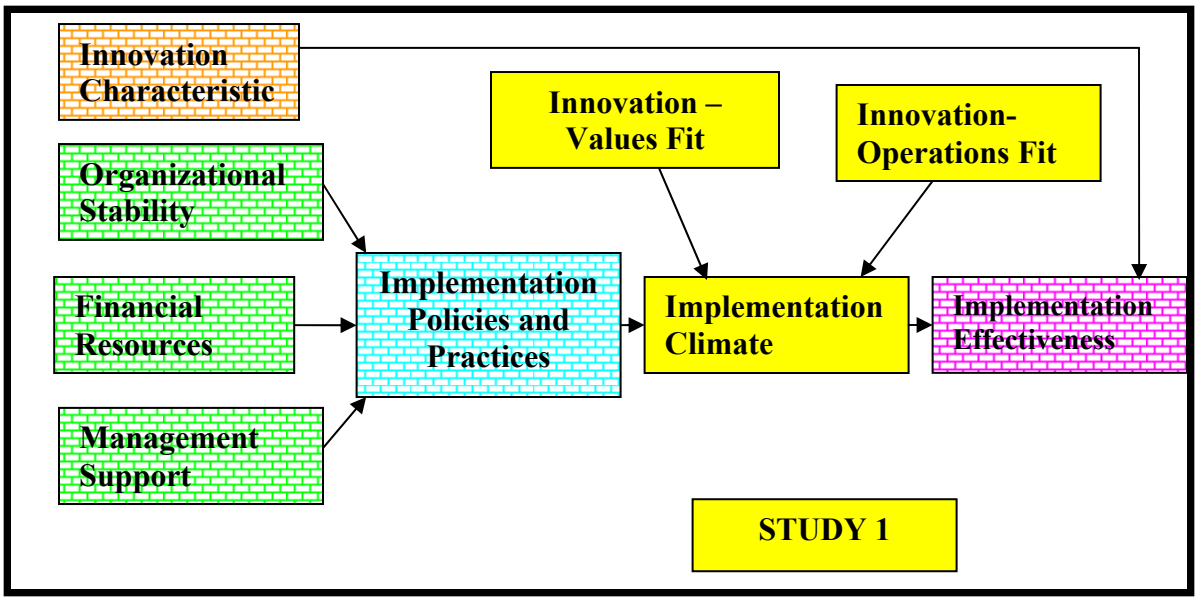
1. Are direct caregivers' views about the "fit" between person centered care and their values associated with their perceptions of implementation climate?

2. Are direct caregivers' views about the "fit" between person centered care and their daily routines associated with their perceptions of implementation climate?

Rationale: Exploring the association between direct caregivers' perceived fit of person centered care and implementation climate in the nursing home addresses gaps in the literature (Greenhalgh et al., 2004) and contributes to a more robust understanding of the outcome of interest: implementation effectiveness.

The conceptual model below shows how Section 2 of Study 1, shown in yellow, fits conceptually into the larger study, Study 2.

Figure 3.1: Conceptual Model Study 1



STUDY 2

AIM: To determine why some nursing homes are more effective than others in implementing person centered care. This study focuses on identifying the factors that distinguish nursing homes that are more effective from those that are less effective in implementing person centered care.

RESEARCH QUESTION 1: Do innovation characteristics—scope of the project—distinguish homes that are more effective from those who are less effective in implementing person centered care?

Hypothesis 1: Person centered care projects that are more complex in **scope** are associated with homes that have lower **implementation effectiveness**. Similarly, projects that are less complex in scope are associated with homes that have higher implementation effectiveness (Rogers, 2003).

RESEARCH QUESTION 2: What organizational contexts—financial resources, management support, and organizational stability—characterize nursing homes that are more successful from those who are less successful in implementing person centered care?

Hypothesis 2: Greater organizational stability is associated with greater implementation effectiveness

Nursing homes are often stressed organizations (Ouslander et al., 1997). Pre-existing organizational conditions in the nursing home, such as high staff turnover, can contribute to stress and prevent the coordination of implementation activities (Weech-Maldonado, Meret-Hanke, Neff, & Mor, 2004). Homes with high annual turnover are likely to be poorly prepared to implement system wide change because staff workloads increase when positions are vacant and training workers requires continuous effort.

Hypothesis 3: Greater management support for person centered care is associated with greater implementation effectiveness

Managers who are committed to person centered care are more likely to invest in the structures and processes needed to foster change (Klein et al., 2001). The more pervasive the message of support for person centered care is from managers, the more likely workers are to perceive the importance of person centered care, coordinate their efforts across worker groups, and consistently use person centered care practices (Berta et al., 2005).

Hypothesis 4: The availability of financial resources to support the implementation of person centered care is associated with greater implementation effectiveness

Funds dedicated to supporting change by providing training or technical support have been shown to improve implementation effectiveness (Nord & Tucker, 1987). When financial resources are scarce, as is often the case in nursing homes, funds

dedicated to support an innovation are likely to positively contribute to implementation effectiveness (Eaton, 2000, Klein et al., 2001).

RESEARCH QUESTION 3: What implementation policies and practices characterize nursing homes that are more effective from those who are less effective in implementing person centered care?

Hypothesis 5: More effective communications between management and workers are associated with greater implementation effectiveness

The quality of management communications designed to introduce and familiarize workers with aspects of an innovation may influence its use by signaling to workers what is important in the organization (Klein et al., 2001). When management makes the effort to communicate with workers in a way that accounts for their differing learning styles, literacy levels, and degree of buy-in, the innovation may be more likely to be perceived as an important one (Reynolds, 2004).

Hypothesis 6: The greater the amount of training workers received about person centered care the greater the implementation effectiveness

Training is acknowledged as a necessity for a change in worker habits and attitudes to occur, but is often not sufficient to explain implementation success (van Weert et al., 2004). Because person centered care is a new model of care that affects

multiple routines and practices in the nursing home, the amount of training delivered across three shifts of workers is expected to relate to the effectiveness of person centered care implementation.

Hypothesis 7: The greater the amount of time provided by management to learn about person centered care the greater the implementation effectiveness

When workloads are high, as in the nursing home, time to experiment with an innovation is at a premium (Eaton, 2000). When management practices make way for workers to have the time to try out person centered care, implementation is expected to be more effective.

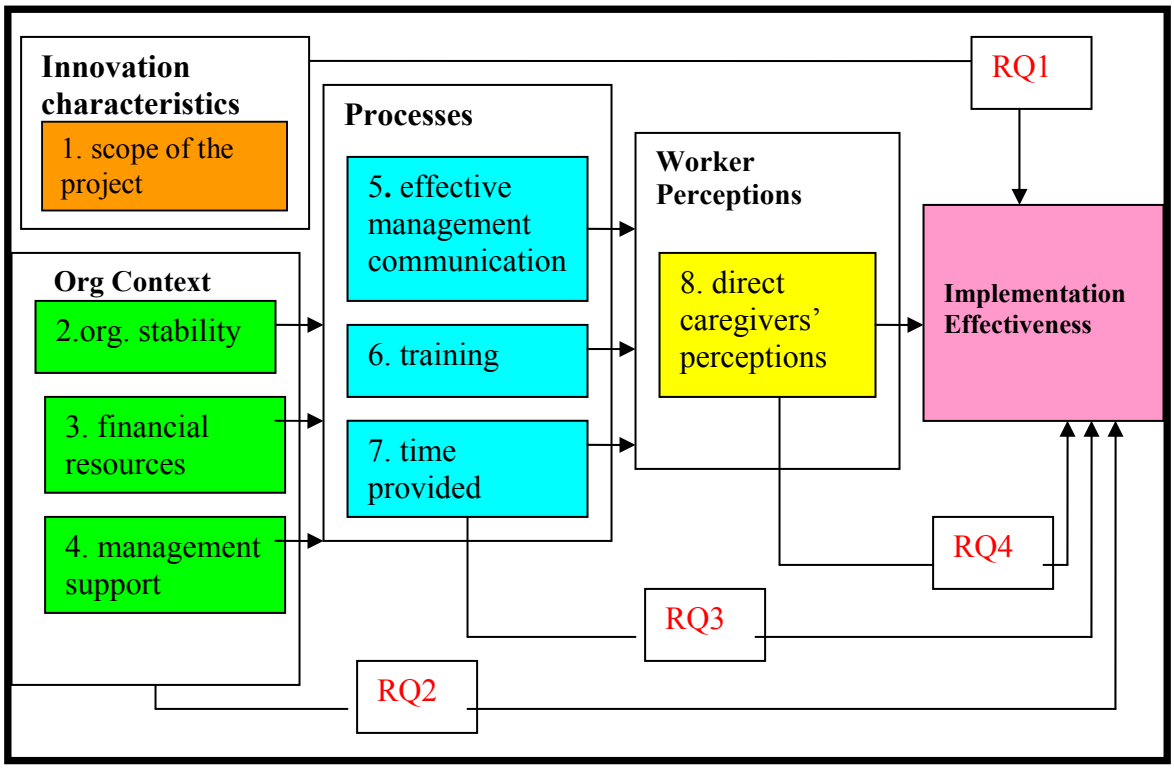
RESEARCH QUESTION 4: Are worker perceptions of the implementation climate in their nursing home associated with the implementation effectiveness of person centered care?

Hypothesis 8: Positive worker perceptions of implementation climate will be associated with greater implementation effectiveness.

Klein et al. (2001) posit that the shared perceptions of workers about how important and expected the innovation is to the organization directly influence the use of the innovation. Because they are the worker group who is most responsible for and most effected by person centered care implementation, direct caregivers who perceive the

implementation climate in their nursing home to be high are more likely to consistently use person centered care approaches.

Figure 3.2: Conceptual Model Study 2



RIVAL HYPOTHESIS TESTING

As a way of addressing alternative explanations for the outcome that did not "fit into the boxes" of the theoretical framework, this research tested three rival hypotheses by examining data that plausibly could have contributed to an explanation of home's implementation effectiveness (Yin, 2003). Sensitized by related research on innovation implementation, and because of the investigator's "on the ground" involvement with all

phases of the PCC Program, the following rival hypotheses were tested to explain implementation effectiveness:

Rival hypothesis 1: **Implementation effectiveness is positively associated with the availability of electronic communications to all worker groups.**

Rationale: In the nursing home, communicating information about an innovation to all worker groups is challenging. Common methods used to communicate include: in-service trainings where workers must be pulled away from their caregiving responsibilities; putting information in pay check envelops, and posting flyers on bulletin boards. Even though these methods can be effective, their reach is uncertain. Electronic messages may provide management with new opportunities to communicate timely information about an innovation to different worker groups simultaneously. Prior research has indicated that the presence of electronic communications, made available to all worker groups, is an indicator of success in introducing new programs into nursing homes (Reynolds, 2004).

Rival hypothesis 2: **Implementation effectiveness is associated with ratings by the CCME team about how successful they expected homes would be in accomplishing their change goals**

Rationale: Current federal funding for quality improvement in nursing homes has adopted an "all comers" approach, recruiting as many homes as possible into quality improvement initiatives without guidance from research to identify which homes' are

most likely to be successful in implementing change. If homes' implementation effectiveness could be accurately predicted early in the process of change, funding agencies might stage their funding to first support organizations most likely to succeed in their improvement goals. This rival hypothesis explores the possibility that effective innovation implementation can be accurately predicted by experts early—within the first four months —in the implementation process. Furthermore, by examining the rationales experts gave to elaborate their predictions, factors that point to the effective implementation of change may be described.

Rival hypothesis 3: **Implementation effectiveness is associated with home leadership teams' shared confidence in their ability to achieve their PCC Program goals**

Rationale: The health behavior literature around the concept of self-efficacy suggests that when individuals are confident that they will succeed, they are more likely to succeed. While this concept has been widely accepted at the individual level, questions about the conceptual strength of self-efficacy applied at the organizational level are unanswered (Glisson & Green, 2006, Prochaska, Prochaska & Levesque, 2001). Nevertheless, one plausible explanation for a nursing home's HIGH implementation effectiveness is that its team, collectively, was highly confident that it would be successful in implementing project goals.

CHAPTER 4

RESEARCH DESIGN AND METHODS

In this research, Study 1 used semi-structured interviews and content analytic methods to understand direct care workers' views about the implementation process and the implementation climate in their home. Using a multiple case study design, Study 2 integrated the data on implementation climate with data from the implementation records of the Person Centered Care Program (PCC Program) (Yin, 2003). All data were collected in the context of the QIO activities and were used by the investigator as secondary data. The term "multiple" refers to the study of eight nursing homes, as opposed to one, enabling broader exploration of the research questions and theoretical elaboration for study (Eisenhardt & Graebner, 2007). The unit of analysis in Section 1 of Study 1 is the nursing homes' category of implementation effectiveness. The unit of analysis in Section 2 of Study 1 is the nursing home. The unit of analysis in Study 2 is the nursing home. The nursing homes in both studies were purposefully selected for the PCC Program, a year long intervention designed to focus care practices, workplace practices, and the environment in the nursing home based on resident's needs and preferences. Following an overview of the PCC Program, the design and methods for each study will be described separately.

THE PERSON CENTERED CARE PROGRAM

North Carolina was one of 22 states that participated in an initiative to put people and their social experiences at the heart of everyday care practices in nursing homes. This initiative was funded by the national Centers for Medicaid & Medicare Services and led by North Carolina's quality improvement organization, The Carolinas Center for Medical Excellence. The Centers for Medicaid & Medicare Services launched the 2004 PCC Program as a pilot initiative because previous quality improvement initiatives, designed to make changes in individual level quality measures such as pain management or restraint use, fell short of their goals. The new PCC Program focused on changing nursing homes' organizational level practices so that daily care routines were driven by resident preferences rather than operational efficiency. Core team members in the PCC Program included: Laura Hanson, MD, MPH, geriatrician and clinical consultant, Lee Dobson, MPA, Assistant Manager, Long Term Care team, Franzi Zabolitzki, MS PT, physical therapist and project manager, Jen Wilson, MPH, project associate, Deb Markley, MPA, project associate, and myself, Cherie Rosemond, MS PT GCS, research assistant.

The Carolinas Center for Medical Excellence used components of the Institute of Healthcare Improvement's (IHI) approach to help eight NC nursing homes implement one organization-wide project that represented a first step toward person centered care (Kilo, 1998). Although the IHI approach includes components of project planning, doing, studying results and acting (PDSA cycles), in the case of this research, the components of shared learning and collaboration between homes were prominent. Person centered care projects that the homes implemented included: 1) changing morning

care or dining routines to accommodate individual resident preferences; 2) including nursing assistants in the care planning process; 3) creating a program to recognize staff who exemplify person centered care approaches to care; 4) fostering decision-making skills in direct caregivers; and 5) restructuring organizational hierarchies to localize decision-making about care processes and create a home-like environment. With technical support from CCME, each participating facility chose their project based on its perceived feasibility and the results of a facility-wide survey of the current organizational culture. All the participating nursing homes were located in North Carolina: one home was located in the coastal region, three were in the Research Triangle, one was in High Point, two were near Charlotte, and one was in Asheville.

Putting the IHI approach into practice, the CCME team hosted four day-long conferences to introduce the basic tenets of person centered care to teams of workers from each home. Representatives from different worker groups formed leadership teams that were responsible for selecting a person centered care project, determining action plans to implement the project, and evaluating the project. Typically, the leadership team from each facility was comprised of five members: the home's administrator, the director of nursing, a social worker, a nurse supervisor, and a nursing assistant.

In addition to hosting the four conferences, CCME provided homes with technical support throughout the year. This support included one site visit from the CCME team to help the homes' leadership teams identify their strategies for change, address barriers to change, and prioritize steps toward the home's goal. In follow up to the site visit, facility leaders from each home received monthly coaching calls from the CCME team to assist in barrier reduction and the development of appropriate project evaluation strategies.

Finally, all homes participated in one teleconference where progress toward project goals was shared.

During the year of data collection, the primary investigator worked with the person centered care program as a research assistant to Laura Hanson, MD MPH. In this capacity, she assisted in development of the data collection tools and collected data. Additionally, she worked with an intern at CCME, Amy Gorely, MPA, to develop the direct care worker interview guide, organize the data collection effort, perform the interviews, and present preliminary findings to the leadership of the quality improvement organization. Permission to use this data set as secondary data for the dissertation has been obtained from the quality improvement organization. The UNC Public Health–Nursing IRB has determined that this research does not constitute human subjects research as defined under federal regulations [45 CFR 46.102 (d or f)] and does not require IRB approval.

STUDY 1: Direct caregivers' views about the implementation of person centered care

This study involved purposive sampling of direct caregivers from homes participating in the PCC Program, semi-structured interviews (Rubin & Rubin, 2005), and directed qualitative content analysis (Hsieh & Shannon, 2005).

Sample

Three direct caregivers from each of the eight nursing homes that were part of the PCC Program were selected by their administrator or director of nursing to participate in this research. For feasibility reasons, only three direct caregivers were interviewed from each home because alternate coverage had to be provided by management when caregivers were unavailable to their residents. Direct caregivers were defined as those workers who provided hands-on service to residents. The CCME team required that direct caregivers selected for the interviews met three criteria: 1) they had been directly involved in the person centered care project; 2) they had one year of experience in the nursing home; and 3) they did not have a supervisory role within the nursing home. With assistance from a contact person in each nursing home, an administrative assistant at CCME scheduled three consecutive 30-minute interviews with the identified direct caregivers. The final sample of interviewees included: twenty-one certified nursing assistants, one environmental services worker, one social worker, and one food services worker.

Primary data collection

The basic tenets of semi-structured interviewing, outlined by Rubin & Rubin (2005), guided the development of the two primary interview questions as well as the probes used to explore worker views about the implementation of person centered care in their home. The interview guide is shown in Appendix 1. The two primary interview questions were: 1) what has your experience been with the person centered care project in your nursing home? and 2) how important is the person centered care project at your

facility? Probes for both questions were designed to elicit specific information related to the constructs of interest. For example: the probe "How has your daily routine changed as a result of the person centered care project?" was designed to explore operational fit. The probe "What was your response to hearing about the person centered care project?" was designed to explore values fit, and the probe "How much effort did people at your facility put into the person centered care project?" was designed to explore implementation climate.

Prior to the interviews, a letter describing the purpose of the interview was sent to each nursing home for distribution to the selected direct caregivers. All interviews were recorded directly through the phone line. The 24 direct caregivers were scheduled to participate in the 30-minute telephone interview with either the study investigator or the CCME intern. Three pilot interviews were conducted with both interviewers on the phone line to ensure that the interview process flowed smoothly, that both interviewers were using similar interview techniques, and that the interview guide elicited appropriate responses from interviewees. No modifications were made in the interview guide as a result of the pilot testing.

The interviews were conducted during the workday within a three week period in August 2005. Typically, three interviews from one home were scheduled during consecutive 30-minute periods. The interviews were conducted in the privacy of a room located outside of resident care activities. Informed consent was obtained verbally from all participants prior to the interview and the informed consent procedure was documented on interview transcripts. Interviews were transcribed without paraverbal

utterances and facility names were de-identified. No interviewees were individually identified.

Data analysis

The data analysis for Study 1 was performed in four stages: 1) coding; 2) data extraction and display; 3) data quality analysis; and 4) interpretation and synthesis of data. Directed content analysis was employed to address the research questions. Content analysis is a research method that makes way for the interpretation of text data through the systematic classification process of coding and identifying themes, patterns or relationships. Directed content analysis differs from conventional content analysis in the sense that the researcher deliberately chooses to describe an event in terms of a conceptual framework, in this case the modified Klein et al. framework (Hsieh & Shannon, 2005).

Atlas*ti* 5.0, a computer-based software program offering visual qualitative data analysis of text, was used during all phases of the data analysis. A journal detailing the coding procedures was maintained and is shown in Appendix 2.

Coding

The codebook used for this study was derived from a codebook developed for previous innovation implementation research that employed the Klein et al. framework. The study was entitled: *Exploring a model of innovation implementation: Cancer Prevention and Control Trials in Community Clinical Oncology Program Research Bases* (Helfrich, 2004). The examples given to illustrate codes were modified to fit the

nursing home setting. Nine major codes and seven sub-codes were included in the codebook, shown in Appendix 3. One major code, "operational fit", was added to Helfrich's original codebook before coding began. One code, "awareness of the project," emerged from the data during initial readings and was added after coding commenced. Except for "operational fit" and "awareness of the project," all the codes used to label text units were constructs from the Klein et al. framework, with sub-codes included to further refine the major codes per Klein et al. definitions. Codes were identified as NEG when there was an absence of the construct, e.g., the interviewer asks if the administrator was supportive of PCC implementation and the participant says, "no," or if the construct was evident but operating in a contrary manner, e.g., a direct caregiver expressly states that she does NOT expect her co-workers to engage in PCC activities (that would be Climate NEG, Helfrich, 2004). The complete response of an interviewee to a question or probe served as the text unit.

Coding reliability was accomplished in three ways. First, three individuals coded interviews: the study investigator, the CCME intern, and an interested volunteer who received her Master's degree in social work with a concentration in aging. Each of the three coders met on two occasions to apply codes to interview transcripts and familiarize themselves with the Atlas*ti* program. During these practice sessions, the coders coded three transcripts and wrote memos within Atlas*ti* to identify areas of uncertainty or a rationale for choice of codes. Second, subsequent to these two meetings, each coder coded two additional transcripts on their own, and finally, the primary investigator then compared text units between her codes and the other two coders on the four transcripts. All text units were compared and patterns of disagreement were noted and discussed with

coders at a follow up consensus building meeting. All subsequent interviews were coded using a consensus coding approach where two coders simultaneously coded transcripts and immediately reconciled differences. An "inclusive" bias was used during coding: if there was a doubt about applying a code, the code was applied and a memo written explaining the choice.

Data extraction and display

Using Atlas*ti* 5.0, queries were run on each code, for each nursing home, to permit grouping of transcript data around a single construct or research question. For example, text units coded as "implementation climate positive" for the three direct caregivers from each home were extracted and placed in the matrix display under the "implementation climate" construct. As shown in Table 4.1, using the matrix format to organize data enabled within and cross case comparisons to address the research questions.

Table 4.1: Sample matrix used to illustrate theoretical constructs

	Nursing Home	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**
Construct									
Innovation-operations fit									
Innovation-values Fit									

Data quality analysis

The quality of the text data for Study 1 was evaluated in two ways: 1) the frequency of each code's appearance in the data was assessed as a way to inform readers about how much information supported the interpretation of the data for a given code; and 2) the quality of the text within a given code was graded according to how well it provided meaning to the construct.

Atlas*ti* 5.0 was used to determine how many times each code was used. To grade the quality of the text around each relevant code/construct, data for each code was classified by the primary investigator into high, medium, or low categories. The criteria for grading constructs were based on the amount of detail and "thickness" of the information provided by the interviewee relative to the construct. Following the primary investigator's rating of the data quality, a confirmatory reader was employed to independently rate the data. Areas of disagreement were resolved through a consensus approach.

In addition to grading the quality of the text around a given code, the quality of the respondent's answers relative to the questions asked was evaluated in the following way. During the initial coding, memos were written to indicate when questions were not answered in the expected way or when the meaning of an answer was uncertain. In reviews of the transcripts these memos were flagged for more in-depth analysis. An audit trail outlining the data quality analysis procedures is found in Appendix 4.

Interpretation and synthesis

In Study 1 Section 1, direct caregiver's statements are identified by the home they worked in. By knowing whether caregivers' comments arose from a home ranked as HIGH, MEDIUM, or LOW in implementation effectiveness, a more robust depiction of what aspects of implementation were associated with a given category of implementation effectiveness could be made. In Study 1 Section 2, investigator judgment was used to categorize data relative to the research questions.

Data for implementation climate, values fit and operational fit were categorized according to the following criteria: 1) The **valence** of the descriptions about the three constructs was determined by the primary investigator. For example, did caregivers say positive or negative things about the degree that person centered care was expected, rewarded or supported within their home? 2) The **intensity** of the comments was determined by the primary investigator. For example, were comments about the implementation climate highly enthusiastic or mediocre in expression? 3) The **consistency** of the comments was evaluated by the primary investigator. For example, did caregivers agree on whether the climate for implementation in their home was positive or negative? After determining the results of these three criteria for each home, a summary category of HIGH, MEDIUM, or LOW was applied by the primary investigator. The following guidelines were used to form the categories of implementation climate, values fit and operational fit. 1) The construct was categorized as HIGH when direct caregivers were enthusiastically and uniformly positive about the climate for implementation in their home. In the case where all but one or two comments were neutral or negative in their valence, while all other comments were enthusiastic and

positive, the construct was also categorized as HIGH. 2) The construct was categorized as LOW when most caregiver comments were negative, and distrust, or even anger, was reflected in the caregiver's comments about the construct in their home. 3) The construct was categorized as MEDIUM when the valence of the caregiver's comments was divided between negative and positive, and/or comments generally lacked enthusiasm for management's expectations, supports, or rewards for person centered care.

Following the initial categorizations by the primary investigator, a confirmatory reader independently categorized the data into HIGH, MEDIUM, and LOW categories. The categorizations applied by the primary investigator and the confirmatory reader were compared. When disagreements were present, consensus about the categorization was achieved through discussion. The data quality analysis for Study 1 Section 2 is shown in Appendix 5.

The goal of using qualitative content analysis is to "get the facts," and the meanings interviewees give to those facts, right, and then convey them in a coherent and useful manner" (Sandelowski, 2000). The design and methods employed in Study 1 were intended to accomplish this goal.

STUDY 2: Innovation characteristics, organizational context, processes, and worker views related to the implementation effectiveness of person centered care in nursing homes

A replicated, holistic case study design was selected to achieve the purpose of this study (Yin, 2003). The term "holistic" refers to this study's examination of the global

nature of nursing homes as organizations (Yin, 2003). Although the holistic study of cases did not preclude the examination of subunits, such as the perceptions of different worker groups, these subunits expand the richness, but are not the focus, of the study.

Sample

The nursing homes in this study formed a purposive sample. CCME invited eight North Carolina homes to participate in the PCC Program based on their high performance with previous quality improvement initiatives. Selected homes had demonstrated success with quality improvement methods, including data collection and submission. Seven of eight homes were not-for-profit. Two homes were privately owned, two were church affiliated, and four were associated with adjacent hospital corporations. All homes were led by administrators who had a relatively long tenure in the facility and had previously participated in collaborative approaches to quality improvement. The sample of nursing homes included homes with a bed capacity between 64 and 289, with an average bed capacity of 129.

Data sources

The study data consisted of qualitative and quantitative data divided into four basic components: 1) descriptive and demographic information about the participating nursing homes collected before the PCC program began; 2) archival documents generated during the PCC Program; 3) post PCC Program interviews with direct care workers from each nursing home; and 4) post PCC Program expert rankings of the nursing home's scope of the project and implementation effectiveness.

The descriptive and demographic information about each home was collected by members of the research team prior to the PCC Program's official kick-off in September of 2004. This information, entered into an Excel spreadsheet entitled *Facility Tracking Tool*, provided measures for three contextual constructs in the model: **organizational stability, financial resources and management stability**.

The archival documents, collected by members of the CCME team from September 2004 through August 2005, provided information to inform the construct of **innovation characteristics** and **implementation policies and practices.** These documents provided detailed text records of: 1) activities of the site visits, conducted by the CCME team with the leadership team from each nursing home; 3) descriptions of homes' person centered care projects; and 4) attendance records for the leadership team members at the four learning sessions.

Twenty-four interviews with direct caregivers were conducted in August 2005 and transcribed in September and October of 2005. Transcripts were used to inform the measure of **implementation climate.**

Expert rankings compiled from all five members of the CCME team and collected in September 2005 were used to inform the measure of **innovation characteristics** and **implementation effectiveness**.

Measures

In this research, the following measures are reported categorically as HIGH, MEDIUM or LOW according to criteria detailed fully in the data analysis section below.

Innovation Characteristics

The ***scope of the project*** was determined by the expert judgment of the members of the CCME team. CCME team members ranked the scope of each nursing home's project based on how "ambitious" the project was perceived to be. The term "ambitious" in this research is likened to Roger's (2003) concept of "complexity." Thus, projects that were more ambitious were expected to be less effectively implemented. Because in this research each nursing home implemented a different project representing person centered care, understanding the relative scope of homes' projects could contribute to a more nuanced understanding of the outcome, implementation effectiveness. *Data source: End of Program Rankings*

Organizational Context

Organizational stability, defined as the level of permanence of a key worker group within the nursing home, was operationalized using the administrator calculated annual turnover rates of nursing assistants, the predominant category of direct caregiver. The turnover rate is the number of direct caregivers who left over a 12 month period divided by the average number of individuals who were working as direct caregivers during the same period. No distinction was made between those direct caregivers who left voluntarily versus those who were fired. *Data Source: Facility Tracking Tool*

Financial resources, defined as the dedicated monetary resources that allow an organization to adapt to change, were measured by determining the availability and amount of financial resources dedicated to support the PCC Program. Some nursing

homes in this study received grants to introduce person centered care, some received funding from corporate headquarters to support the PCC Program, and some received state funds generated from penalties administered to poor performing nursing homes during the survey process. These data were self-reported to the CCME team by nursing home administrators prior to the beginning of the PCC. *Data Source: Facility Tracking Tool*

Management support, defined as the level of management commitment to conduct transformation of the organization by implementing person centered care, was determined by the presence of formal initiatives that pre-dated the PCC Program and were part of a larger culture change effort to introduce the tenets of person centered care in the nursing home. Management support was positive when facilities provided evidence that the PCC Program implementation was part of a larger effort supported by local or corporate management to put resident preferences at the center of daily care routines. *Data Source: Facility Tracking Tool*

Implementation policies and practices

Management Communications

In the preliminary phases of the PCC Program, facilities were asked to administer a 40 item survey entitled the Kansas Survey of Organizational Culture to all employees. In order to administer a survey to all employee groups from all three shifts, communications were needed to explain the purpose of the survey, enlist employee

participation, and ensure confidentiality. Some nursing homes simply put the surveys in boxes on a centrally located table with a sign giving instructions about how to complete the survey. Other homes hosted facility-wide in-services for all employees over all shifts and instituted rigorous procedures to protect respondents' confidentiality. During these in-services, employees learned about the purpose of the survey and were promised future communications to share survey results. Facilities did not receive instructions from CCME regarding their methods for survey administration. Thus, the effectiveness of the communications that facilities implemented around the survey administration served in this research to indicate the overall quality of communications about facility wide initiatives such as the PCC Program. The assumption guiding that choice was that the methodology used to administer the survey was considered to be an indicator of management's competency to anticipate, and follow through with communications and behaviors that would elicit staff cooperation in the desired actions. Thus, the response rate of the Kansas Pre-test survey, defined as the number of surveys received versus the number distributed, was used as a measure of communications effectiveness. *Data source: Response rate, Pre-test Kansas Survey*

Training

In the first learning session, the CCME team presented several in-service trainings to introduce and demonstrate the basic tenets of person centered care. These trainings were developed in a "train the trainer" format. Facilities were invited to host similar in-services in their nursing home to workers unfamiliar with person centered care concepts, paving the way for the changes ahead. The amount of person centered care

training nursing home leaders offered to their workers served as a marker of the effectiveness of implementation policies and practices. The total number of in-service trainings offered to workers by the nursing home leadership team after Learning Session 1, and before the site visit, served as the measure of training. *Data Source: Preliminary to site visit teleconference*

Time Provided

In the beginning of the PCC Program, each facility appointed a leadership team to select and guide the implementation of their person centered care project. The leadership team was typically comprised of five members who planned to attend all four learning sessions during the year. The participation of three key members of the leadership team, the Administrator, the Director of Nursing or Assistant Director of Nursing and the Nursing Assistant, reflects the time provided by management for facility leaders to learn the basic tenets of person centered care and tailor implementation strategies to facility operations. Typically, nursing homes face uncertainty in their daily routines. These uncertainties, caused largely by short staffing, unannounced surveys, and resident illness or death, often necessitate changes in worker plans and duties. Nursing homes that were consistently able to allow key leaders to be out of the facility for day- long learning sessions demonstrated their commitment to the PCC Program by providing time for leaders to learn about and experiment with person centered care. *Data Source: Facility Tracking Tool*

Worker perceptions

Implementation climate is defined as the shared, summary perceptions of the extent to which the use of person centered care is rewarded, supported, and expected within their nursing home (Klein et al., 2001). Measures of HIGH, MEDIUM, or LOW implementation climate were derived, as described above in Study 1, using data from the interviews with three direct caregivers from each home. *Data Source: Interview Transcripts*

Implementation effectiveness

Implementation effectiveness**,** the study outcome**,** is defined as the "consistency and quality of [nursing homes'] use" of person centered care (Klein et al., 2001). At the end of the PCC Program, the five members of the quality improvement team ranked the participating nursing homes from one to eight, using the above definition.

The measure of implementation effectiveness was based on the expert judgment of five highly involved, highly trained individuals who worked on the project from inception to completion (Note: one expert took maternity leave five months before the project ended but continued to provide input to inform this research). The experts included a physician, one with a Master's degree in public health, one with a Master's degree in public administration, and two with Masters' degrees in physical therapy. *Data source: End of Program Rankings*

Data Analysis

Homes were categorized based on the outcome of interest, implementation effectiveness. Based on knowledge experts rankings, three homes were ranked as HIGH in effectiveness, two homes were ranked LOW, and three homes were ranked MEDIUM in implementation effectiveness. A data matrix was constructed to display the data relative to the study outcome and constructs of interest.

By analyzing the within-case data from eight nursing homes, the strength of the Klein et al. framework to explain implementation effectiveness in the nursing home was tested. Using pattern matching logic, when the construct category matched the outcome category five out of eight times, the utility of the Klein et al. model to test implementation effectiveness in the nursing home setting was supported.

Using pattern matching logic, a cross case analysis was employed to test how consistently the hypothesized relationships were supported or refuted by the data (Yin, 2003). For example, if a facility is ranked high in both implementation effectiveness and organizational stability and simultaneously another facility is ranked low in both these same measures, the expected pattern is generally confirmed. When the expected pattern match was demonstrated in five out of eight constructs, the hypothesis was considered confirmed.

As a first step in the analysis, data related to each of the eight constructs was summarized and categorized. Using the range of values, natural cut-points and practical clinical impact of the construct, the primary investigator applied an initial category rating of HIGH, MEDIUM, or LOW. Except for **implementation climate** (discussed below), two additional investigators then reviewed each construct categorization. All three

investigators discussed any disagreements in the categorization, and after reaching consensus, a final category was applied. The range of values and the specific rationales applied to categorize the outcome and each construct in the theoretical framework is described below.

Innovation Characteristics

Scope of the Project

To categorize homes based on the scope of their project, all five CCME team members were asked to rank the eight projects from the least ambitious to the most ambitious. Then, the rankings were added across raters. For example, if Nursing Home A was ranked as the highest in scope of the project by all five raters, its sum score would be 40 (8 X 5 raters). Conversely, if Nursing Home B was ranked as the lowest in scope of the project by all raters, its sum score would be five (1 X 5 raters).

Raw scores on scope of the project were as follows: 7, 12, 21, 22, 23, 24, 33, and 38. Homes with the raw ranking scores of 7 and 12 were categorized as LOW in scope. Homes with raw ranking scores of 21, 22, 23, and 24 were categorized as MEDIUM in scope, and homes with ranking scores of 33 and 38 were considered HIGH in the scope of their chosen PCC project.

Organizational Context

Organizational Stability

Organizational stability was operationalized by an assessment of the averaged annual turnover rates of nursing staff, including RNs, LPNs, and CNAs, that occurred in

the year before the PCC Program began. From lowest to highest, the eight facilities had the following annual turnover rates: 3%, 7%, 8.5%, 25%, 38%, 46%, 50%, and 52%. While these percentages all fell below the national average nursing staff turnover, nursing homes in this study were compared to each other, not to the national average (Castle & Engberg, 2005). Thus, the categorization of PCC homes' organizational stability, using annual nursing staff turnover, was based on two considerations: 1) natural cut points; and 2) the practical implications of staff turnover for a home undergoing change. The natural grouping strategy resulted in two clear categories. The designation of HIGH organizational stability was given to a natural grouping of homes with 3%, 7%, and 8.5% annual turnover. Similarly, LOW organizational stability grouped naturally around homes with 46%, 50%, and 52% turnover. The home with 25% annual turnover represented a mid-range of annual turnover and thus, was categorized as MEDIUM in organizational stability. The home with 38% turnover is not grouped naturally with the other categories and so a second criterion—practical implications—was applied. A home that had recently experienced almost 40% annual nursing staff turnover would likely have had significant challenges in implementing organization wide change, such as person centered care. Thus, the home with 38% annual turnover rate was categorized as LOW in organizational stability.

Financial Resources

The categorization of PCC homes' financial resources was based on natural cut points. Four of the study homes had no funds dedicated to the PCC Program and thus, were categorized as LOW in financial resources. One home had dedicated funds for moderate capital improvements that included a new common room for residents to

socialize in. Another home had received a similar amount of funding ($20,000) to support their person centered care project by providing material support for environmental changes. These two homes were categorized as having MEDIUM financial resources. In contrast to the two homes categorized as MEDIUM, two other homes had over a million dollars of funding dedicated by their corporate headquarters to completely renovate their facilities and re-organize staffing patterns to support person centered care. These two homes were categorized as HIGH in financial resources.

Management Support

The categorization for management support was based on natural cut points. Four homes were categorized as having LOW management support; one home was categorized as MEDIUM; and three as HIGH. Each of the three homes with HIGH management support was embedded within a corporate structure that had already adopted person centered care principles to guide their larger organization. As a result, these homes had undergone multiple organization-wide trainings and had received consultations in person centered care from national experts. In contrast, the one home in the MEDIUM category had some prior training in person centered care, and was also led by a seasoned administrator who was already providing leadership to a task force that was introducing person centered care in long term care facilities across the state. The remaining four facilities, rated as LOW in management support, had no formal experience with person centered care prior to the PCC Program.

Implementation Policies and Practices

Management Communications

Response rates from the Kansas Organizational Culture Survey were used to determine the quality of communications from management about the person centered care program. The survey itself was intended to serve as a needs assessment, assisting management within the home to gather feedback from staff about their perceptions of the home's leadership style, degree of staff empowerment, resident control, physical environment and community involvement. The survey results were not intended to be generalized to a larger population. Natural groupings of survey response rates determined how homes were categorized. Three homes had extremely high response rates (98%, 98%, and 100%) and were categorized as HIGH in management communications. Two homes had mid-range response rates (78% and 62%) and were categorized as MEDIUM. Three homes had response rates clustered in a lower range (43%, 28%, and 49%) and, thus, were categorized as LOW in management communications.

Training

The rationale for categorizing homes based on the amount of person centered care training they provided to staff was based on natural cut points. Half of the facilities provided more than 20 trainings (21, 22, 24, and >30) for staff before the CCME site visit and were categorized as HIGH. The other four facilities offered fewer than ten (zero, one, four, and nine) person centered care trainings to staff within the same time frame and, thus, were categorized as LOW.

Time

In order to categorize the time management provided for staff to learn about person centered care, members of the CCME research team tracked the attendance of homes' leadership team members at the four CCME hosted conferences and the principal investigator then categorized attendance as HIGH, MEDIUM, OR LOW. Three disciplines, representing the key disciplines on the homes' leadership team, were considered in the tracking process. The three disciplines tracked were: 1) administrator; 2) director of nursing, assistant director of nursing, or resident care coordinator; and 3) nursing assistant. If a key discipline member from one home attended all four conferences then the time category was HIGH. If two or three conferences were attended then the category was MEDIUM, and if one or none, then this time to learn about person centered care was ranked as LOW. Following categorization based on discipline specific attendance, an overall categorization of time provided to learn about person centered care was achieved by determining the category that was represented in at least two out of the three disciplines. For example, if the director of nursing from Nursing Home A attended two conferences (MEDIUM) and the administrator and the nursing assistant from Nursing Home A attended all four conferences (HIGH X 2), the time provided to learning about person centered care was categorized as HIGH. Using this categorization strategy, two homes were categorized as MEDIUM and six as HIGH in time provided by management for staff to learn about person centered care.

Worker Perceptions

Implementation Climate

Qualitative data from interviews with direct caregivers from each home were used to determine the implementation climate for person centered care in each home. Using Atlas*ti* 5.0, interviewer comments coded as **implementation climate** were grouped for each home. Thus, comments from three direct caregivers related to implementation climate at each home were viewed as a whole. To accomplish the ultimate goal of categorizing implementation climate in each home as HIGH, MEDIUM, or LOW, the data were considered based on the three criteria described previously under Study 1 – Data analysis and confirmed by a second reader.

Implementation Effectiveness

The study outcome, implementation effectiveness, was categorized by ranking study facilities based on the following definition provided to raters: *Implementation effectiveness* is the consistency and quality of a facility's use of person centered care practices, as represented by their individual project. Similar to the approach used to categorize scope of the project, each of the five CCME team members rank ordered the homes' implementation effectiveness from lowest to highest. Raters worked separately, confidentially, and without knowledge of other rankings. The rankings were conducted in September 2005 after the PCC Program was complete. Next, the rankings were totaled for each home across all raters. This method resulted in natural groupings of homes that were then categorized as HIGH, MEDIUM, and LOW in implementation effectiveness. Raw scores on implementation effectiveness for the eight homes were as follows: 6, 9,

18, 23, 25, 32, 33, and 34. The homes with scores 6 and 9 were categorized as LOW in implementation effectiveness. The homes with scores 18, 23, and 25 were categorized as MEDIUM in implementation effectiveness, and homes with scores 32, 33, and 34 were categorized as HIGH in implementation effectiveness.

Summary

After categorizing study data using the rationales described above, pattern matching logic was applied at two levels, thereby enabling within-case and cross-case comparisons. In pattern-matching logic, an empirically based result is compared with a predicted result. If the results agree, the hypotheses generated from the model are validated and the internal validity of the findings is strengthened (Yin, 2003).

CHAPTER 5

RESULTS AND DISCUSSION

STUDY 1: DIRECT CAREGIVER'S VIEWS ABOUT THE IMPLEMENTATION OF PERSON CENTERED CARE

While management in participating homes described various policies and practices they put in place to inform workers about and support the implementation of person centered care, these efforts may not have been perceived or understood by direct caregivers as formally related to the PCC Program. In some cases, direct caregivers may have appeared to be unaware of the PCC Program. In other cases, it appeared that workers adopted person centered care practices without recognition that a formal PCC Program existed. Section 1 describes direct caregivers' views about: 1) what management did, or did not do, to teach direct caregivers about the PCC project in their home; 2) what management did, or did not do, to support and reward person centered care practices in their home; 3) what changed in caregivers' daily routines as a result of person centered care; and 4) what caregivers valued about person centered care. This background information is provided to inform Section 2, an organizational level analysis of the association between caregivers' perceptions of the innovation fit and the implementation climate for person centered care. Information about the number of text units used to inform the Study 1 research questions is shown in Appendix 6.

SECTION 1: CAREGIVER DESCRIPTIONS

How did direct caregivers learn about the PCC Program?

Direct caregivers learned about the Person Centered Care Project in their homes primarily by attending meetings where the project was explained by a facility leader, typically the administrator or director of nursing. In three cases (B, D, E), the in-service trainings employed a "top-down" approach where direct caregivers were told about how PCC would be manifested in the home. Several variations of this educational approach were evident. For example, in two homes (A, C), the administrator convened direct caregivers to ask for their input about the person centered care project. In one home (C), management indicated to all the direct caregivers that their participation in the PCC project was voluntary. Caregivers seemed to appreciate that their participation was optional, and as a result, they said they made efforts to recruit their co-workers to join in the PCC Program.

In two homes (F, G), caregivers said they learned a lot about the PCC Program from their co-workers. One caregiver said she learned about person centered care from her peers who were already in the program. In one home (F), this peer learning approach was a strategy planned by management. In the other home (G), this strategy seemed to be one that occurred in the absence of formal introductions to person centered care by management. In both homes, direct caregivers appreciated their co-workers "on the job" efforts to orient them to the program.

Finally, in one home, (H), direct caregivers were selected by management to participate. These participants referred to themselves as "the chosen ones." This

selection strategy seemed to have elevated the role of the direct caregivers, because they continued throughout the project to refer to themselves as “the chosen ones.”

Table 5.1 summarizes the strategies used to introduce the PCC Program relative to home’s implementation effectiveness. Homes with HIGH implementation effectiveness used a combination of strategies to introduce person centered care to workers. In combination with the more traditional educational approach—in-service training—homes with HIGH implementation effectiveness used strategies that played to their organizational strengths. The “best” caregivers were recognized as such and specially chosen to lead the person centered care project within their home. It is likely that caregivers were motivated by this recognition and thus, became champions for person centered care. Additionally, these same caregivers were formally asked by management to educate their peers in person centered care practices.

In contrast to strategies used by facilities HIGH in implementation effectiveness, facilities LOW in implementation effectiveness relied solely on in-service training to introduce person centered care to workers. In these trainings, management introduced person centered care to direct caregivers, without asking for their input and opinions or soliciting their help in developing a dissemination plan

The data suggest that using multiple strategies to introduce person centered care to direct caregivers is an effective approach. Specifically, when management creates opportunities for innovation champions to emerge, who then educate their peers, innovation implementation may be more effective.

Table 5.1: Introduction strategies

Implementation Effectiveness Rating	Strategy used to introduce the innovation
HIGH (Homes E, F, H)	In-service education (top-down) Identify and recognize the best caregivers to lead the program. Peer learning as a management strategy
MEDIUM (Homes A, C, G)	In-service education (top-down) Meeting to gain input from direct caregivers Participation voluntary Informal peer learning
LOW (Homes B and D)	In-service education (top-down)

Were direct caregivers aware of the PCC project in their home?

In four of the eight participating nursing homes (C, E, F, H), direct caregivers gave descriptions that indicated to interviewers that they were fully aware of the specific nature of person centered care project in their homes. In one home (A), two of the three direct caregivers interviewed indicated they might not understand the specific nature of the person centered care project in their home. For example, in the middle of one interview, a direct caregiver from Nursing Home A asked, "Would you explain a little bit of this project to me?" In response to hearing about changes in the home relative to person centered care, a second direct caregiver from Nursing Home A, replied, "The what change now?" Despite these two indications that the direct caregivers did not understand the particulars of their person centered care project, a third worker from the same home was very articulate about the details of Home A's project.

Direct caregivers from two homes (B, G) indicated that not all the workers in their home knew about the person centered care project. More specifically, caregivers suggested that it was the part time workers who had not been apprised of the project. When issues around orienting part time staff to the project were combined with the need to orient temporary staff called in to work from an off-site agency, the importance of management's continuous efforts to disseminate information about change efforts to all employees was emphasized by caregivers.

Finally, in one home (D), caregivers provided detailed descriptions about the basic tenets of person centered care but they did not seem to understand the specific attributes of their person centered care project, a recognition program. While person centered care approaches seemed to be adopted generally within the home, the implementation of a recognition program, touted as the home's person centered care project, was not understood as specific to the PCC Program.

Table 5.2 summarizes direct caregivers' awareness of the PCC Program relative to home's implementation effectiveness. These data suggest that homes that are HIGH in implementation effectiveness take steps to make key worker groups, including part time workers, fully aware of the innovation.

Table 5.2: Awareness of the PCC Program

Implementation Effectiveness Rating	Awareness of the PCC Program
HIGH (Homes E, F, H)	Caregivers fully aware of project
MEDIUM (Homes A, C, G)	Caregivers fully aware of project in C 2/3 caregivers unaware of project in A Part time workers unaware of project in G
LOW (Homes B and D)	Person centered care not recognized as specific to PCC project in D Part time workers unaware of project in B

What policies and practices did management implement that signaled to direct caregivers that the PCC Program was a priority in their nursing home (Policies and Practices)?

In some cases (A, D, E, F), changes were made in homes' organizational structure to make way for the PCC project. These changes included pushing back the start time of the a.m. shift so that more workers could be hired to help during peak hours of PCC project operations, instituting consistent assignment of workers with "their" residents, and forming "neighborhoods" to localize governance within small groups of residents and their direct caregivers (A). Structural changes of smaller, yet important, magnitudes included buying uniforms for PCC participants to increase "esprit de corps" and firing a department director who acted to obstruct PCC implementation (E).

In one home (A), moving the shift start time one hour earlier helped the home bolster the number of direct caregivers available during the peak activities of the PCC project. Of added benefit, the home was able to tap into a larger workforce pool because the later shift time permitted parents with young children to arrive at work after their children had started school.

During the course of the PCC Program, all homes moved toward scheduling caregivers to work consistently with a group of residents. This change was put in place to permit direct caregivers to care for the same resident over time so that they could learn the resident's history and preferences. One resulting effect of this change in staffing strategy was that direct caregivers said they felt more responsible to provide good care because the resident became theirs."

In four homes (A, C, F, G), localizing the governance of care practices by forming "neighborhoods" served to increase the decision-making role of direct caregivers. For example, individual neighborhoods comprised of a small group of residents and their caregivers decided upon the work schedules, the types of activities they engaged in, and the décor of their environment. This change made way for closer alignment between resident and/or staff preferences and the care routines and activities.

Table 5.3 summarizes strategies management used to make way for the PCC Program relative to home's implementation effectiveness. Restructuring operations to flatten the organizations' governance (neighborhoods), acknowledging the values of direct caregivers (consistent assignment), capitalizing on opportunities to create "esprit de corps" (team uniforms), and reducing barriers to implementation appear to be

strategies that signal to workers that the innovation is important and as such, stand to improve implementation effectiveness.

Table 5.3: Implementation policies and practices

Implementation Effectiveness Rating	Implementation Policies and Practices
HIGH (Homes E, F, H)	Formed "neighborhoods" (F only) Bought uniforms for PCC leadership team (E only) Fired a department head (D only) Put consistent assignment in place
MEDIUM (Homes A, C, G)	Formed "neighborhoods" Changed shift times (A only) Put consistent assignment in place
LOW (Homes B and D)	Put consistent assignment in place

What management behaviors signaled to direct caregivers that the PCC Program was a priority in their nursing home?

Direct caregivers in all homes except B indicated that administration communicated messages that made it clear that person centered care was expected and would be supported and rewarded. Direct caregivers perceived that person centered care was important when management expressed appreciation for their participation, maintained a "listening attitude" (A), and prepared for meetings (H). Also, direct caregivers took note of how pervasive the PCC initiative was within their home. They

noticed when housekeepers, office staff, families, dietary workers, and even residents themselves, became involved in promoting person centered care practices (G). In particular, caregivers in two homes (C, E) appreciated receiving compliments from their supervisors "every day" and felt managers were readily available to answer questions about person centered care as they came up. In one home, caregivers expressed pride in the way management operated. For example, one nursing assistant said about her facility (A), "Our administration is after anything that will improve patient care."

Except for the absence of responses in B, and a mediocre response from direct caregivers in G, direct caregivers indicated that person centered care was considered by management to be a valued program and that the activities and philosophy would be continued by caregivers even in the face of waning or absent administrative support.

Table 5.4 summarizes the management behaviors recognized by direct caregivers that indicated the importance of person centered care to the organization. In HIGH implementation homes, management was visibly available to support project activities and when management was explicitly available to help, direct caregivers understood the person centered care to be a priority within the organization. Direct caregivers appreciated being recognized for their work and noticed when the messages about person centered care were pervasive within their organization. In contrast, in homes with LOW implementation effectiveness, management was perceived as lacking follow up on the plans for person centered care initially described during in-service programs.

Table 5.4: Management behaviors

Implementation Effectiveness Rating	Management behaviors
HIGH (Homes E, F, H)	Showed appreciation Were available to help Were available for questions "PCC is all you hear about" (F) Prepared for meetings
MEDIUM (Homes A, C, G)	Showed appreciation "Everybody here knows about PCC" Set high standards of care Maintained listening attitude
LOW (Homes B and D)	Did not follow up on promises

In what ways did person centered care promote or hinder the values of direct caregivers (Innovation-values fit)?

Direct caregivers described the basic tenets of person centered care, and the materialization of those tenets in their PCC project, as intrinsic to and congruent with their reasons for working in a nursing home. Because direct caregivers value the relationships they have with residents, and because relationships are at the center of person centered care practices, caregivers felt their role in the nursing home was elevated. Under person centered care, direct caregivers appreciated that spending time to get to know residents was sanctioned by management rather than considered as an "add-on" to already busy routines. Two quotes illustrate the satisfaction caregivers received from having more time to get to know residents. One caregiver from Nursing Home A said:

> Me, personally, I think it [PCC] is a wonderful thing. I think it's wonderful for us to get to learn a little bit more about them [residents] that we did not know. And that's the amazing part about it, and I guess I keep coming back to that, with this project we're doing, we have the time to go in there and talk to them and learn about them. You know what I'm saying? And they love to talk. [Laughter] Oh, they'll tell you a whole lot.

Another caregiver from Nursing Home C shares her pleasure at learning that one of her residents could dance. She said:

> Yes. It [a dancing activity] was something, and she was something, I tell you. And I didn't think she [the resident] was going to ever get tired. She said "Oh, I could go for months," this little old lady. [Laughs] I mean that's one of the things that really - - I keep that, I don't know, that just stays in my mind. Just looking at her you never would have thought! It's one of the experiences that I'll remember.

Additionally, practicing person centered care created opportunities for reciprocity in relationships between residents and caregivers. One caregiver describes the mutual benefits of reciprocal relationships this way:

> I think this one particular day I was in the dining room and some of the residents and I was talking. We were, you know, at the table talking and eating and mealtime is a good, happy time to enjoy when you sit and talk. [Afterwards] they said "Well, Miss, we was glad you came to our table to sit." I told where I was from, and my job, you know, what I did… and they did too. And we went on and we had a great day just in the dining room.

In addition to the benefits of creating opportunities for relationships to form between residents and caregivers, person centered care afforded caregivers the chance to serve an expanded role in the nursing home. By knowing the history and preferences of residents more fully than other staff, direct caregivers were in the unique role of educating other staff about what approaches to care might work, or not work, to engage residents in conversation or activity. As one caregiver said:

> It [PCC] helps the patient that really can't talk or communicate, you know, we [direct caregivers] can be their mouth, you know, their eyes and their ears too. I

> know now that I'm an important person in my patient's life. You know, they depend on me.

Positive, reciprocal relationships with residents were cited by direct caregivers as being highly valued and central to the meaning of their work. As shown in Table 5.5, the PCC projects afforded opportunities for strengthened relationships between caregivers and residents across all homes.

Table 5.5: Innovation-values fit

Implementation Effectiveness Rating	**Innovation-values fit**
HIGH (Homes E, F, H)	Reciprocity in relationships More time to spend with residents Learning about residents' lives Having a unique role Becoming important to residents
MEDIUM (Homes A, C, G)	
LOW (Homes B and D)	

What attributes of the person centered care project promoted or hindered smooth operations in the daily routines of direct care workers (Innovation-operations fit)?

Several direct care workers indicated that factors intrinsic to the concept of person centered care seemed to make daily routines easier and more enjoyable (caregivers from Nursing Home G did not inform this answer). Caregivers from several homes (A, C, D, F, H) reported that residents cooperated more during personal care when a positive relationship was in place. One direct caregiver from Nursing Home C said:

> Once you have that kind of relationship with them, you can get them to do just about anything once you understand them. And that's what it's all about. That's why I like this project with the person centered care because it gives you time to interact with your residents and you get to know them well and then when you have that relationship with them like that, it makes things go a lot easier.

In short, direct caregivers expressed pride in their work when the good outcomes of resident care could be directly attributed to their person centered care practices.

Specific characteristics of the individual PCC projects also seemed to make daily routines easier. These characteristics related to the decreased need to un-do or re-do work when care was individualized to target resident preferences. The facility (E) that changed their dining program to allow more resident choice, found that mealtimes were easier because residents liked to see and select their food and thus, did not ask as frequently for staff to return unappealing meals in exchange for alternative ones. Another direct caregiver from Nursing Home E reported that their workday was easier because the paper trail was lessened when fewer formal grievances were filed by residents and fewer "incident' reports needed completion.

Two caregivers from Nursing Home B indicated that person centered care approaches were difficult to implement when they were working short staffed or when they lacked effective teamwork among caregivers. It was harder to take time to talk with residents knowing daily tasks might not get accomplished. In general though, direct caregivers expressed willingness to occasionally give up their lunch break or work late in the service of providing good care to residents.

As summarized in Table 5.6, caregivers across all homes indicated that not only did person centered care approaches not make their daily workload more difficult, these approaches may have made caregiving tasks easier because residents were more cooperative when their choices about care were honored.

Table 5.6: Changes in operations

Implementation Effectiveness Rating	How person centered care affected operations
HIGH (Homes E, F, H)	Fewer resident grievances made for less work Less need to re-do work already done More resident cooperation
MEDIUM (Homes A, C, G)	More resident cooperation
LOW (Homes B and D)	When short staffed or lacking teamwork, person centered care was difficult to implement More resident cooperation

SECTION 2: THE ASSOCIATION BETWEEN INNOVATION FIT AND IMPLEMENTATION CLIMATE

Are direct caregivers' perceptions of the "fit" between person centered care and their values associated with their perceptions of implementation climate?

In all eight homes, the fit between the values of direct caregivers and the values promoted by person centered care was categorized as HIGH. Out of 52 quotes coded as **Innovation-values fit**, 51 of them were further classified as **Innovation-values fit positive**. Because the Innovation-values fit construct did not demonstrate variability, it was not associated with implementation climate.

Are direct caregivers' perceptions of the "fit" between person centered care and their daily routines associated with their perceptions of implementation climate?

In seven of the eight homes, operational fit and implementation climate, as described by direct caregivers, were pattern matched. In four homes (A, E, F, H), both

operational fit and implementation climate were high. In two homes (G, D), both operational fit and implementation climate were medium, and in one home (B), both measures were low. In one home (C), caregivers' descriptions of the implementation climate and the operational fit differed. The operational fit was described as MEDIUM while the implementation climate was described as HIGH. These results support the positive relationship between operational fit and implementation climate in nursing homes implementing person centered care.

In homes where operational fit and implementation climate were HIGH, direct caregivers indicated that having more time to get to know residents had the effect of making their jobs easier. Instituting consistent assignments of direct caregivers to residents and offering new shift times were two examples of organizational restructuring that occurred in homes with both high operational fit and high implementation climate.

Consistent assignment means that direct caregivers take care of the same residents each day. With this change, workers have the opportunity to get to know their residents care preferences and tailor the day's activities accordingly. When residents have the opportunity to work with one direct caregiver over time, they may be better able to anticipate, and thereby cooperate with, daily care activities. Conversely, when caregivers know their residents' individual needs and preferences intimately, they may experience a sense of ownership about the work they do. For example, one caregiver described a sense of pride in her work, an opportunity created by consistent assignments, when she offered the following comments:

> By us taking on the permanent assignments, it gives us a bigger picture of what we're doing and what the outcome is. And also, you know, after you finish a job and you go back, you walk down that hall and you look at the rooms that you are assigned to. You say "well, I did a good job today."

When consistent assignment is instituted in nursing homes as a means to support person centered care practices, direct caregivers perceive the implementation of person centered care more favorably (HIGH implementation climate), perhaps because daily routines are easier (HIGH operational fit) when caregivers know their residents.

Creating new shift times, which made it possible for more help to be available for person centered care activities, was another example of organizational restructuring that was perceived favorably in a home with HIGH operational fit and HIGH implementation climate. Caregivers said they were "de-stressed" by person centered care practices because management provided for more help during times when the person centered care activities were in full swing.

It appears that when residents are satisfied with their care, caregiving is easier and caregivers perceive operational fit as HIGH. Contrasted to the above positive effects, in the home where operational fit and implementation climate were described as LOW, caregivers felt management did not prepare for, or follow through with plans to implement person centered care practices.

In the home where both determinants were LOW, direct caregivers said they were constrained from participating in the person centered care project because they were working short staffed, lacked teamwork, and attended meetings at the expense of resident care. Caregivers in this home seemed to lack trust that management would deliver on their promises about the person centered care project. Examples of lack of trust came through in comments such as the following, "They [management] made a big deal out of it [person centered care] to start with and then it didn't really happen." Additionally, when direct caregivers offered feedback to their administrator and director of nursing

about the shortcomings of the program, they perceived management to be unresponsive to their concerns.

In nursing homes, where workloads are high, attributes of the innovation that ease the daily routines of caregiving are more likely to be associated with favorable climates for the implementation of change. In general, when direct caregivers are consistently supported by administration in developing positive relationships with residents, and each other, the implementation climate is described as HIGH. Conversely, when innovation implementation disrupts or hinders daily routines and management lacks responsiveness to feedback, direct care workers perceive the implementation climate for change as LOW. As shown in Table 5.7, this research demonstrates that the relationship between operational fit and implementation climate in the nursing home is a positive one. Furthermore, levels of operational fit vary in accordance with levels of the implementation climate.

Table 5.7: The association between innovation-operations fit and implementation climate by home

	Implementation Climate - HIGH	**Implementation Climate - MED**	**Implementation Climate LOW**
Innovation-operations fit- HIGH	A, E F H	C	
Innovation-operations fit- MED		G, D	
Innovation-operations fit- LOW			B

CHAPTER 6

RESULTS AND DISCUSSION

STUDY 2: INNOVATION CHARACTERISTICS, ORGANIZATIONAL CONTEXT, PROCESSES, AND WORKER VIEWS RELATED TO THE IMPLEMENTATION EFFECTIVENESS OF PERSON CENTERED CARE IN NURSING HOMES

The results and discussions of within-case and cross-case analyses for Study 2 are presented in this chapter. The results and discussion for each analysis are described as a unit in an effort to offer details and possible explanations for the findings as they are presented. Nursing Homes are identified by letter, instead of name, to protect their privacy.

As a first step in the within-case analysis, a narrative of implementation effectiveness was rendered for each nursing home. As a second step in the within-case analysis, the utility of the theoretical framework to explain implementation effectiveness was assessed and is presented at the end of the eight case descriptions. The cross-case analysis follows the within-case analysis. In this analysis, individual constructs from the Klein et al. framework were assessed to determine if the predicted relationships between the constructs and the outcome functioned across the cases.

WITHIN-CASE ANALYSIS

What follows is a narrative describing each nursing home's implementation of person centered care, told through the lens of the Klein et al. framework. In the eight case studies, qualitative and quantitative data from multiple sources was incorporated to create an overall narrative about each nursing home (Yin, 2003). Within each case, the outcome, implementation effectiveness, was the point of reference. Explanations are offered where possible when the expected patterns do not match the actual patterns. Following the case narratives, Table 6.1 summarizes findings from the within-case analysis.

NURSING HOME A

Implementation Effectiveness Rating = MEDIUM

Project Description. Nursing Home A offered residents the opportunity to set their own morning schedules around waking and eating. Prior to this change, and still within the timeframe of the PCC Program, Nursing Home A reorganized its operations around the neighborhood concept. This concept is one that focuses decisions and accountability for daily activities and care routines within a small group of staff and residents. In the case of Nursing Home A, neighborhoods were formed according to the home's hallway configuration. A budget was supplied by administration to support the neighborhood activities and a mayor was "elected" to lead the group of staff and residents, who then made decisions about their schedules, décor, and holiday celebrations. This change to the

neighborhood concept was implemented within two months of the PCC Program and helped make way for the next step, allowing residents to wake at their preferred times and eat a made-to-order breakfast. The scope of Nursing Home A's PCC project was rated by the CCME team as MEDIUM.

Organizational Context. Nursing Home A is a 143 bed not for profit home that was deeply embedded in a mission of service to the local community. To this end, Nursing Home A served as a training site for nursing assistants who were students at the local community college. While this educational endeavor was consistent with the home's mission, it also served another purpose. Nursing Home A had continual difficulty recruiting and retaining direct caregivers. Thus, serving as a training site for future caregivers provided opportunities to recruit new staff. Worker shortages were such a consistent problem for Nursing Home A that the home developed a second strategy to overcome the worker shortage problem. Over the course of several years, Nursing Home A developed ongoing relationships with communities in Singapore and Micronesia as a way to recruit caregivers from overseas to join their staff. Securing international caregivers was also consistent with Nursing Home A's high value on having a multi-cultural staff. A third strategy Nursing Home A used to address its worker shortage was to hire temporary agency staff seven days a week. Typically, the use of temporary agency staff is considered inconsistent with person centered care practices because caregivers rotate who they care for and thus, seldom have an opportunity to learn the preferences of their residents. Using this strategy suggests the gravity of the workforce

shortage in the community and set Nursing Home A apart from other homes in the PCC Program.

Despite difficulties recruiting caregivers, Nursing Home A had LOW staff turnover (8.5%) and had money to support its plans for person centered care. A MEDIUM amount of funding was awarded from the state government. After grant application, $20,000 was awarded to Nursing Home A from "penalty" monies accrued when nursing homes are fined for regulatory violations. This money was used to make changes in the home's environment to support person centered care practices.

Implementation Policies and Practices. Administration from Nursing Home A provided a MEDIUM amount of time for workers to learn about person centered care. Even though the administrator and director of nursing attended two of the four CCME hosted conferences, nursing assistants attended three times. No members of the leadership team attended the final CCME conference. Nursing Home A was categorized as HIGH in the policies and practices it put in place to support person centered care. Over the three month period between the conference kick-off and the site visit, twenty-four educational programs about person centered care were offered to staff from all shifts. One of these programs was subsequently incorporated as a standard part of orientation for all new employees. Nursing Home A also distinguished itself from the other PCC Program participants by making two organization-wide policy changes specifically to support person centered care practices. First, annual staff evaluations were modified so that staff received feedback about their fidelity to delivering person centered care. In addition to getting feedback, staff was rewarded monetarily for providing person centered

care. Second, management hired more staff in the morning hours to support the added flexibility needed to permit residents to wake and eat according to their preferences. By altering the shift start time and bringing in more workers, management in Nursing Home A signaled its support of person centered care practices to all workers.

Nursing Home A had a MEDIUM response rate to the Kansas Organizational Culture Survey. Management surveyed all staff at the end of a meeting designed to discuss the tenets of person centered care. Staff were asked to complete surveys on the spot and place them in an envelop after the meeting. This strategy resulted in a 78% response rate.

Implementation Climate. Direct caregivers from Nursing Home A perceived that management expected, supported, and rewarded person centered care. Caregivers felt they had a voice in crafting changes and were included as decision makers for the person centered care program. Workers were particularly proud of the high standards that management had for care at the home. This sense of pride and ownership in the change process was consistent throughout each interview with direct caregivers in Nursing Home A and thus, implementation climate was categorized as HIGH.

Summary. In view of the HIGH amount of training, the HIGH implementation climate, and the two organization-wide changes that Nursing Home A put in place to support person centered care practices, the MEDIUM rating of Nursing Home A's implementation effectiveness by the CCME team is somewhat puzzling. It is possible that because the home's leadership team did not attend the final CCME hosted

conference, where nursing homes celebrated their PCC Program successes, the CCME team was unable to confidently compare Nursing Home A's achievements with other homes. Nevertheless, the MEDIUM rating of implementation effectiveness is consistent with Nursing Home A's MEDIUM rating of time offered by management to learn about person centered care, the MEDIUM rating of the communications from management about the Kansas Survey, and the MEDIUM amount of funding dedicated to support person centered care activities.

NURSING HOME B

Implementation Effectiveness Rating = LOW

Project Description. For its PCC Project, Nursing Home B invited nursing assistants to attend, and contribute to the resident care planning process. Typically, care planning meetings include licensed staff only. Also, as part of the PCC program, Nursing Home B changed the lighting and paint colors in the bathrooms and dining room to reflect residents' preferences. The scope of Nursing Home B's PCC project was rated by the CCME team as LOW.

Organizational Context. Nursing Home B is a for-profit nursing home with 100 beds. This home was the only one in the PCC Program with a for-profit status. Located in a small community, Nursing Home B has been privately owned and operated by members of three generations from the same family. Relative to other PCC Program participants,

Nursing Home B had one of the highest percentages of residents who pay for service with Medicaid funding (67%) and the lowest ratio of staff time per resident per day (3 hours). Low nursing staff to resident ratios (15%) is one organizational characteristic that could explain why residents received fewer care hours per day in Nursing Home B than in other PCC nursing homes. In addition to the low ratio of nursing staff/residents, Nursing Home B had HIGH staff stability, with an annual turnover rate of nursing staff of 3%.

Nursing Home B dedicated no funds to the PCC Program and management support for PCC was LOW. In fact, the administrator was initially skeptical that the PCC would benefit resident care, saying that, "We are already a PCC nursing home." However, after seeing the results of their Kansas Organizational Culture Survey, the administrator agreed with the CCME nursing home team that staff concerns expressed in the survey may in fact "need some work."

Implementation Policies and Practices. The administrator and director of nursing from Nursing Home B did make time in their schedules to attend all four CCME hosted conferences. This attendance rate put Nursing Home B in the HIGH category for time provided to learn about person centered care. Even though a nursing assistant was on Nursing Home B's PCC leadership team, she only attended two conferences. Since this home's PCC project directly involved nursing assistants, this attendance record may reflect a "top-down" environment within Nursing Home B. Staff training in PCC principles did not appear to be a high priority for Nursing Home B. During the four months between the PCC kick-off event and the site visit, no PCC trainings were conducted. Thus, the training provided for staff to learn about person centered care was

categorized as LOW. Furthermore, the response rate to the Kansas Organizational Culture Survey was low (43%). A LOW response rate could indicate that conducting a needs assessment was a low priority for management, or it could possibly indicate that the process of survey administration was ineffective. Nursing Home B put the Kansas Survey into staff paychecks with a request to drop completed surveys at the nurses' station. Management did not inform staff of the purpose of the survey or provide support for survey completion. Staff was reminded of the need to complete the survey when management posted a notice over the time clock.

Implementation Climate. In Nursing Home B, direct care workers described the operational fit of person centered care as LOW. While workers saw the benefit they could bring to the care planning process, they felt unsupported to do so because management made no provision for coverage of care for their residents while they attended meetings. Workers also indicated that they were not confident that management would follow through with plans to implement person centered care. For example, workers said that even when they were invited to care planning by their supervisors, they were not invited to actually contribute at the meetings. Finally, workers showed some anger with management for not following through with plans as described. One worker said, "They [management] made a big deal out of it [PCC] to start with and then it didn't really happen." Another direct care worker echoed distrust of management practices when she said, "don't let us think that we're going to be in on something that we're not in." Thus, the climate for implementation in Nursing Home B was categorized as LOW.

Summary. Nursing Home B followed five out of the expected seven theoretical patterns with regard to implementation effectiveness. Ranked by the study team as LOW on the outcome, implementation effectiveness, Nursing Home B also ranked LOW in management support for PCC, financial resources to support the project, management communications, training provided about person centered care, and worker perceptions about the facility's climate for implementation.

NURSING HOME C

Implementation Effectiveness Rating = MEDIUM

Project Description. Nursing Home C's leadership team chose its PCC project from a list of four possible projects. The initial list included: changing the dining environment to reduce noise and invite community residents to eat with residents; reconfiguring the shower rooms to be more spa-like; re-decorating resident rooms; and forming neighborhoods where small groups of residents and caregivers would share decision-making about daily routines and neighborhood activities. Ultimately, the team decided to form neighborhoods first. The team believed that once the neighborhoods were configured and operational, the other three environmental changes could be made easily. The scope of Nursing Home C's PCC project was rated by the CCME team as MEDIUM.

Organizational Context. Nursing Home C is an 80 bed, not-for-profit facility located in a rural community. A high percentage (67%) of residents' care in Nursing Home C was reimbursed by Medicaid, indicating the generally low socio-economic status of the residents and the community at large. No funding was available to support the implementation of person centered care and no previous PCC-like initiatives had been tried. The community was close-knit and Nursing Home C was the only PCC Program participant that chose to include a resident's family member on the leadership team. Two other characteristics distinguished Nursing Home C from other PCC Program participants. First, it was routine to take residents on regular outings into the community. Residents and staff were able to enjoy church services, senior center activities and special library events together. As a result of this integration into the community, Nursing Home C felt supported by many local organizations and individuals. For example, when the CCME team came for a site visit, the water pipes throughout the facility had just burst because of a recent ice storm. Several members of the community were already on hand to help mop up and repair the pipes, making it possible for a productive site visit to occur. Second, relative to the other PCC homes, Nursing Home C had the highest annual nursing staff turnover (52%) and the highest nursing staff to total bed ratio (30%). While one might expect the high ratio of nursing staff to total bed ratio to make way for more hours per day of resident care, this was not the case. Nursing Home C provided 3.4 hours of resident care per day, the second lowest amount compared to other PCC Program participants. This constellation of figures may mean that while they are poised to provide more resident care because of the high number of staff present, Nursing Home C's high

turnover rate may mean that operational efficiency was compromised because so many staff members were new.

Implementation Policies and Practices. An examination of Nursing Home C's implementation policies and practices also reveals inconsistent patterns. Nursing Home C provided a HIGH amount of time for the leadership team to learn about person centered care. Even though the administrator only attended one conference, all other disciplines were represented at all four CCME conferences. Conversely, Nursing Home C provided a LOW amount of on-site training about person centered care to staff. During the four months between the first PCC conference and the CCME site visit, Nursing Home C provided staff with four training sessions. This LOW amount of training is contrasted to the fact that over half of the other participating homes provided more than 20 trainings during the same period.

The quality of communications from management about person centered care was MEDIUM. The response rate for the Kansas Organizational Culture Survey was only 62%. Management administered the surveys by placing them in workers' paychecks without instructions and collected surveys in a box at the front desk. Management at Nursing Home C demonstrated commitment to the PCC Program by providing time for leadership team members to learn about person centered care. However, this same level of commitment was not demonstrated in the training provided to staff and the quality of communications management sent to staff about the survey.

Implementation Climate. Direct caregivers in Nursing Home C rated the climate for implementation as MEDIUM. Overall, caregivers appreciated the wide base of support for PCC within the organization. For example, one caregiver said, "PCC is at the top of the list of things to do. Everyone knows about PCC. Even family members and visitors who come in want to know what it is." In spite of workers' perceptions that management was supportive of person centered care, one "neighborhood" leader had trouble enlisting the participation of her co-workers in PCC activities. She attributed management's decision to make worker participation in PCC optional, instead of mandatory, as a key explanation for lack of participation in her "neighborhood".

Summary. The CCME team rated Nursing Home C's implementation of the neighborhood concept as MEDIUM in implementation effectiveness. This rating was consistent with direct caregivers' perceptions of the climate for implementation and the quality of management communications about person centered care. However, this rating was not matched with other construct ratings. Time made available to learn about PCC was HIGH for the leadership team but the amount of training offered to the staff at large was LOW. No funds were available to support PCC implementation, staff stability was LOW, and even though Nursing Home C was embedded in a close-knit community where relationships were key, person centered care was still a new concept to the facility.

NURSING HOME D

Implementation Effectiveness Rating = LOW

Project Description. Nursing Home D had a difficult time deciding on its PCC project. Initially, the administrator planned to host focus groups with all staff members to introduce PCC concepts and solicit their feedback about an appropriate project. For unknown reasons, the focus groups did not materialize. Five months after the PCC Program started, and several false starts later, Nursing Home D determined that its project would be to enhance its existing Recognition and Reward Program to specifically reward caregivers who were providing person centered care. The leadership team at Nursing Home D agreed that enhancing an existing program would be more feasible than starting from the beginning to design and implement a new PCC project. The initial Recognition and Rewards Program had been in existence for at least one year. It was a program originally designed to reward staff for providing exemplary care. Nursing Home D planned to augment this program by awarding "coupons" specifically when peers, family members or management observed staff providing person centered care. Individual staff members accumulated coupons that could be cashed in for rewards such as movie tickets, meal tickets, or time off work. The scope of Nursing Home D's PCC project was rated by the CCME team as LOW.

Organizational Context. Nursing Home D is a 114 bed not for profit home that is embedded within a continuing care retirement community. Relative to the other homes participating in the PCC Program, one distinguishing demographic factor about Nursing

Home D was its high percentage (60%) of residents who paid privately for their care. While this home was well resourced, no funding was dedicated to support the PCC Project.

Management support at Nursing Home D was nuanced. The administrator was actively involved at the state level in enhancing the quality of care provided in nursing homes. She had a long history of commitment to the principles of person centered care and under her direction, Nursing Home D had already received at least one facility-wide training in person centered care. Because the CCME team knew of the administrator's longstanding involvement in person centered care initiatives, their expectations for her support of the PCC project were high. However, throughout the PCC Program, her support for the program seemed to falter. The CCME team later learned that two factors could have contributed to this impression: 1) the administrator's grandmother, who lived in the retirement community, was dying; and 2) the administrator had an add-on responsibility to mentor an administrator-in-training toward his licensure. This mentoring relationship was not a positive one and thus, may have hampered the administrator's available energy and focus for the PCC Program. Another factor that could have added stress to the administrator's work was the high nursing staff turnover (38%) at Nursing Home D. In addition to this LOW staff stability, LOW management support and the lack of dedicated funding for the PCC project were contextual factors that could have made goals for change within Nursing Home D difficult to achieve.

Implementation Policies and Practices. Nursing Home D's attendance at the four CCME conferences was erratic. Only two members of the home's leadership team

attended the first conference, twelve participants (some identified as leadership team members and some not) attended the second conference, and six attended the third and fourth conferences. Not only did this attendance pattern mean that management was irregular in supporting time for staff to learn about person centered care, it could also have led to confusion among leadership team members about their roles and their home's goals. Training in person centered care principles for staff members was LOW. In the four months between the first conference and the CCME site visit to Nursing Home D, only one training in person centered care had been offered. Furthermore, communications from management around the administration of the Kansas Organizational Culture Survey were also of LOW quality, resulting in a 28% response rate and essentially unusable data.

Implementation Climate. Worker perceptions about the climate for PCC Program implementation were difficult to interpret. In some cases, study investigators lacked confidence that caregivers were aware of the PCC project. In the interviews, caregivers confused recognition for person centered care with recognition for getting to work in the snow or painting residents fingernails. Caregivers also confused PCC-specific reward coupons with other rewards such as raffles, luncheons, cookouts, and holiday parties where everybody got a prize. Apart from this confusion about the specific nature of the PCC project at Nursing Home D, direct caregivers perceived that person centered care in general ways was supported and rewarded. Thus, implementation climate was rated as MEDIUM.

Summary. Nursing Home D's path towards person centered care was thwarted by a slow start, competing agendas, mixed messages from management, and confusion among direct caregivers. In addition, staff stability was LOW, there were no resources dedicated to the PCC Program, the amount of training offered to staff about person centered care was LOW, and management communications about the needs assessment resulted in a LOW response rate on the Kansas Organizational Culture Survey. All these factors contribute to the LOW rating CCME team members had for Nursing Home D's implementation of person centered care.

NURSING HOME E

Implementation Effectiveness Rating = HIGH

Project Description. Nursing Home E's PCC project was to reconfigure the dining program to improve the food quality and presentation for residents. The dining project was chosen because resident criticisms of the food and requests for alternative meals were becoming the norm, requiring more staff time and creating chaos in the kitchen. Previous to the PCC program, the dining experience for residents meant eating canned or pre-prepared food served on plastic trays. As a result of the PCC project, all resident meals were cooked using fresh ingredients and dessert was served buffet-style allowing residents to choose their dessert and portion size. Of note, during the revamping of the dining program, the dining services director was resistant to change and was asked by the

administrator to leave. The scope of Nursing Home E's PCC project was rated by the CCME team as HIGH.

Organizational Context. Nursing Home E is a 64 bed, not for profit home that is located in a small community on the NC coast. This facility is affiliated with the local hospital and together, these two entities share the same campus and have overlapping governance. Compared to the other study facilities, Nursing Home E provided the second highest number of hours of resident care per day (4.69) and reported a HIGH staff stability evidenced by the low nursing staff turnover rate of 7%. Nursing Home E provided this high number of hours of resident care per day with a modest number of nursing staff per available bed (17%) compared to the average (19%) of all participating homes. While other facilities provided residents with higher amounts of care by hiring more nurses, Nursing Home E did not use this strategy. One possible explanation for the high number of resident care hours provided by Nursing Home E is high worker efficiency. This may be related to the nursing home's location in a small community where the likelihood of knowing a resident's past history and preferences is great. During the initial site visit to Nursing Home E, the quality improvement team noted a sign posted just inside the front door that read, "You don't live where we work, we work in your home." If this sentiment had already been widely adopted at Nursing Home E, it is possible that the ingredients for person centered care were partially in place before the formal program began. However, additional data to support this conjecture is lacking so the rating for management support is LOW.

Despite HIGH staff stability, Nursing Home E had no financial resources dedicated to the PCC Program. Management support was rated LOW because, while leaders at the nursing home and affiliated hospital were supportive of the basic principles of person centered care, these principles were not explicitly guiding workplace or care practices within the larger nursing home-hospital system.

Implementation Policies and Practices. The leadership team from Nursing Home E demonstrated generally high quality implementation policies and practices. The administrator and the resident care coordinator each attended all of the four conferences and the nursing assistant attended three. In addition, Nursing Home E's leadership team attended conferences dressed in uniforms specially bought to signal membership in the PCC program Nursing Home E. This also demonstrated HIGH quality communications from management. The home had a 100% response rate to the Kansas Organizational Culture Survey. The process that led to this accomplishment included hosting educational sessions for all three shifts to explain the person centered care project and to assist with survey completion. Finally, the amount of training provided to Nursing Home E's staff was categorized as LOW. Nine in-services were offered to staff in the time period after the first learning session and before the site visit. One explanation for this relatively low amount of training is that compared to other PCC homes, Nursing Home E had the shortest measurement interval (1.5 months), the time between the learning session and the site visit.

Implementation Climate. The climate for implementation at Nursing Home E was HIGH. All three direct care workers spoke enthusiastically about the high priority person centered care held within the organization. Direct care workers expressed gratitude for the daily inquiries they received from their administrator about how the PCC Program was going, and all interviewees indicated that person centered care was highly valued by management. Particularly, direct caregivers noted that management came on to the hallway every day to help solve problems and participate in the residents' dining experience. One direct care worker said about the PCC Program, "We've had so much involvement from everyone, from dietary to the managers. Everybody had a clear understanding of what the need was and that's the reason it has gone so well."

Summary. Nursing Home E's HIGH implementation effectiveness is matched by HIGH ratings on four of the seven theoretical constructs. In the context of HIGH staff stability, Nursing Home E demonstrated high quality implementation policies and practices and a HIGH climate for implementation. Specifically, the benefits of HIGH quality management communications around survey administration and HIGH attendance by key leaders at all conferences seemed to outweigh the LOW amount of training implemented early on. Most notable are the uniformly enthusiastic worker descriptions of the climate for innovation implementation.

NURSING HOME F

Implementation Effectiveness Rating = HIGH

Project Description. In order to empower direct care staff to embrace person centered care, Nursing Home F helped nursing assistants learn what other facilities are doing to promote person centered care for their residents. Based on their exemplary care giving skills, 38 nursing assistants were selected for this project by their supervisors. In groups, nursing assistants made numerous conference calls and eleven in-person visits to homes throughout the nation that were identified as leaders in person centered care. At the end of the project, nursing assistants were charged with leading the implementation of one new person centered practice within their hallway. These projects included: instituting consistent assignment of caregivers with residents, compiling "get to know you" books about each resident, remodeling bathrooms to reflect a more home like environment, and offering buffet dining. The scope of Nursing Home F's PCC project was rated by the CCME team as HIGH.

Organizational Context. Facility F is a not for profit nursing home with 289 beds. While located in a small suburban community, this facility is owned by a larger, corporate health system that services a nearby metropolitan area. Two factors distinguish this nursing home from others in the PCC Program. In the study, Nursing Home F had: 1) the highest percentage of residents who rely on Medicaid funding (67%); and 2) the highest ratio of caregiver hours spent with residents per day (4.96 hours). The overall effect of these two factors is that while residents in this facility are largely poor, they

received more hours of care each day than the other participating facilities. Facility F reported MEDIUM staff stability, with an annual turnover rate of nursing staff of 25.4%.

Facility F was fortunate to have funding dedicated to achieving the goals of the PCC program. Following a grant application, $26,000 was awarded to Nursing Home F from a corporate trust fund to implement changes that directly improved resident quality of life. In addition to receiving funds for PCC related activities, Nursing Home F was planning a move within the year to a new building specially designed to facilitate resident/caregiver interactions. The new building clustered resident rooms and staff operations into neighborhoods where daily routines were jointly determined by staff and residents who consistently lived and worked together. Thus, financial support for PCC related activities in Nursing Home F was HIGH and local efforts to introduce PCC were embedded in a larger corporate effort to improve the quality of residents' experience in the nursing home.

Implementation Policies and Practices. In addition to the broad-based supportive context around Nursing Home F, local management demonstrated high levels of support for the PCC Program. Nursing Home F's administrator, director of nursing and a nursing assistant attended all four training conferences. The consistent attendance of these key PCC team members distinguished Nursing Home F from other PCC participants. Nursing Home F also provided a HIGH number (22) of trainings to introduce the core tenets of person centered care to all workers within their facility. Nursing Home F used high quality communication strategies to achieve a high (98%) response rate on the Kansas Organizational Culture Survey. The PCC leadership team helped the department

managers run meetings when the Kansas Survey was administered. Each question on the survey was read aloud since both reading comprehension and English as a second language were concerns for the staff group. Further clarification about each question was added by PCC leaders when staff had questions. Respondents completed the Kansas during the meeting, and put it in an envelope marked "confidential."

Implementation Climate. In addition to having a favorable organizational context and high quality implementation policies and practices, Nursing Home F's workers perceived the climate for implementation of PCC as HIGH. Indications of workers' favorable perceptions are demonstrated in the following statements, "It [PCC] is very important here because that's all you hear around here," "PCC would never be dropped from here [Facility F], and "If the plug were pulled on PCC, we'd just have to continue." Workers also noted that as a result of the PCC Program, family members were calling them directly for information about their loved one. Caregivers said this direct communication link fostered closer relationships with family members.

Summary. Nursing Home F follows all but one of the expected theoretical patterns with regard to the outcome, implementation effectiveness. Ranked by the study team as HIGH in implementation effectiveness, Nursing Home F also ranked HIGH in dedicated financial resources, management support, time provided to learn about person centered care, training provided to workers, management communications, and worker perceptions about the facility's climate for implementation.

NURSING HOME G

Implementation Effectiveness Rating = MEDIUM

Project Description. For their PCC project, Nursing Home G worked to integrate teamwork development strategies into an expansion of their Breakfast on Demand program. When the PCC Program began, Nursing Home G had already embarked upon a large-scale transformation of its workplace practices, care practices and the environment. All these changes were designed to foster person centered care for residents. When the PCC Program was begun at Nursing Home G, leaders hoped to leverage the technical support provided by the PCC Program to improve teamwork among workers involved with the already ongoing Breakfast on Demand project. The Breakfast on Demand project was created to foster socialization during the breakfast hours by offering made-to-order food and encouraging residents to get up when they wanted and eat with people of their choosing. By offering more choices for residents, staff schedules and roles required change. In some cases, roles were "blended." For example, eligible housekeepers were certified to provide direct care during meals and nursing assistants had to cooperate with each other to coordinate daily plans for residents who were now on a flexible schedule. Because the rate and magnitude of change within Nursing Home G was large, the development of teamwork skills among caregivers was deemed by management as a critical ingredient for overall success. The scope of Nursing Home G's PCC project was rated by the CCME team as MEDIUM.

Organizational Context. Nursing Home G is a religiously affiliated, not for profit facility located in an urban area. Approximately 50% of residents in this home pay privately with another 40% that pay with Medicaid funding, indicating that Nursing Home G served a population of residents from both high and low socioeconomic standing. Nursing Home G had a HIGH amount of management support and funding already dedicated to promote change in all three domains of person centered care. Simultaneous with PCC Program activities, care practices at Nursing Home G were changed by creating clustered neighborhoods that were governed by small groups of residents and staff. Workplace practices were changed by introducing flexibility into formerly rigid daily routines, and the environment was changed through complete re-design and renovation of the physical facility to support person centered care. Underlying all the changes described above was high staff turnover. During the year prior to the PCC Program, the nursing staff turnover rate was 46%. The challenges imposed upon the administration to orient new staff while simultaneously designing and building a new facility that would meet the requirements of the county health department and the state regulatory agency, were formidable. While the implementation of several major initiatives simultaneously could have had a facilitative effect on the change process, it also might have been overwhelming to administrators and caregivers alike.

Implementation Policies and Practices. Despite the many changes going on, management at Nursing Home G provided a HIGH amount of time for key employees to attend all four CCME hosted conferences. The administrator attended three sessions and the director of nursing and the nursing assistant attended all four conferences. By hosting

an on-site two-day kick-off event where 80% of the staff was in attendance, management also provided a HIGH amount of person centered care training compared to other facilities.

Even though management said they were eager to view the needs assessment results provided by the Kansas Organizational Culture Survey, the response rate was LOW (49%) compared to the average (70%) of all PCC facilities. The surveys were distributed to staff after team meetings where person centered care was not necessarily discussed. Workers were asked to complete the survey and turn it in after the team meeting, but many workers elected to complete the survey at home. Administrators attributed the high level of non-responders to the group that took surveys home rather than complete them on-site. While the Kansas Organizational Culture survey is intended to serve as a needs assessment that guides the selection of individual PCC Program projects, Nursing Home G may have not perceived high utility for the survey because they were already so far along in their journey toward person centered care. Thus, communications about the survey and the survey administration strategies may not have reflected the usual norms and expectations for leaders in Nursing Home G.

Implementation Climate. In general, workers perceived the climate for implementation of person centered care at Nursing Home G as MEDIUM. While workers described a lack of confidence that person centered care activities would continue without the current level of management support, this sentiment is understandable given the magnitude of change that was happening within the facility. Aside from concerns that PCC activities would falter without administrative support, workers were enthusiastic about the overall level of help they experienced from multiple sources. Workers said that, "Administration

is stressing PCC. It is very important here; even the people in the office come by and ask if we need any help…on a daily basis." Another worker expressed appreciation for hands-on help from supervisors. She said, "Our supervisors participate in resident care more than before. It feels good and is a big help to us."

Summary. The CCME quality improvement team rated Nursing Home G as MEDIUM in implementation effectiveness. Also, direct caregiver remarks describe the climate for implementation with Nursing Home G as MEDIUM. These ratings exist despite Nursing Home G's HIGH amounts of dedicated funding for PCC, HIGH management support, and HIGH amounts of training and time for workers to learn about PCC. It is possible that the sheer magnitude of change going on within the facility may have diluted the observable effects of the PCC program for the CCME team and may have been overwhelming for direct caregivers. Also, the LOW level of staff stability that Nursing Home G experienced during the time immediately prior to the PCC Program may have made it difficult for management to effectively and consistently convey the message to workers that the PCC project was a high priority within Nursing Home G.

NURSING HOME H

Implementation Effectiveness Rating = HIGH

Project Description. Nursing Home H's leadership team chose to integrate direct caregivers into the resident care planning process. The CCME team rated the scope of Nursing Home H's PCC project as MEDIUM.

Organizational Context. Nursing Home H is a 105 bed not for profit home. Nursing Home H is located in a metropolitan area and is part of a large, corporate healthcare system that serves the urban vicinity and surrounding rural communities. Compared to other homes in this study, the overall portion of Medicaid payment was low, indicating that Nursing Home H tends to serve residents from a higher socio-economic status. Nursing Home H received a MEDIUM amount of funds dedicated to the PCC from their corporate headquarters. These capital funds were specifically used to expand the common areas to accommodate more group activities and foster socialization among residents. In addition to providing expansion funds, the corporate headquarters had embarked on a new program to improve customer service throughout all their facilities. This customer service program, already underway when the PCC Program began, was aligned with many person centered care principles such as tailoring services to customer preferences and enhancing respectful communications between providers and those they serve. Because Nursing Home H was embedded in a corporate structure that had adopted a philosophy of care that was aligned with person centered care, management support for the PCC Program was HIGH. Compared to other homes in the PCC Program, Nursing Home H had the second highest turnover of nursing staff. Despite this relatively high turnover rate, Nursing Home H was able to provide residents over 4 hours (4.2) of direct care per resident per day, an amount higher than the average (4.0) in the study facilities. This provision may have been possible because of efficient staffing patterns or use of temporary, agency-based direct caregivers.

Implementation Policies and Practices. Nursing Home H had a strong showing of its PCC leadership team at every conference. Its administrator attended two conferences and the director of nursing and nursing assistants attended all four conferences. This attendance record, combined with the HIGH number of person centered care trainings offered to staff (21) and a 98% response rate for the Kansas Organizational Culture Survey demonstrate that Nursing Home H was strong in its implementation policies and practices. To achieve the 98% survey response rate, Nursing Home H used the following steps: 1) the administrator read the survey instruction at all four training sessions and then made herself available to answer staff questions as they came up; 2) leadership team members were on site, available to help those who had difficulty interpreting questions or for whom English was not their first language; and 3) at the end of the trainings, surveys were placed in a specially decorated box to insure confidentiality. Unlike any other PCC homes, results of Nursing Home H's Kansas survey were tabulated and shared with all staff.

In addition to the detailed preparations the PCC leadership team made for its project, the team piloted the PCC project on one hallway and "modeled the way" for direct caregivers to contribute at meetings. The team held mock meetings to model the various roles each individual could play in care plan meetings. Using the lessons learned from the pilot experience, the PCC leadership team did follow up surveys with participants to determine the needed next steps for improvement. Initially, the team learned that the Minimum Data Set (MDS) coordinator felt threatened in her job when direct caregivers were in the care-planning meeting. Thus, the PCC leadership team

worked more intensively with the MDS coordinator to help her understand how direct caregivers' contributions at care planning could improve the quality of her work.

Implementation Climate. The CCME team ranked Nursing Home H as the highest of all PCC nursing homes in implementation effectiveness and direct caregivers were similarly HIGH in their descriptions of the climate for implementation. One direct caregiver described being won over to person centered care. She said, "I was like you know what? I don't have time. I'm barely getting through, you know, the day with what's on my plate and other things." But, like I said, going to the care plan meeting kind of changed the outlook of things. They explained, you know, exactly what it would be like. That kind of, you know, changed my outlook." All direct caregivers reported that management was exceptional in their detailed preparations for the PCC project; preparations that included making time available for questions, anticipating the need for coverage on the hallways while caregivers attended the care planning meetings, and calling families ahead of time to make sure they could attend meetings.

Summary. Despite a relatively LOW staff stability and a MEDIUM amount of funding dedicated to PCC, Nursing Home H's ranking as HIGH in implementation effectiveness was matched with HIGH rankings in five of the eight study constructs. Consistently, Nursing Home H demonstrated detailed attention to the implementation process.

TESTING THE ADAPTED KLEIN ET AL. FRAMEWORK

Table 6.1 displays the results of the within-case analysis, and is intended to provide readers with a visual representation summarizing the "story line" of each home's implementation of person centered care.

Table 6.1: Summary – Within-case analysis of pattern matches between Klein et al. constructs and implementation effectiveness

	Nursing Homes							
	A	**B**	**C**	**D**	**E**	**F**	**G**	**H**
Construct								
Scope of the Project	**MED**	**LOW**	**MED**	**LOW**	**HI**	**HI**	**MED**	MED
Organizational Stability	HI	HI	LOW	**LOW**	**HI**	MED	LOW	LOW
Financial Resources	**MED**	**LOW**	LOW	**LOW**	LOW	**HI**	HI	MED
Management Support	LOW	**LOW**	LOW	MED	LOW	**HI**	HI	**HI**
Management Communications	**MED**	**LOW**	**MED**	**LOW**	**HI**	**HI**	LOW	**HI**
Training	HI	**LOW**	LOW	**LOW**	LOW	**HI**	HI	**HI**
Time	**MED**	HI	HI	MED	**HI**	**HI**	HI	**HI**
Implementation Climate	HI	**LOW**	**MED**	MED	**HI**	**HI**	**MED**	**HI**
Outcome: Implementation Effectiveness	**MED**	**LOW**	**MED**	**LOW**	**HI**	**HI**	**MED**	**HI**
PATTERN MATCHES > or = 5/8 times		**X**		**X**	**X**	**X**		**X**

Note: Red font indicates pattern match between a construct and implementation effectiveness

Using pattern matching logic, the expected result on each construct in the framework was compared to the actual result within one home. For example, within a home categorized as HIGH in implementation effectiveness, worker perceptions about the climate for implementation would also be expected to be categorized as HIGH. To

the degree that the expected patterns are confirmed within the case, the Klein et al. framework is strengthened in its usefulness to construct a narrative that accurately portrays the outcome—implementation effectiveness. To the degree that the expected patterns do not match the actual patterns, the hypotheses are not confirmed and the Klein et al. model is weakened in its usefulness to identify constructs in the nursing home setting that are associated with implementation effectiveness.

Per criteria determined *a priori*, when the expected pattern match between the category of the construct and the category of the outcome in each case was demonstrated five out of eight times, the Klein et al. framework was considered useful to explain implementation effectiveness in the nursing home setting. In this research, the criteria for framework utility were met in five out of eight nursing homes. Two out of two homes rated as LOW in implementation effectiveness, and three out of three homes rated as HIGH in implementation effectiveness met the criteria. This result suggests that constructs from the Klein et al. framework have particular utility to explain implementation effectiveness in homes that were extreme cases (HIGH or LOW in implementation effectiveness), but have less utility to explain implementation effectiveness in homes that were ranked as MEDIUM in implementation effectiveness.

CROSS-CASE ANALYSIS

The cross-case analysis examined findings from the eight case studies. While the within-case analysis resulted in a theory guided narrative describing individual nursing homes' implementation of person centered care, comparing the case studies of eight

homes on each construct from the adapted Klein et al. framework provides an understanding of which constructs are the most salient to homes' implementation effectiveness. Table 6.2 summarizes results from the cross-case analysis.

Table 6.2 Summary - Cross-case analysis of pattern matches between Klein et al. constructs and implementation effectiveness

	Nursing Homes								
Construct	**A**	**B**	**C**	**D**	**F**	**F**	**G**	**H**	**PATTERN MATCHES (> or = 5/8)**
Scope of the Project	**MED**	**LOW**	**MED**	**LOW**	**HI**	**HI**	**MED**	MED	**X**
Organizational Stability	HI	HI	LOW	**LOW**	**HI**	MED	LOW	LOW	
Financial Resources	**MED**	**LOW**	LOW	**LOW**	LOW	**HI**	HI	MED	
Management Support	LOW	**LOW**	LOW	MED	LOW	**HI**	HI	**HI**	
Management Communications	**MED**	**LOW**	**MED**	**LOW**	**HI**	**HI**	LOW	**HI**	**X**
Training	HI	**LOW**	LOW	**LOW**	LOW	**HI**	HI	**HI**	
Time	**MED**	HI	HI	MED	**HI**	**HI**	HI	**HI**	
Implementation Climate	HI	**LOW**	**MED**	**MED**	**HI**	**HI**	**MED**	**HI**	**X**
Outcome: Implementation Effectiveness	**MED**	**LOW**	**MED**	**LOW**	**HI**	**HI**	**MED**	**HI**	

Note: Red font indicates pattern match between a construct and implementation effectiveness

Using criteria similar to the within-case analysis, when the expected pattern match between the category of the construct and the category of the outcome was demonstrated in five out of eight cases, the hypothesis was considered confirmed. Three constructs from the Klein et al. framework met the criteria for hypothesis confirmation. These

constructs were: **scope of the project, management communications,** and **implementation climate.** Seven out of eight times, the category rating for scope of the project and management communications matched with the outcome category. Six out of eight times, the category rating for implementation climate matched with the outcome category. The function of these three constructs across extreme cases (HIGH and LOW categories) is detailed below.

Scope of the Project

The scope of each nursing home's project was rated by the CCME team based on how ambitious the team perceived the project to be. Two projects were rated as HIGH in scope, four projects were ranked as MEDIUM, and two projects were rated as LOW. The two projects rated as HIGH in scope were chosen by homes that were also HIGH in implementation effectiveness. Similarly, the two projects rated LOW in scope were chosen by homes that were also LOW in implementation effectiveness.

Nursing Home E and Nursing Home F were rated HIGH on both constructs. These two homes implemented projects that were highly ambitious. Nursing Home E chose to completely revise the dining program for residents. As part of this project, Nursing Home E changed its meal service from using canned and pre-prepared foods to cooking fresh foods on site. This step required retraining the dining staff, purchasing food from a new set of vendors, and buying new utensils, trays, and table cloths. Additionally, several months into the new program, the administrator fired the dining services director because she was interfering with the change process.

Nursing Home F's project was also ambitious. First, nursing assistants were formed into teams to consult with other national and local homes that were farther along in the journey towards person centered care. The nursing assistant teams were responsible for making their own arrangements to either visit another facility or host a conference call with nursing assistants from the other homes. After gathering information from the other homes, nursing assistants were charged with disseminating information to co-workers and creating a new project on their respective hallways. As a result, the nursing assistants were functioning with more autonomy than is typical for their role. Management made themselves available to facilitate nursing assistants' plans and mentor them in their new role.

In contrast to the HIGH ranking homes, Nursing Homes B and D were both rated LOW on the scope of their project and implementation effectiveness. Nursing Home B chose to integrate nursing assistants into their care planning process. To make this change, they announced to nursing assistants that they would be invited to attend care planning meetings for the residents they cared for. Similarly, Nursing Home D's project was implemented largely in one step. This home re-configured an existing recognition program to reward staff for demonstrating person centered care practices during the care process.

Two possibilities could explain the high frequency of pattern matches between scope of the project and implementation effectiveness. First, it is possible that because the CCME team ranked both scope of the project and implementation effectiveness at the end of the PCC Program, they had difficulty separating the "on paper" description of the project from what they already knew about the way the home implemented the project.

For example, Nursing Home B and Nursing Home H had the same "on paper" project—integrating nursing assistants into the care plan process. Yet, the CCME team ranked Nursing Home B's project as LOW in scope and Nursing Home H's project as MEDIUM in scope. These different ratings could be explained by taking a closer look at the steps each home took to implement their project. Nursing Home B essentially implemented their project in one step—inviting the nursing assistants over the intercom to come to care planning. In contrast, Nursing Home H implemented their project in many steps. For example, they piloted their project with one hallway before introducing it facility-wide. They developed special training modules to teach nursing assistants how to participate in care planning. Then, they prepared the existing members of the care plan team and resident's family members for the ways nursing assistants might contribute during the care plan meeting. In summary, while offering a plausible interpretation for the findings, the first explanation points to a limitation in the study related to the timing of data collection. Because CCME team members judged both the scope of the project and implementation effectiveness at the end of the study, they could have been biased by what they already knew about the implementation strategies homes used.

Second, it is possible that the leadership teams intuitively chose the scope of their project to reflect their readiness for change. For example, leaders who chose to implement a highly ambitious project were "ready for change," confident they could anticipate and deal with the inherent complexities and "ripple effects" an ambitious project would have on the organization. Conversely, leaders who were not confident that they could foresee or deal with the ripple effects of their project may have intuitively chosen a less ambitious project because they were less ready for change. Thus, leaders'

level of confidence to take on an ambitious project may have been a reflection of their readiness for change. This explanation is corroborated by data described in Chapter 7 that documents the high frequency of pattern matches between facility leaders' confidence that they would succeed in achieving their overall PCC Program goals and their implementation effectiveness.

Management Communications

The response rate from the Kansas Organizational Culture Survey was used as a measure of management communications to workers about the importance of person centered care to their nursing home. Three homes categorized as HIGH in management communications were also categorized as HIGH in implementation effectiveness. In all three homes where the survey response rate was HIGH, the PCC leadership team was on hand to assist department managers run the meetings, which were designed specifically to educate staff about the Kansas survey. Each question in the survey was read aloud and interpreted for those workers who had English as their second language. PCC leaders offered further clarification about the survey for staff that had questions. These meetings were held across all three shifts and workers completed the survey during the meeting. Surveys were then put in a box labeled "Confidential."

In contrast with homes ranked HIGH in management communications, the two homes that were ranked LOW in both management communications and implementation effectiveness, used very different strategies to administer the survey. In one home, the Kansas Survey was put into staff paychecks with a request to drop completed surveys at the nurses' station. Management did not inform staff of the purpose of the survey,

provide support for survey completion or take steps to ensure confidentiality. In the other home, the surveys were handed out at the end of an educational program on aromatherapy. Completed surveys were put under the administrator's office door.

In summary, the three homes ranked HIGH in management communication and HIGH in implementation effectiveness, included all workers in educational sessions that introduced person centered care and the Kansas Survey. These homes were able to anticipate and act on the need for extra assistance required by some workers to complete the survey. Finally, these homes also realized the importance of ensuring that workers could feel free to voice their opinions without repercussions. The data suggest that when management communicates with workers in a way that demonstrates sensitivity, inclusion, and respect, survey response rates are HIGH. If qualities and strategies demonstrated during the survey process are mirrored more broadly in the overall implementation strategies, such approaches may offer an explanation for why management communications emerged as a key correlate of implementation effectiveness.

Implementation Climate

Implementation climate is defined as workers' shared perceptions about the degree to which management expected, supported and rewarded person centered care within the nursing home. At a basic level, implementation climate has to do with how workers "feel" about an innovation. In six out of eight cases, worker perceptions about how important person centered care was to the organization were aligned with implementation effectiveness. In all three homes where implementation climate was

HIGH, implementation effectiveness was also HIGH. In one of two homes rated as LOW in implementation effectiveness, implementation climate was also LOW.

In all three homes where implementation climate was categorized as HIGH, direct caregivers took note when management was visible in its support for person centered care. Caregivers appreciated it when the administrator came onto the hallway every day to help solve problems or lend a hand. Caregivers from homes where implementation climate was rated HIGH appreciated the preparations managers made for person centered care. Notable preparations included: making time available for questions, anticipating the need for coverage on the hallways while caregivers attended meetings, and calling families ahead of time to make sure they could attend meetings. Caregivers also took note when involvement in person centered care was broad-based and included groups such as the dietary staff, housekeepers, book keepers and family members. In summary, caregivers perceived the climate for implementation as favorable when: 1) they observed managers showing the way to person centered care; 2) they observed managers preparing for person centered care by anticipating potential adverse consequences and taking steps to avoid them; and 3) they perceived that person centered care was "everywhere" within the facility.

In contrast, caregivers in the home where both implementation climate and implementation effectiveness was LOW described distrust toward management. Caregivers expressed frustration when they gave their feedback about the person centered care project and it was not followed up by management. Caregivers also seemed to feel minimized by management's failure to deliver on what they had initially advertised about the home's person centered care project.

In summary, in six out of eight homes, implementation climate ratings derived from direct caregiver interviews were aligned with ratings of implementation effectiveness derived from expert judgment. It appears that implementation effectiveness is likely to be high when workers observe management: 1) reach out to a broad array of worker groups to participate in person centered care; 2) lend a hand to help solve problems and anticipate the consequences of change; and 3) follow through with stated plans for change.

CHAPTER 7

RESULTS AND DISCUSSION

RIVAL HYPOTHESIS TESTING

Sensitized by related research on innovation implementation (Reynolds, 2004, Gardner & Pierce, 1998, Prochaska, Prochaska & Levesque, 2001)), three rival hypotheses were tested in an effort to offer alternative explanations for the research outcome, implementation effectiveness. In the text below, the results and discussion of rival hypothesis testing are presented.

Rival hypothesis 1: Implementation effectiveness is associated with workers' access to electronic communications

Because direct caregivers spend the greatest part of their day providing direct care to residents, disseminating information regarding an innovation can be challenging for management trying to initiate changes in hands-on care practices, such as those related to person centered care. Typically, information about an innovation in nursing home care would be disseminated throughout the facility by calling special staff meetings or providing in-service trainings. For three main reasons, these methods can be cumbersome and disruptive for management and direct caregivers alike. First, to announce meetings, management must often rely on bulletin board postings or word of

mouth to convey information about meeting times and locations. Second, direct caregivers work over three shifts and staffing shortages are commonplace. Thus, getting information out to staff requires continuous effort. Last, for direct caregivers to attend meetings, coverage for their residents care must be secured.

Thus, homes that were able to overcome these challenges by using electronic communications to announce meetings or disseminate information about the innovation might have higher implementation effectiveness than those who do not have such technology. To test this hypothesis, administrators were asked to gauge the percentage of staff in their home that had access to computers. Their estimates were recorded in quartiles, e.g. <25%, 25-49%, 50%-75% and >75% in the *Facility Tracking Tool*. Then, quartiles were converted to either HIGH, MEDIUM, or LOW categories with homes reporting < 25% categorized as LOW, those reporting between 25 and 75% categorized as MEDIUM, and those with >75% access categorized as HIGH in staff access to computers. To test the hypothesis, category rankings on computer access were pattern matched across cases as demonstrated in Table 7.1 below. In only two cases did the category ranking for computer access match with the category ranking for implementation effectiveness. Thus, the hypothesis was not confirmed.

Table 7.1 Analysis of pattern matches between rival hypothesis constructs and implementation effectiveness

Rival Hypothetical Constructs	Nursing Homes								PATTERN MATCHES (> or = 5/8)
	A	B	C	D	E	F	G	H	
Access to electronic communications	LOW	**LOW**	LOW	MED	**HI**	MED	LOW	LOW	
Early ratings of success – CCME team	HI	**LOW**	**MED**	**LOW**	**HI**	**HI**	**MED**	**HI**	**X**
Leadership team's confidence to accomplish goals	**MED**	**LOW**		**LOW**	MED	**HI**	**MED**	**HI**	**X**
Outcome: Implementation Effectiveness	**MED**	**LOW**	**MED**	**LOW**	**HI**	**HI**	**MED**	**HI**	

Rival hypothesis 2: Implementation effectiveness is associated with early ratings by the CCME team about how successful they expected homes would be in accomplishing their change goals.

The CCME team providing technical assistance to the eight participating nursing homes was involved in both the planning and the implementation of the PCC projects. With one exception (a team member went on maternity leave), team members were consistent throughout all phases of the year long project. In addition to being cohesive, the five team members brought diverse skills to the project. One team member was a physician geriatrician, two were geriatric physical therapists, one had a master's degree in public health, and one had a master's degree in public administration.

Early on in the project, the CCME team interacted with each participating nursing home during initial administrator interviews, during the kick-off conference, and during a "preliminary to site visit" conference call. Two or three members of the CCME conducted site visits in each home three to four months into the project. During the site visit, team members met for several hours with the home's PCC leadership team to provide feedback on the Kansas Survey, assist the team in goal setting, and help the team consider action steps to accomplish its goal.

The site visit created an opportunity near the beginning of the PCC Program to examine whether the CCME team could forecast the level of success facilities could achieve in accomplishing their goals. Thus, following the site visit, the CCME team members ranked each home on the following question: How successful do you believe this home will be in accomplishing its change goals? In answering this question, team members provided both a percentage score and a rationale for their answer. Similar to other constructs, natural cut points were used to categorize the data on expert predictions. The scores provided by the CCME team were as follows: 40%, 50%, 78%, 83%, 88%, 88%, 90% and 95%. To categorize these scores, homes rated as 40% and 50% likely to succeed were categorized as LOW. Homes with 78% and 83% were categorized as MEDIUM and homes with 88%, 90% and 95% were categorized as HIGH.

While this approach to predicting homes' success early in the project was no more than a curiosity at the time, the result was that in seven out of eight cases, the CCME team's forecasting about the likelihood of homes' success was pattern matched with homes' implementation effectiveness (Table 7.1). Thus, the hypothesis was confirmed.

One might argue that this result creates a situation of self-fulfilling prophecy where, in the eyes of the CCME team members, the homes that were expected to be HIGH in the ability to change actually became HIGH in their implementation effectiveness. A fact that argues against this possibility is that only two or three team members contributed to the predictions that homes would succeed in their change goals while all five team members ranked homes on implementation effectiveness. Moreover, the rationales given to support the CCME predictions offered insight into what components of the nursing home team's early functioning were noted by the CCME team as markers of success.

In homes that were forecast to succeed and then categorized as HIGH in implementation effectiveness, several themes, expressed in the words of CCME team members, were salient to the forecast of potential "success." These themes are listed below with representative comments from the CCME team.

VISION: "This team knows what it wants and is able to think through the process."

COMMITMENT: "They are fundamentally behind the change and feel confident they can succeed."

SUPPORT FOR ONE ANOTHER: "The CNA leading the effort is highly motivated and the PCC team backs her 100%."

ORGANIZATION: "This team is organized, has big plans, and is committed to PCC."

COMPLEMENTARY PERSPECTIVES: "The team members have different perspectives but are a cohesive unit with a shared vision; they discuss differences to find the best pathway to their goal."

RECEPTIVITY: "The members of this team were excellent listeners to each other."

In contrast to homes ranked HIGH in implementation effectiveness, those ranked LOW in implementation effectiveness were rated LOW by the CCME team. These reasons are listed below, again with representative comments:

VISION LACKING: "Administrator seems disconnected from group, and a consistent vision has not formed. These factors could make developing goals, making a plan, and following through difficult."

ENERGY LACKING: "The knowledge, excitement, commitment and passion for implementing a new PCC project are not apparent here."

READINESS FOR CHANGE LACKING: "This group seems to be at a potential turning point in their thinking about PCC. They joined [PCC Program] to help make the staff happier, but the perspective shift is not complete and it is hard to tell at this point how sustainable it is."

COMMUNICATION SKILLS LACKING: "The skills necessary to hold open, honest small group discussions with staff about their project goals are not apparent in the team members."

LEADERSHIP LACKING: "Foundation for leading change has not been established. The team is too large and the administrator needs regular coaching."

In summary, the CCME team appeared to be able to accurately forecast homes' final rating of implementation effectiveness based on knowledge and experience gained early in the project. The key characteristics identified by CCME team members that poised nursing homes for "success" included: 1) having a unified vision; 2) being organized and following through; 3) having an environment where support and receptivity were norms; and 4) having a commitment to stay on course.

Rival hypothesis 3: Implementation effectiveness is associated with homes' leadership teams' shared confidence in their ability to achieve their PCC Program goals.

A third rival hypothesis tested in this research was that the PCC leadership team's level of confidence that it would accomplish its goal was associated with implementation effectiveness. This hypothesis was tested by asking the leadership team from each home to rate its confidence that it would accomplish the PCC Program goal. The rating took place immediately following the site visit, three to four months into the PCC Program. In some cases, each team member gave a percent confidence rating and then these percentages were averaged. In other cases, the team determined their percent confidence through a consensus approach. Either way, the result was one percentage score from each home that rated their confidence to accomplish their goals. The range of scores included the following percentages: 75%, 75%, 75%, 82.5%, 85%, 98%, and 100%. Similar to other construct categorization strategies, organization members' collective confidence to succeed was categorized based on natural cut-points. Thus, three homes with scores of 75% were categorized as LOW in confidence to accomplish their goals. Homes with scores of 82.5% and 85% were categorized as MEDIUM in confidence, and home with scores of 98% and 100% were categorized as HIGH in confidence. Data were missing for one home, ranked MEDIUM in implementation effectiveness.

The "confidence" and implementation effectiveness categories for each home were then pattern matched. Patterns were matched in five of the seven cases with complete data. Using extreme case comparisons, the results were as follows. For all three homes ranked HIGH in implementation effectiveness, organizational confidence

was also HIGH. In one home ranked LOW in implementation effectiveness, confidence was also ranked LOW. The other home ranked LOW in implementation effectiveness ranked its confidence to accomplish its goals as MEDIUM. Thus, with pattern matches in five out of seven homes, the rival hypothesis was confirmed. In summary, early measures of leadership teams' degree of confidence that they would accomplish their program goals was associated with implementation effectiveness.

CHAPTER 8

SUMMATIVE DISCUSSION AND CONCLUSIONS

This research contributes to the literature by: 1) adapting and testing variables from an existing theoretical framework for application in a new setting; 2) exploring the views of a worker group that is largely under- recognized, yet plays a key role, in the effectiveness of innovation implementation in nursing homes; and 3) investigating what organizational attributes and processes characterize nursing homes that are effective in implementing person centered care. While discussion of the research findings is largely incorporated into the text following the presentation of the results, the purpose of this section of the dissertation is to provide an overview of important study results, discuss strengths and limitations of the research, and suggest implications for practice and future research.

From the within-case analysis, we learned that constructs from the Klein et al. framework were useful in distinguishing between nursing homes high in implementation effectiveness and nursing homes low in implementation effectiveness. Thus, one assumption guiding this discussion is that the Klein et al framework is fundamentally a useful model that could be modified and expanded to better fit the nursing home setting.

From the cross case analysis, we learned that three constructs were key to understanding differences in nursing homes' implementation effectiveness: **Scope of the**

project, management communications about person centered care, and **worker perceptions** about the priority of person centered care. Conversely, implementation effectiveness was not associated with the presence of financial resources, management support, organizational stability, or other implementation policies and practices, including the amount of time and training offered to workers to learn about person centered care. Each of the positive constructs and its possible contribution to theory development, practice, and future research is discussed below.

SCOPE OF THE PROJECT

Roger's (2003) diffusion of innovation theory predicts that the more complex the innovation, the less effectively it will be implemented. In this research, the opposite result occurred. Projects that were rated as highly "ambitious" in scope were also those that were most effectively implemented in the nursing homes. As discussed in Chapter 6, these results could have been related to measurement error. Alternatively, the scope of the project, as measured in this research, could have been a reflection of another construct (discussed below) that functioned to confound the relationship between scope of the project and implementation effectiveness. Since the relationship between project scope and implementation effectiveness was strong (seven out of eight pattern matches) further exploration is warranted.

An additional prompt for further exploration of this finding comes from the results of rival hypothesis testing—results demonstrating that nursing home leaders and CCME experts were accurate in their forecasts of homes' implementation effectiveness. Why did this happen? Since nursing home leaders (assisted by CCME experts) selected

the scope of their homes' project, understanding the basis for leadership team project choices may shed light on why the relationship between scope of the project and implementation effectiveness was both strong and counter to theoretical predictions.

Confidence to implement change

A possible explanation for why nursing home leaders chose the scope of the project they did is that they were tailoring it to their level of confidence that they would succeed in their goals. One concept from the literature in health behavior, self-efficacy, suggests that when individuals are confident that they will succeed, they are more likely to succeed (Glanz, Lewis & Rimer, 1997). While this concept has been widely accepted at the individual level, questions about the conceptual strength of self-efficacy applied at the group level are unanswered (Gardner & Pierce, 1998). This explanation is supported by the results of rival hypothesis testing where, in five out of seven cases, the leadership teams' level of confidence to reach its project goals was **dually** associated with its chosen project scope and level of implementation effectiveness. For example, in Nursing Home H, the leadership's level of confidence to reach its goal was HIGH, the scope of the project was HIGH, and implementation effectiveness was also HIGH. Additional support for this explanation is demonstrated by the finding that in six out of eight cases the CCME team's level of confidence in the home's ability to accomplish its goals was **dually** associated with project scope and implementation effectiveness. Finally, in five out of eight cases, leadership team self-ratings of confidence to accomplish their goals was pattern matched with CCME team's early ratings of homes' implementation effectiveness. Table 8.1 shown below illustrates these findings.

Table 8.1: Leaders' or CCME team's ratings and scope of the project dually matched to implementation effectiveness

	Nursing Homes							
Constructs	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**
Leadership team's ratings of its confidence to accomplish goals	**MED**	**LOW**		**LOW**	MED	**HI**	**MED**	**HI**
CCME team's early ratings of home's implementation effectiveness	HI	**LOW**	**MED**	**LOW**	**HI**	**HI**	**MED**	**HI**
Scope of the Project	**MED**	**LOW**	**MED**	**LOW**	**HI**	**HI**	**MED**	MED
Outcome: Implementation Effectiveness	**MED**	**LOW**	**MED**	**LOW**	**HI**	**HI**	**MED**	**HI**
When either home's leaders' or CCME team early ratings of implementation effectiveness were dually matched with scope of the project	**X**	**X**	**X**	**X**	**X**	**X**	**X**	

Thus, it is plausible that nursing home leaders could have chosen the **scope of their project** based on their **collective confidence** that organizational change brought about by implementing person centered care was within reach of their nursing home. In this situation, scope of the project was merely a reflection of leaders' level of collective confidence.

It is further possible that leaders' (and CCME experts') **collective confidence** was intuitively based on their perception of the nursing home's **readiness for change**. The

Transtheoretical Model posits that health behavior change involves progress through stages of change: pre-contemplation, contemplation, preparation, action, maintenance, and termination (Prochaska, 1997). The theory states that individuals are more successful in their change efforts when they are at a stage of readiness for change. While this model has largely been tested in the setting of individual behavior change, it may have relevance at the organizational level. As suggested by Prochaska et al. (2001), organizations with employees at more advanced stages of readiness for a specific change are poised to more effectively implement change. As such, organizational readiness for change, added as a contextual variable in the adapted Klein et al. framework, may contribute to a more in-depth understanding of implementation effectiveness by assisting in an explanation of leaders **collective confidence** ratings.

Capacity to implement change

Absorptive capacity, a construct closely related to the concept of readiness for change, may additionally help explain the positive association between project scope and implementation effectiveness. An organization's absorptive capacity is defined as the degree to which new knowledge can be incorporated and distributed. Absorptive capacity is high when the organization's history, values and goals have been previously directed toward capturing and sharing information and ideas (Zahra & George, 2002). When an organization's absorptive capacity is high because of a previous experience with successful change, current innovations may be adopted and implemented with greater success. In this research, all the homes with high implementation effectiveness seemed to have a constellation of factors that signaled high absorptive capacity. Homes F and H

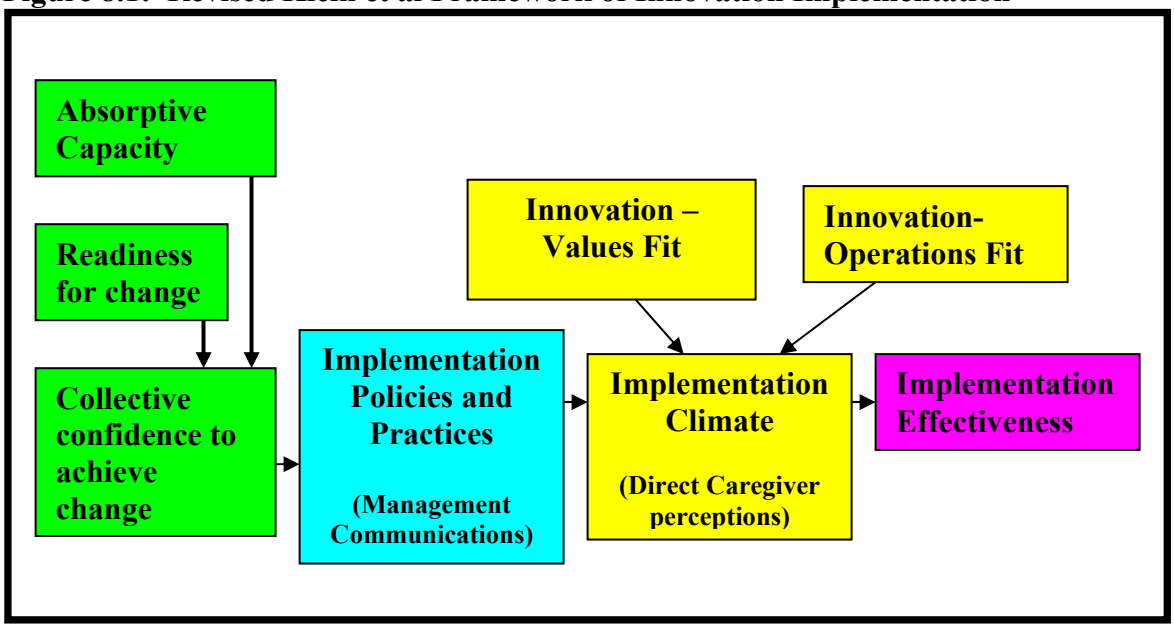
were very mission-driven. Both homes had a long history of trying out innovations that were consistent with their organizational mission. Home E also was mission driven and additionally, had an administrator who was highly efficient, persuasive, and fun. All three homes demonstrated competence about the change process; meaning their leaders seemed skilled in their ability to assess their workers and then, anticipate, sequence, and follow through with the planned steps toward their goal. Future research testing **absorptive capacity** in the nursing home setting may also contribute to theory development by broadening our understanding of leaders' **collective confidence** ratings.

Implications for theory development, future research, and practice

While the theoretical constructs of collective confidence, readiness for change, and absorptive capacity are represented in the literature as distinct, they seem to function together in this research to "set the stage", or contextualize, innovation implementation. By reflecting nursing homes' prior experience with change, absorptive capacity functions as an antecedent to future change efforts (Greenlaugh, 2004). In a similar but slightly different way, readiness to change reflects homes' current level of responsiveness to a specified change. Following on, leaders' collective confidence to implement change could be seen as a function of both absorptive capacity and the homes' current readiness for change. Together, all three constructs relate to this research by contributing to a possible explanation of unexpected results. This possible explanation—that leaders and outside experts' confidence about how effectively person centered care would be implemented was represented in their choice about the scope of the project and based on unarticulated perceptions about their home's readiness for change and capacity to change.

Results from this research, combined with the preliminary explanations for unexpected results, suggest ways the Klein et al. framework could be modified to more aptly apply to the nursing homes setting. Suggested modifications in the framework that could be tested in future research are represented in Figure 8.1 shown below. Scope of the project was deleted from the model because it served only as a reflection of leaders' collective confidence for change. The new framework adds organizational **absorptive capacity** and **readiness for change** as contextual variables. Leadership teams' **collective confidence,** also a contextual variable**,** is a function of both absorptive capacity and organizational readiness for change.

Figure 8.1: Revised Klein et al Framework of Innovation Implementation



If future research confirmed the utility of the new framework suggested by this research, the recruitment strategies currently mandated by the Centers for Medicare & Medicaid Services for their quality improvement initiatives would deserve further attention. At this time, funding from the Centers for Medicare & Medicaid Services for

quality improvement in nursing homes is based on an "all comers" approach where quality improvement organizations are asked to recruit as many nursing homes as possible to participate in the change process. This research suggests that a different strategy, where nursing homes are recruited for change based on a pre-intervention assessment of their readiness and capacity for change, may yield better results. Concomitantly, different interventions may be designed for nursing homes that provide evidence that they are not ready for broad-based change.

MANAGEMENT COMMUNICATIONS

In this research, the response rate to the Kansas survey was the operational measure of **management communications**. The Kansas survey was administered early in the PCC Program to all workers in each participating home. The data demonstrate that it was the quality, not the quantity, of management communications that separated homes high in implementation effectiveness from those low in implementation effectiveness. When considered from two different perspectives, this result suggests an implication for practice and for future research. First, since the survey was administered as a means to introduce person centered care to workers, this investigator assumed that the response rate of the survey would serve to demonstrate the quality of management communications about person centered care. Following this logic, looking at what highly effective homes actually did to introduce person centered care could provide guidance to nursing home management about what they could do to improve implementation effectiveness.

Returning to the case studies, we learned that when management introduced person centered care to workers in an unorganized, cursory way, implementation effectiveness was low. In contrast, when management took almost painstaking steps to ensure that workers had a positive introduction to person centered care, implementation effectiveness was high. For example, when management personally introduced the innovation, was available to answer workers' questions, provided interpreters when needed, asked for worker feedback, and ensured this feedback was anonymous, implementation was highly effective. As an implication for practice, nursing home leaders implementing complex change would be advised to put policies and practices in place that demonstrate cultural sensitivity and increase buy-in from key worker groups. Specific suggestions include: 1) providing interpretation services for workers who do not speak English as their first language; 2) providing technical assistance to, or finding other means to gather information and get buy-in from workers who may not be familiar with survey methods; and 3) ensuring anonymity to workers who offer feedback and suggestions, thereby making way for positive as well as negative comments to come forward. In a more general way, when management makes it easy for workers to respond by putting needed "props" in place, workers may be more likely to perceive that an innovation is a priority within the organization and embrace change.

A second, equally plausible and yet different way to look at the pattern match between management communications and implementation effectiveness is also suggested by the data. Assuming survey methodology is largely unfamiliar to most nursing home workers, administering a survey in the nursing home could be thought of as implementing a mini-innovation indicating the organization's capacity and readiness to

implement more complex change. Following on from the previous discussion about a home's readiness for change having a bearing on successful implementation, future research in nursing homes might consider using a needs assessment survey as a tool to simultaneously indicate a nursing home's capacity and readiness for change as well as provide indications for management about what worker's perceive about current workplace and care practices.

WORKER PERCEPTIONS

A positive relationship between implementation climate and implementation effectiveness was demonstrated in seven out of eight cases. Furthermore, in seven out of eight cases, implementation climate was matched by the degree to which direct caregivers' daily routines were burdened or disrupted (innovation-operations fit). When asked about their perceptions of the ways management communicated about person centered care, direct caregivers stated that they experienced person centered care positively when they observed management: 1) reach out to a broad array of worker groups to participate in person centered care; 2) lend a hand to help solve problems and anticipate the consequences of change; and 3) follow through with stated plans for change. These three principles have practical, far reaching implications for practice.

In the nursing home setting, where communication channels to all worker groups are limited, management's concerted efforts to include all worker groups in discussions about an innovation will likely be beneficial. Furthermore, using the concept of organizational readiness for change, leaders might tailor their communications to the stage of change that employees are in. For example, for employees in the pre-

contemplation stage, leaders might avoid mandating change and simply present the pros and cons for change. Additionally, management that models person centered care practices by providing observable, hands-on support to direct caregivers will be likely to reap the benefits of such efforts during the implementation phase. Finally, it is imperative that management demonstrate "truth in advertising" about the innovation and not promise more than can be delivered during the initial phases of the implementation process. When management does not follow through with plans as advertised, and does not respond to feedback about the program from direct caregivers, the innovation itself can be dismissed by caregivers as a viable means to improve care.

In all eight cases, we saw that the values ascribed by person centered care fit well with the values of direct caregivers. From the interviews with direct caregivers, we learned that person centered care's focus on individualizing care through developing relationships with residents was highly valued by caregivers, and in turn, elevated the importance of their work in the nursing home. While innovation-values fit was high across all cases, it did not vary and thus, did not contribute to an explanation of implementation effectiveness.

Collapsing the results from Study 1 and Study 2, shown in Table 8.2, we see that in five out of eight cases, implementation effectiveness was dually matched with operational-fit and implementation climate.

Table 8.2. The relationships between operational fit, implementation climate, and implementation effectiveness

	Nursing Homes							
	A	**B**	**C**	**D**	**E**	**F**	**G**	**H**
Construct								
Operational Fit	HI	**LOW**	HI	MED	**HI**	**HI**	**MED**	**HI**
Implementation Climate	HI	**LOW**	**MED**	MED	**HI**	**HI**	**MED**	**HI**
Outcome of Interest: Implementation Effectiveness	**MED**	**LOW**	**MED**	**LOW**	**HI**	**HI**	**MED**	**HI**
PATTERN MATCHES across two constructs and the outcome		**X**			**X**	**X**	**X**	**X**

This finding suggests two things: 1) implementation effectiveness is a function of implementation climate; and 2) implementation climate is a function of the degree to which implementing person centered care either does not disrupt daily routines or fosters smooth operations. Summarizing findings related to both values-fit and operational-fit points to the following implication for practice: When the core concepts of the innovation match the values of the worker group most affected by its implementation AND when smooth daily operations ensue as a result of innovation implementation, nursing homes are more likely to be successful in accomplishing their goals for change. Smooth operations can be enhanced by management's restructuring of daily routines to accommodate the innovation. When this restructuring is in place, it serves to "make it

easy for workers to do the right thing" (Laura Hanson, personal communication, Oct. 2005). In this research, homes that restructured shift start times, instituted consistent assignment, and cross trained workers, were highly effective in their implementation of person centered care.

STRENGTHS AND LIMITATIONS

Strength: Suitability for case study research

This research met Yin's (2003) three key criteria for the most distinctly advantageous use of case study methodology: 1) the research was conducted in a contemporary, real-life setting as compared to a historical one; 2) other than through its technical support role, the research team had little control over the events that occurred during the implementation phase; and 3) the type of question being asked was fundamentally a "why" question (Why were some homes more effective than others at implementing person centered care?). In addition to the fit between this research and case study methodology, the primary investigator was involved in all aspects of the project from conceptualization to conclusion. Her role in collecting primary data and soliciting the views of her team mates throughout the duration of the project increases the likelihood that the interpretations of the data and summative conclusions rendered in the dissertation are sound.

Strength: Voice of direct caregivers

An important strength of this research is its focus on the voice of direct caregivers. In the nursing home setting, direct caregivers perform 90% of the hands-on

care for residents and thus, are key to the successful implementation of an innovation such as person centered care. While collecting data from multiple worker groups in the nursing home would have been ideal, especially to the examination of implementation climate, the focus on direct caregivers seems most appropriate and timely for this research topic.

Limitation: Generalizations to theory

Primarily for practical reasons, the CCME nursing home team chose to limit cases in the PCC Program to nursing homes that had already successfully implemented small scale change. This choice was supported by previous research suggesting that only high performing homes are likely to be able to implement organization-wide change such as person centered care (Schrijnemaekers et al., 2002). Even with the choice to include only homes that had performed well in previous change efforts, implementation effectiveness in this research was not achieved by all. Thus, generalizations to innovation implementation theory based on this research may be limited to nursing homes that have already demonstrated some success with change.

Limitation: Voice of direct caregivers

Three limitations related to the data from direct caregivers are apparent. 1) Direct caregivers were chosen to participate in the telephone interviews by their Director of Nursing or Administrator. Since it is unlikely that leaders within the homes would choose caregivers with a negative work history, this selection method introduces a positive bias to the interview findings. 2) Using the telephone to interview direct

caregivers was not ideal. Even though the interviews were conducted in private, at times the conversations seemed stilted. This situation is not surprising given the fact that the interviewer was a stranger from the university asking questions about sensitive issues in the workplace. While it would have been desirable to conduct in-person interviews, concerns about the feasibility of this option, wisely so, were brought forward by an experienced nursing home researcher. Because of scheduling changes and frequent call-outs in nursing homes, it seemed likely that adherence to an interview schedule would have been a rare event. The cost of such a scenario would also have been high in terms of travel time and expense. 3) Not all direct caregivers commented on all study constructs. This situation sometimes made it difficult to interpret data related to implementation climate. Since implementation climate is conceptualized in terms of "shared" perceptions, when only two out of three caregivers within one home commented specifically about implementation climate, it was difficult to use the pre-determined criteria for interpretation of findings. In future studies, conducting in-person interviews with randomly selected representatives from multiple worker groups would likely make for more robust findings, especially with regards to constructs such as values fit, operational fit, and implementation climate.

Limitation: Data collection procedures

Two limitations of this research have to do with the timing of expert rankings of the scope of the project and potential confusion around the terminology used to represent this construct. As mentioned earlier, the timing of data collection about innovation characteristics makes interpretation of this data challenging. First, this ranking would be

more credible if it was performed just after homes selected their project. By ranking homes on the scope of their project at the end of the study period, the scope ranking could have been confounded by information the knowledge experts already had about the set-backs and adaptations to the project that occurred throughout the implementation process.

Additionally confounding the scope of the project rankings was the terminology used to describe the scope. CCME team members were asked to rank the scope of each home's project around how "ambitious" the project was perceived to be. It is possible that homes perceived as highly successful in their project implementation could simultaneously have been perceived as ambitious in the project scope, because even a simple project quickly becomes complex (and therefore "ambitious") in the nursing home setting. In addition to moving up the timing of the scope ranking, future research would benefit from use of the term "complex" as compared to "ambitious" as a descriptor.

Limitation: Terminology

One further limitation of this research relates to construct terminology. In the literature, the terms operational fit, organizational fit, compatibility, and values fit are commonly used and easily confused with one another. **Operational fit**, as used by Helfrich (2004) helps to explain **values fit (**Klein & Sorra, 1996) and refers to what an individual worker group or organization "does" to get its identity. For example, an innovation related to physical activity might be considered by physical therapists as an "operational fit." Goodman and Steckler's (1989) definition of **organizational fit** as the compatibility of the innovation with the values and core operations of the organization is similar to Roger's (2003) conceptualization of innovation **compatibility** as a match

between "existing values, past experiences, and needs of potential adopters." However, in this research, **operational fit** refers to the degree of fit between the innovation and the daily routines and tasks of the primary users. Further refinement and agreement on the definitions of the above terms, as they are intended, is important to an overall understanding of the related literature and this research. Since one term used in this research, **operational fit**, sounds so similar to the other terms cited above, changing the name of the construct to **workload fit**, or **efficiency factor**, or **convenience** could be useful.

CONCLUSIONS

Analysis of data from this research demonstrates that, relative to implementation effectiveness, none of the three measures of organizational context (staff stability, dedicated financial resources, and management support) met pre-established criteria for hypothesis confirmation. Analysis also demonstrates that neither the amount of training about person centered care nor time given for workers to learn about the innovation were associated with implementation effectiveness. Unlike the null findings related to training and time, pattern matching logic applied to examine the relationship between management communications and implementation effectiveness confirms the positive relationship between these two constructs. Furthermore, communications from management about the innovation were positively associated with workers' perceptions about the importance of the innovation to the organization (implementation climate).

The case study analysis suggests that to the degree that management in nursing homes adopts an innovation that fits with key worker groups' values, introduces the innovation effectively, and implements policies and practices that leave workers with the perception that their daily routines are made easier by the innovation, implementation effectiveness is likely to be high.

Future research is needed to explore the concepts of organizational readiness and capacity for change, especially when both the innovation and the organization are complex. Such research could inform whether the Klein et al. framework should be adapted to include these concepts. There is a paucity of research that systematically investigates when nursing homes are ready for change. The process and feedback loops that explain how nursing homes adapt to characteristics of an innovation and, conversely, how innovation characteristics are adapted to the nursing home setting are also understudied. Future research focused on such organization-innovation interactions could expand and refine current innovation implementation theory.

APPENDIX 1

SEMI-STRUCTURED INTERVIEW GUIDE

DIRECT CAREGIVERS IN HOMES IMPLEMENTING PERSON CENTERED CARE

The focus of the interview will be on learning about the direct caregivers (usually nursing assistants) perceptions of the "climate" for implementation of the Person Centered Care Program in their facility. Interviews will be planned for 30 minutes. Implementation climate is defined as...the messages employees get about what is important in the organization. ...shared, summary perceptions of the extent to which their participation in the Person Centered Care Program is rewarded, supported, and expected within their organization. Workers' perceptions of the organizational fit of the Person Centered Care Program is part of implementation climate.

Begin recording here:

1. Introduction stating the purpose of the interview and why caregivers were chosen for the interview (I want to talk to you because I want to talk to the people whose work I believe makes the most difference in the resident's day to day life. The Person Centered Care Program at your nursing home was about _____and I want to learn about your impressions of how the project affects your work.

2. Tell them the interview will be recorded and how the information they share will be used. (2 ways: Summarize what direct caregivers experience of PCC is and contribute to my studies at UNC.) Insure confidentiality. Tell interviewees that their participation is voluntary and they can refuse to answer any question they want, or to participate at all. Do you agree to participate?

3. Initial demographics: How long have you been a direct caregiver in nursing homes? What is your job title? How long have you worked in this facility?

Questions (When asking questions, you may need to elaborate on or substitute the phrase Person Centered Care Program with a few words to describe the particular facility's project. E.g. "attending care plan meetings" or "changing the dining program."

State two main questions then ask…

1. Overall, what has your experience been with the Person Centered Care Program in your nursing home?

Probes: How did you learn about the program? What was your response to hearing about the program? Do you think your co-workers share your understanding of the program? In

your opinion, what barriers kept the program from being as successful as it might have been? What things helped the program succeed? How has your daily routine changed as a result of the Person Centered Care Program? Do you have the time to participate in the Person Centered Care Program? How has the project affected your relationship with residents? With families? With your co-workers? With your supervisors? (*Operational fit*)

SEGWAY: THE NEXT QUESTION IS NOT RELATED TO YOUR EXPERIENCE, BUT RATHER TO YOUR IMPRESSION OF HOW SUPERVISORS IN YOUR NURSING HOME MANAGED THE PROJECT.

2. How important is the Person Centered Care Program at your facility?

Probes: How much effort did people put into the Person
Centered Care Program? Examples? How likely are you to receive praise or rewards from your supervisors for knowing about and participating in the project? What would those rewards be? What else could management do to move the PCC program forward? "Change is hard" How did the people you work with react to the changes called for in the PCC program? Examples? How available was help if you had questions or concerns about how to participate in Person Centered Care? What would happen to the PCC program if it was no longer supported by your supervisors? Any more thoughts that you would like to share that we haven't asked about? (*Rewarded and supporte*d)

Conclusion: Express thanks, offer copy of transcript

APPENDIX 2

JOUNAL OF ANALYTIC PROCEDURES

The following activities were conducted before this journal was begun: 1.Field notes were prepared by the interviewer immediately after telephone interviews ended. 2. General themes were identified, written up, and presented to CCME staff in January 2005. 3. Poster presentations X 2 in January 2006 and 4. Four face to face (one with intern) and four meetings with Paul Mihas to develop technical skills in Atlas and establish protocols for ensuring inter-rater reliability…This journal of coding activities begins in Fall 2006.

1. Codebook developed August 2006 modeled on Christain Helfrich's dissertation work.
2. Codebook briefly reviewed by Paul Mihas
3. Meetings X 2 between me, Coder 1 and Coder 2 to, as a group, code 2 transcripts. August and Sept 2006
4. Coding interrupted until uncertainty about data deidentificaion cleared up
5. Coder 1 coded B1 and B2 alone approx. Sept 2006
6. Coder 2 coded B3 and C1 alone approx. Oct 2006
7. I coded B1, B2, B3, and C1 alone in Jan 2007. Compared my work with Coder 1 and Coder 2 to look for systematic differences in coding. Prepared themes that summarized coding differences that need attention and will be presented at the consensus meeting.
8. Met with Paul Mihas re: methods for establishing reliability between coders
    a. 2-4 transcripts sufficient for establishing reliability
    b. Miles and Huberman suggest 70% agreement level is sufficient but the field has not yet established what defines "agreement." E.g. same text, same code etc.
    c. Paul thought paired coding where differences were resolved on the spot was a good way to approach the coding process
    d. Paul thought review of interviews submitted to paired coding by a third party would be considered a "luxury."
    e. Paul recommended a consensus coding meeting between coders to take place prior to paired coding efforts.

8.5 Added Awareness of the Project code
9. Coder 1 and I had a consensus coding meeting on 1/30 and, after addressing areas of difference, applied paired consensus coding to interviews C2
10. I did reliability coding on B3 and C1 and on 2/5/07 met with Coder 2 to review our materials and develop consensus coding approach. Coder 2 and I coded C3 together.
11. Coder 1 and I coded D1 and D2 on 2/8/07.
12. Coder 1 and Coder 2 coded three more interviews (D3, E1, E2) on 3/2/07. They raised questions re: what to do when the interviewee seems to have little awareness of the

project. Coder 1 and I discussed coding challenges on 3/4/07. Primarily Coder 1 was concerned that both she and Coder 2 did not use the code "implementation effectiveness" very much. I reassured them that the interviews were not designed to capture this info specifically but that if we heard reports from interviewees that could shed light on IE, then this was a bonus.
13. Coder 2 and I met on 3/5/07 and together we coded E3, F1. We noted the value code a lot in these transcripts.
14. Coder 1 and I met on 3/16/07 and coded f2, F3, and G1. We are easily in agreement on most text-coding matches. Our speed at coding has increased considerably and we did 3 interviews in a little less than 2 hours.
15. Coder 1 and Coder 2 met to continue coding on 3/21/07. They coded G2, G3, and H1
16. Coder 1 and I met on 3/23/07 and completed the coding, excepting for the "reason for staying and reason for leaving" codes
17. I coded A1 and plus the remainder of A3 while at CCME on 3/28. I also checked all the coded transcripts to make sure they were complete.
18. I coded the reasons for staying and leaving on 4/10/07. I had some technical difficulty bringing up F2, F3 and G1.

Summary of analytic process

DATE	WHO	TRANSCRIPTS	COMMENTS
8/2006	PI, Coder 1 and 2	A2	Getting familiar
9/2006	PI, Coder 1 and 2	A3 partial	Still getting familiar
9/2006	Coder 1	B1, B2,	Beginning reliability
10/2006	Coder 2	B3, C1	Beginning reliability
1/2007	PI	B1, B2, B3, C1	Coded, reconciled, summarized coding differences
1/30/07	PI, Coder 1	C2	Consensus coding meeting
2/5/07	PI, Coder 2	C3	Consensus coding meeting
2/8/07	PI, Coder 1	D1, D2	Consensus coding
3/2/07	Coders 1 and 2	D3, E1, E2	Consensus coding
3/5/07	PI, Coder 2	E3, F1	Consensus coding
3/16/07	PI, Coder 1	F2, F3, G1	Consensus coding
3/21/07	Coders 1 and 2	G2, G3, H1	Consensus coding
3/23/07	PI, Coder 1	H2, H3	Consensus coding
3/28/07	PI	A1, Partial A3, review	
4/10/07	PI	All transcripts except F2, F3, and G1	Coded reasons for staying and leaving
4/11/07	PI	Staying and Leaving for F2, F3, G1	ALL COMPLETE

APPENDIX 3
CODEBOOK

- **Implementation climate**:

Implementation climate is "employees' shared perceptions of the importance of innovation implementation within the organization." Implementation climate is strong if "employees perceive that innovation implementation is a major organizational priority--promoted, supported, and rewarded by the organization" (Klein, Conn et al. 2001). Implementation climate refers explicitly to whether or not "work unit practices, procedures, and rewards promote behaviors consistent with a specific strategic outcome of interest;" it does not address "generic work unit characteristics—such as socio-emotional supportiveness—that are generalizable to any work unit" (Klein and Sorra 1996). Therefore, it addresses the experiences of organizational members around this specific innovation.

Operational definition:

Targeted organizational members indicate the PCC project in their nursing home is an organizational priority; and/or is supported (i.e., moral or material support necessary to complete implementation tasks is provided), rewarded (i.e., moral or material rewards that offer personal gratification are provided) and/or expected of one another (i.e., organizational members have mutual expectations that they will deliver person centered care). Sub-codes include: "supported," "rewarded" and "expected."

Use when:

Participants indicate PCC is or is not an organizational priority, including citing examples of actions, processes, policies by the organization, peers or management that they perceive as supportive of PCC implementation.

Do not use:

For management's view of how *they* support the PCC project (that should be "Management support").

Example:

Expected: "PCC will continue in our facility no matter how much it costs."

Supported: "After visiting other PCC facilities, we learned that we could make positive changes for our residents."

Rewarded: "My input into the PCC process is valued by administration."

- **Implementation effectiveness**:

Implementation effectiveness is the pooled or aggregate consistency and quality of targeted organizational members' use of an innovative technology or practice and targeted organizational members' commitment to consistent and quality use of that technology or practice (Klein, Conn et al. 2001). *Implementation effectiveness* is an aggregate effect measured at the group or organization level, not at the individual level. In a multi-level organization such as a nursing home, *implementation effectiveness* applies to the level where implementation primarily occurs, between residents and direct care workers.

Operational definition:

Indications of the consistency and quality of PCC development within the nursing home. Does this quote tell us about how direct care workers evaluated the implementation process of person centered care? Use for quotes that provide complementary descriptions of PCC implementation effectiveness to help supplement and interpret NHQI team rankings.

In this case, *implementation effectiveness* occurs at the level of direct care workers, where targeted organizational members include nursing assistants, nurses, allied health workers, housekeeping and dining staff.

Use when:

There are quotes that help provide complementary descriptions of PCC implementation effectiveness to help supplement and interpret completion of steps in the action plan or NHQI rankings.

Do not use:

For indications of overall organizational performance, such as DFS deficiency ratings, that may be primarily based on activities outside of PCC.

Example:

“Once we got started, we put PCC into place about twice as fast as we expected to.”

- **Implementation policies and practices**:

Implementation policies and practices (*IP&P*) are the formal strategies (i.e., the policies) the organization employs in order to put into use the innovation, and the actions that follow from those strategies (i.e., the practices). These include such activities as employee training, financial assistance (e.g., payment for phone calls to consult with other facilities), praise from supervisors, employee promotions, regular and accurate communication from supervisors about the innovation, and extra time in the workday to experiment with the innovation and become comfortable with it (Klein, Conn et al. 2001).

Operational definition:

Use when direct care workers indicate the development of strategies employed by the organization to support the implementation of PCC, particularly around ensuring organizational member training, incentives, identification/reduction of barriers to implementation and policies around participation in decision-making. Sub-codes include: communications, "training," "incentives," "barrier reduction" and "decision-making."

Use when:

There are general indications of explicit *implementation policies and practices* undertaken by the organization or organizational subunits.

Example:

"One of the best things that has happened is that they have hired more staff to help with morning routines."

"We learned about PCC through forming neighborhoods and electing a mayor."

Do not use:

When policies or practices emerge from actors or events outside of the nursing home, e.g. DFS

- **Management support**:

Management support is managers' "commitment to conduct transformation [of the organization]," and commitment to invest in quality implementation policies and procedures to implement the innovation (Klein, Conn et al. 2001). It may involve managers being innovation "protagonists by creating rationales for action in the minds of key people." This may involve identifying "new norms" by which the old way of doing things is perceptibly inadequate and then creating a vision for how practice could be changed and modeling the feasibility of change (Nutt 1986). It may include actions intended to "inform, persuade and motivate" organizational members around innovation implementation (Savitz and Kaluzny 2000).

Operational definition:

Users indicate that management has provided some kind of material or moral support for PCC, specifically in terms of communicating that PCC is a priority or communicating a rationale for PCC. Management is defined as administrators, the leadership team, director of nursing or assistant director of nursing. Also use when there are more general attributions of management support, such as references to "management showing up to help us do this work." Sub-codes include "rationale" and "communicating priority."

Use when:

Those in positions defined as "management" act in some sort of formal capacity to support innovation implementation as described above.

Example: "Our administrator comes out of her office every day to see how things on the floor are going with PCC."

Do not use:

Where non-managers support the innovation.

- **Operational Fit**:

Attributes of the innovation may facilitate, or disrupt, users daily routines. This positive or negative relationship between the innovation attributes and the users daily routines, herein called operational fit, is hypothesized to contribute to implementation climate. By influencing implementation climate, operational fit may make the innovation more or less likely to be implemented.

Operational definition:

Apply whenever there is an attribute of PCC project that appears to affect users daily operations but is not explained by values fit, or other constructs in the model. Label the relationship between innovation attributes and users daily routines as positive or negative.

Example:

Negative: "I was invited to attend care planning meetings but when I do, no one is on the floor to take care of my patients."

Positive: "Now that our residents have choices about their food, we don't have to spend time taking special orders back to the kitchen."

- **Resource availability**:

Resource availability is "that cushion of actual or potential resources which allows an organization to adapt successfully to internal pressures for adjustment or to external pressures for change in policy as well as to initiate changes in strategy with respect to the external environment" (Bourgeois 1981). These include financial "systems resources," such as funds for training, new positions and necessary hardware or software (Savitz and Kaluzny 2000).

Operational definition:

Managers or targeted organizational users indicate a perceived availability or dearth of financial resources affecting the nursing homes ability to implement new policies or practices (whether or not related specifically to PCC implementation). Use when Subjects explicitly cite any financial, or explicitly financially-dependent resources (e.g., obtaining new personnel) having an effect on or implication for PCC implementation.

Use when:

Workers explicitly cite an availability or dearth of financial or financially-dependent resources related to PCC implementation.

Example:

"So yeah, how we funded our new hallway spa is we went out and raised money. That wasn't funded through corporate; that was funded by our team going out and getting money by selling raffle tickets."

- **Rival activities**:

Rival activities are "events or elements" external to the innovation that "may be a factor in the same outcomes" or that may rely on the same antecedents (Savitz 2003). *Rival*

activities can absorb resources that might otherwise be available for *implementation policies and practices*. They can dominate the attention of management, drawing off *management support* from innovation implementation and they can create confusion among targeted organizational members over organizational priorities or create doubt over the feasibility of innovation implementation, thus resulting in weaker *implementation climate*.

Operational definition:

Events or elements external to the innovation that occur contemporaneously with PCC implementation and influence the same outcomes or depend on the same inputs.

Use when:

Rival activities are explicitly linked to PCC inputs or outcomes. Example:

"We have experienced a lot of nursing assistant turnover this month and our administrators are in a frenzy to get more staff hired."

Or

"DFS came and told us we had to reduce the number of restraints in our facility. Now we are spending so much time with our restrained residents."

- **Values**:

Kabanoff, Waldersee and Cohen (1995), define *values* as "generalized, enduring beliefs about the personal and social desirability of modes of conduct or 'end-states' of existence."

Operational definition: Workers indication of what is important to them about working in a nursing home.

Use when: Direct care workers indicate what is important to them about their work and the workplace environment. Also use when direct care workers indicate what causes them to stay at, or leave, their nursing home.

Example: "Taking care of my residents is what really matters." Or "I work here because this facility has a reputation in our community for providing great care to residents."

- **Values fit**:

Innovation fit with users' values (hereinafter called "*innovation-values fit*") is the "extent to which targeted users perceive that use of the innovation will foster (or, conversely, inhibit) the fulfillment of their values" (Klein and Sorra 1996).

Values fit may occur at: (1) the greater-organization level and (2) the group level, i.e., groups within the organization.

Operational definition:

Targeted organizational users or managers indicate implicitly or explicitly that PCC does or does not fit with the interests, values or mission of their organization, functional group, or profession.

Use when:

There is an explicit or strongly implicit link to the values of a defined group, including both "moral" values and values about what falls within a given professional or organizational purview.

Do not use:

If the subject expresses a point-of-view that is purely logistic, e.g., not having enough time/resources to implement PCC (use Resource Availability for that).

Example:

"How well does PCC fit with your nursing home's primary mission?

"PCC is all about putting residents' care first and foremost…that's why I wanted to work in a nursing home."

- **Negative:**

"NEG" indicates the "negative" version of codes, which can mean two things:

1) There is a conspicuous absence of the variable, e.g., the interviewer asks if the administrator was supportive of PCC implementation and the participant says, "no." Or,

2) The variable is evident but operating in a contrary manner, e.g., a direct care worker expressly states that she does NOT expect her workmates to engage in PCC activities (that would be Climate NEG).

If both negative & positive indications appear in the same text unit, code with both the regular and negative versions of the code."

APPENDIX 4

STUDY 1: AUDIT TRAIL FOR DATA QUALITY RANKINGS

DATE	ACTIVITY	WHO PARTICIPATED
1/08	Ranking transcripts for data quality. Approx 20-30 minutes per transcript	PI
2/08	Met with intern to review data quality assessment process	PI and intern
2/08	Intern completed data quality assessment on 9 transcripts (initial step with feedback forthcoming). During our 2/15/08 meeting, as intern reviewed her notes, there was really only one transcript that we disagreed upon…by one category difference	intern
2/08	Reviewed text for intern's initial transcript data quality rankings and determined areas of disagreement that were greater than 1 step apart. Prepared table to use to discern final rankings. Discussed results with intern	PI
3/2/08	Intern completes transcript data quality rankings	intern
3/14/08	Intern completed initial ranking of codes. After a phone de-briefing to summarize main issues, we met for consensus ranking before intern continues with the remainder of the code rankings.	PI and intern talked via phone to outline what I think is happening to explain our different rankings and plan for next steps. Mostly, our differences had to do with inconsistent approaches to coding where sometimes larger codes were labeled with sub codes and other times, not.
3/15/08	Met to build consensus on data quality rankings for transcripts and 7 initial codes.	PI and intern
3/26/08	Met to finalize codes that required consensus	PI and intern

	approach. Before consensus, there was one code that was greater than 1 ranking different. We reviewed and came to consensus on 6 additional codes.	
4/1/08	PI completed categorization of codes by 4 questions and generated four new documents to rep. each question. Also, PI reviewed all memos: The major themes of the memos were 1. reciprocity, 2. awareness of the project negative and then 8 memos that deserved a second look because they brought up questions about the codes applied to the text. After reviewing the eight memos, I determined that all questions had already been addressed during previous data quality analysis. Thus, no further action is needed regarding memos.	

APPENDIX 5

STUDY 1 SECTION 2: AUDIT TRAIL FOR DATA QUALITY ANALYSIS

DATE	ACTIVITY	WHO PARTICIPATED
5/29/08	Blinded test to see if intern was able to recall facility's project description or degree of implementation effectiveness. Results: Intern was not unable to recall any of the project descriptions nor was she able to tell me anything about the facilities' rankings of implementation effectiveness. Thus, I feel confident that this intern is suited to independently rank facilities as hi, med, or low on operational fit, values fit, and implementation. climate	PI and intern
6/2/08	Sent intern the relevant data with the following introduction: This data is organized by theoretical construct...1. Values fit for each facility on separate documents and 2. Both operational fit and psychological climate listed side by side for each facility. Rather than rank the data for richness (as you did previously), the next ranking is for content. For example: did direct caregivers describe the PCC-values fit for their organization as high, med, or low. Another example: Did direct caregivers describe the PCC-operational fit for their organization as high, med, or low. And last, Did caregivers describe the psychological climate within their facility as high, med, or low...where psychological climate is the degree to which caregivers' perceived management to support, reward, and expect PCC related behaviors. Discussed results with inter before actually proceeding with the rankings.	
6/5/08	Just a little more specific guidance re: ranking the data: Nursing homes where the consistency (at least two out of three direct caregivers agree) and valence (highly laudatory remarks) of descriptions of implementation climate are favorable will be categorized as implementation climate HIGH. Nursing homes will be categorized as implementation climate LOW when at	

	least two out of three direct caregivers consistently report that person centered care was not expected, rewarded or supported within their facility and the intensity of reports is unenthusiastic. Implementation climate MEDIUM facilities will be identified by mediocre reports of implementation climate and/or wide variance among the three caregivers' descriptions of their facility's implementation climate. Similar to the categorization of implementation climate, values fit and operational fit will be categorized for each nursing home as HIGH, MEDIUM or LOW based on the consistency and valence of the interviewees' remarks.	
061508	Phone call to clarify the criteria for rating OF, VF, and IC. Let intern know that the proposal criteria of 2/3 readers did not work as planned because not all codes had comments by all three interviewees	PI and intern
061608	Received and put in comparison table intern's initial ratings of constructs with mine	PI
061808	Reviewed areas of disagreement with intern. We easily agreed that all facilities had Hi values fit. Her disparate ratings had to do with lack of clarity about FIT WITH WHAT? When I discussed the FIT as congruence between the values of caregivers and the basic tenets of PCC, she easily agreed. Then, we struggled a bit with ratings for C and G. We came to consensus after reading each facility comments again and discussing further. Facility G implementation climate and Facility G implementation climate were the hardest to reach consensus on but finally after comparing C and G to others, we arrived at final ratings.	PI and intern

APPENDIX 6

NUMBER OF TEXT UNITS INFORMING STUDY 1 RESEARCH QUESTIONS

QUESTION	Number of text units informing the question
How did direct care workers learn about the PCC Program?	13 sub-units of text coded as Policies and Practices
Were direct caregivers aware of the PCC project in their home?	50 text units coded as Awareness of the Project
What policies and practices did management implement that signaled to direct caregivers that the PCC Program was a priority in their nursing home?	79 text units coded as Policies and Practices
What management behaviors signaled to direct caregivers that the PCC Program was a priority in their nursing home?	43 sub-units of text units coded as Policies and Practices
In what ways did person centered care promote or hinder the values of direct caregivers?	52 text units coded as Innovation-values fit
How did daily operations change when person centered care was practiced?	69 text units coded as Innovation-operations fit
Do direct caregivers' perceptions of "fit" between the person centered care project and their daily routines influence their perceptions of implementation climate?	80 text units coded as Implementation climate

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