UNIVERSITY OF CALIFORNIA,
IRVINE

Interprofessional Collaborative Culture and Interprofessional Collaborative Care Processes in Practice in a Transitional Care Program for Older Adults: A Qualitative Study

DISSERTATION

submitted in partial satisfaction of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

in Nursing Science

by

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DEDICATION

To

My fiancé Jude Harrison, my children Alex, Cherish and Jonathan Burtson, and my sister Robin Bahl

in recognition of their ongoing support that has enabled me to achieve this longed-for academic goal.

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ABSTRACT OF THE DISSERTATION

Interprofessional Collaborative Culture and Interprofessional Collaborative Care Processes in Practice in a Transitional Care Program for Older Adults: A Qualitative Study

By

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Doctor of Philosophy in Nursing Science

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Associate Professor Jung-Ah Lee, Chair

Purpose. The purpose of this study was to describe interprofessional collaborative competencies in practice, and barriers to competency enactment, in the setting of a transitional care program for older adults.

Background. The care for older adults with multiple comorbidities is complex, requiring collaboration between multiple health professionals in various settings, creating problems with communication and coordination that result in avoidable readmissions. Interprofessional collaborative competencies have been identified as key skills for health and social services professionals to address quality and safety gaps, particularly in the hospital to home transition for older adults.

Methods. This study was a descriptive qualitative study using a hybrid, deductive-inductive thematic analysis method. The setting was the Community-based Care Transitions Program, a

transitional care program for older adults organized around an Area Agency on Aging collaborating with health systems. Research participants were nursing, pharmacy, and public health professionals at the director, manager and clinical staff levels involved with the care transition intervention. The conceptual framework for Core Interprofessional Collaborative Competencies, developed by the Interprofessional Education Collaborative, was used to frame the interview questions and develop the initial deductive coding scheme. This was followed by an inductive thematic analysis.

Results. Overarching interprofessional collaborative processes, such as interprofessional care planning, were described that encompassed multiple previously identified competencies. System factor barriers to interprofessional collaborative competency enactment were defined at the micro level (interactional), meso level (organizational), and macro level (city, county, state and national level). In addition, interprofessional collaborative culture was defined and posited as a facilitator to interprofessional collaboration at the meso level. A new conceptual model of interprofessional collaboration in the context of transition care for older adults emerged from the study findings that combined previously described conceptual models.

Conclusion. This study described interprofessional collaborative culture and interprofessional collaborative processes that added to the understanding of interprofessional collaboration in practice in the context of transition care for older adults. System factor barriers that were identified and described could be proactively addressed to facilitate interprofessional collaboration. Interprofessional collaborative culture could be proactively cultivated within organizations with the goal of promoting health among the older adult population.

Chapter 1. Introduction

1.1 Problem

The older adult population in the United States (U.S.) is growing, creating economic pressure to improve healthcare quality for older adults while controlling costs (Knickman & Snell, 2002). In fact, the number of older adults in the U.S. is projected to more than double from 46 million in 2014 to 98 million by 2060 (Mather, Jacobsen, & Pollard, 2015). As age increases so do comorbidities, with estimates that 62% of older adults live with multiple chronic conditions in the U.S. (Vogeli et al., 2007).

Optimizing health among the older adult population with multiple chronic conditions is a complex endeavor that requires coordination and communication between multiple health professionals with diverse areas of expertise such as primary care physicians, specialist physicians, advanced practice nurses, registered nurses, physical therapists, occupational therapist, dieticians, social workers, and pharmacists (Coleman & Boult, 2003). To add to the complexity, there is a growing trend in the U.S. of health professionals restricting their practice to a single setting such as a hospital, ambulatory care setting, or skilled nursing facility that exacerbates the system fragmentation (Committee on Quality Health Care in America, 2001). Health professionals in different specialties and settings frequently practice independently in silos, with little to no communication between them, creating a fragmented healthcare delivery system with dangerous gaps in patient safety and quality (Committee on Quality Health Care in America, 2001).

The older adult population not only has complex health service needs, but frequently also has unmet social, economic or environmental needs that impact health. The vast majority (96%) of older adults in the U.S. live in the community in homes or apartments and many are

vulnerable, with 10% requiring assistance with physical activities of daily living (eating, bathing or moving) and another 5.6 % requiring assistance with instrumental activities of daily living (shopping or cleaning) (Knickman & Snell, 2002; Mather et al., 2015). While the Social Security program in the U.S. has kept poverty among older adults to 10%, economic insecurity is relatively higher among women 75 and over (15%), Latino older adults (18%) and African American older adults (19%) (Mather et al., 2015). The social, economic and environmental factors that impact health in the older adult population include access to nutritious food, ability to afford healthcare and medications, and safe and affordable housing, among others. These factors are called social determinants of health (Pooler & Mithuna, 2018). These social determinants of health for older adults are often addressed by Community-based Organizations (CBOs) like Area Agencies on Aging (AAAs) that provide services such as in-home support, respite care, meals, money management, transportation or adult day care (County of San Diego Health and Human Services Agency, n.d.). Similar to the silos that exist between health professionals of different specialties and settings, the health system and the social services system also operate independently with little to no communication or care coordination between them (Coleman & Boult, 2003). The system fragmentation has led not only to poor quality, but also to unnecessary costs of care that creates an economic burden in the U.S.

Older adults with multiple, chronic conditions are particularly vulnerable at the transition between the hospital and home settings, where many suffer from an avoidable hospital readmission resulting from common failure points in the fragmented healthcare system (Hines, Barrett, Jiang, & Steiner, 2014). Hospital readmissions among older adults within 30 days of discharge alone cost $24 billion annually, creating economic pressure to identify quality improvement strategies and decrease costs related to transitional care (Hines et al., 2014).

Maintaining quality and safety in the hospital to home transition for older adults requires coordination and communication between multiple health professionals with different areas of expertise in different geographic locations (Coleman & Boult, 2003). In contrast to the coordination and transparent communication between health professionals that would characteristics of an integrated healthcare delivery system , the U.S. healthcare system instead is characterized by communication silos that create a quality chasm (Committee on Quality Health Care in America, 2001).

1.2 Transitional Care Interventions

Hospital to home transitional care intervention strategies for older adults aimed at overcoming the existing quality gaps have been investigated in the research literature. Transitional care interventions strategies have evolved over time starting with using an advanced practice nurse (APN) alone to address quality issues and prevent safety gaps in the hospital to home transition, and then moving to interprofessional partnerships, and later interprofessional teams that require multiple health professionals to collaborate with each other on the intervention team, and also with the patient's hospital-based and community-based health and social services teams. Landmark studies by Naylor et al. (1999) and Coleman et al. (2006) both used APNs to address quality gaps in the hospital to home transition, reducing readmissions and costs. APNs alone were initially used to complete highly individualized, comprehensive discharge planning and home follow-up with older adults, with readmission reduction persisting up to 24 weeks (Naylor et al., 1999). The Naylor model demonstrated positive effects on patient experience and cost, realizing a savings of $3031 per patient over 24 weeks (Naylor et al., 1999). The Naylor model, however, was costly as it utilized an APN for comprehensive discharge planning, but also required the APN to complete time-consuming home follow up and phone calls. Other models

have modified the strategy for cost containment and still impacted readmissions up to 90 days after discharge by using an nurse case manager for comprehensive discharge planning, but delegating the home follow up to less costly home health aides, trained volunteers or student nurses (Chow & Wong, 2014; Martin, Oyewole, & Moloney, 1994; Wong, Ho, Yeung, Tam, & Chow, 2011).

Coleman studied the standardized Care Transition Intervention (CTI) strategy that used an APN as a patient coach in the hospital and the home to engage the patient in self-empowerment and self-advocacy, with hospital readmission reduction persisting up to 90 days and annual cost reductions per patient of $1813 (E. A. Coleman, C. Parry, S. Chalmers, & S. Min, 2006a; Saleh, Freire, Morris-Dickinson, & Shannon, 2012). Other researchers have replicated Coleman's results (Parry, Min, Chugh, Chalmers, & Coleman, 2009).

Following the APN strategies, interprofessional interventions were investigated. Care transition interventions involving interprofessional partnerships emerged including a nurse and physical therapist partnership, and an nurse and a pharmacist partnership, with both strategies impacting readmission from 30 days to 24 weeks (Courtney et al., 2009; Koehler et al., 2009). Finally, interprofessional team-based care transition interventions have emerged, demonstrating a significant impact to readmission up to 180 days (Parsons et al., 2018). Parson's model involved a supported discharge team that included a physician, physical therapist, occupational therapist, APN, and an unlicensed home health aide trained in rehabilitation techniques (Parsons et al., 2018). Parsons' model achieved longer term impact on readmissions by using a home health aide to visit older patients up to four times a day in the initial discharge period, and decreasing frequency through the first six weeks after discharge. In contrast to Parsons et al. (2018), other interprofessional team-based care transitions interventions have not demonstrated a

significant reduction in hospital readmissions (Avlund, Jepsen, Vass, & Lundemark, 2002; Nikolaus, Specht-Leible, Bach, Oster, & Schlierf, 1999; Rosstad et al., 2017; Sahota et al., 2017; Siu et al., 1996). Because of the lack of effectiveness of most of the team-based care transitions, the possibility arises that interprofessional collaborative practice may not been sufficiently developed to succeed with these more complex interventions.

As described, most of the research literature to date in transitional care for older adults has consisted of randomized controlled trials of transitional care interventions. Hospital to home transitional care intervention studies have included the outcomes of hospital readmission and cost reduction as the primary focus, with some studies that also included the outcomes of quality of life or overall health. Transitional care interventional studies show a trend toward more complex interventions that include a team of licensed and unlicensed health professionals that highlights the need to better understand interprofessional collaboration.

1.3 Interprofessional Collaboration

Transitional care intervention studies using more than one health professional have provided information about the effectiveness of transitional care intervention structures, but have provided little insight into the process of interprofessional collaborative practice itself. Here it is important to define the key terms applicable to this study. Interprofessionality is the development of a cohesive practice between professionals from different disciplines. It is the process by which professionals reflect on and develop ways of practicing that provides an integrated and cohesive answer to the needs of the client/family/population (D'amour & Oandasan, 2005). It is different from interdisciplinarity, a related term. Interdisciplinarity is the development of cohesive base of knowledge between various disciplines (D'amour & Oandasan, 2005). And finally, collaborative practice is when "multiple health workers from different

professional backgrounds work together with patients, families, carers, and communities to deliver the highest quality of care (WHO, 2010).

The World Health Organization (WHO), the American Geriatric Society and The Joint Commission (TJC) have all posited that targeting improvements in interprofessional collaboration is a key strategy of healthcare redesigned that could decrease the system fragmentation in care transitions that leads to poor health outcomes among older adults (Coleman & Boult, 2003; The Joint Commission, 2013; World Health Organization, 2010). To accomplish sought improvements in interprofessional collaboration in practice, the Interprofessional Education Collaborative (IPEC) was formed (including educational experts in medicine, nursing, pharmacy, dentistry, and public health) with the goal of identifying and developing core competencies for interprofessional collaborative practice among health professionals (American Association of Colleges of Osteopathic Medicine, 2011). IPEC defined interprofessional collaborative competencies as the integrated enactment of knowledge, skills, and values/attitudes that define working together across the professions, with other health care workers, and with patients, along with families and communities, as appropriate to improve health outcomes in specific care contexts (America Association of Colleges of Osteopathic Medicine, 2011). IPEC also created a conceptual framework and defined 38 core competencies for interprofessional collaboration practice. While significant work has been done to identify interprofessional collaboration competencies and describe the processes of interprofessional collaboration, the studies have not yet been done to better understand how interprofessional collaboration manifests in practice in the context of transitional care for older adults.

1.4 Purpose of the Study

The overall purpose of this study was to describe, analyze and examine interprofessional collaborative competencies in the setting of a transitional care program for older adults. A natural experiment consisting of a transitional hospital to home model for older adults was identified with the implementation of the Community-based Care Transitions Program (CCTP) in 2013-2015 (Ruiz et al., 2017). CCTP was a federally funded grant program designed to reduce avoidable hospital readmissions among older adults (Ruiz et al., 2017). In April of 2011, Section 3026 of the Affordable Care Act created CCTP with the aim of testing community-based practice models designed to reduce avoidable hospital readmissions among Medicare beneficiaries (Centers for Medicare and Medicaid Services, n.d.-b). This federal program required area hospitals to collaborate with a community-based organization (CBO), such as an Area Agencies on Aging (AAAs), in order to receive grant funds administered through the Centers for Medicare and Medicaid Services (CMS) (Ruiz et al., 2017). The CCTP program created an interprofessional, inter-hospital, and inter-system (health and social services systems) collaborative professional experience that could be used as a study setting to examine the experience of interprofessional collaborative competencies in practice in the context of transitional care for older adults. The central **research question** is: How did interprofessional collaborative competencies manifest in practice, and what (if any) barriers existed to interprofessional collaborative competency enactment?

1.5 Specific Aims

In the setting of an interprofessional, inter-hospital, inter-system (health and social services systems) transitional care program for older adults, the three **specific aims** of this study are:

1) To describe interprofessional collaborative competencies in practice as expressed by various health professionals.
2) To compare and contrast interprofessional collaborative competencies as conceptualized with interprofessional collaborative practice as operationalized in a transitional care program for older adults.
3) To identify and explore barriers that exist in the practice system (between health professionals, within and between organizations, and in the local, state and federal contexts) to interprofessional competency enactment.

1.6 Significance

Describing interprofessional collaborative competencies in practice can provide more information on how IPEC's conceptual framework is reflected in practice. By identifying gaps where interprofessional collaborative competencies are poorly enacted, focus areas can be recognized for targeted interventions. In addition, new information can be found regarding as yet unidentified competency domains, competencies within domains, or collaborative care processes that have not yet been understood. Furthermore, health professionals' descriptions of their experiences in practice can contribute to a better understanding of barriers to competency enactment that impede the ability of health professionals to deliver care that is patient and family-centered, and community and population-oriented in relation to older adults. These barriers if known can be pro-actively addressed and mitigated. This information can be used in both academic and practice settings to improve interprofessional collaboration toward the end of achieving the Institute for Healthcare Improvements quadruple aim for health care: 1) improve the patient experience of care (quality and satisfaction), 2) improve the per capita cost of health

care, 3) improve the health of populations (older adults), and 4) improve the health professionals' work experience (Bodenheimer & Sinsky, 2017; Institute for Healthcare Improvement, n.d.).

1.7 Chapter Summary

This dissertation is organized into 8 chapters. Chapter 1 provided an overview of the problem of avoidable hospital readmissions among older adults that highlights quality and safety gaps in transitional care for older adults, introduced interprofessional collaborative competencies as a potential healthcare redesign solution to the problem, introduced the CCTP program as an natural experimental setting to investigate interprofessional collaborative competencies in practice, and provided an overview of the research question, specific aims of the study, and the significance of the study. Chapter 2 provides a review of literature focusing on what is known about interprofessional collaborative competencies in practice in transitional care for older adults, and identifying where there are knowledge gaps. Chapter 3 provides descriptions of conceptual frameworks relevant to interprofessional collaboration and interprofessional collaborative competencies in practice. It also provides a detailed description of IPEC's core competencies for interprofessional collaborative practice, including definitions of each of the four domains and competencies within each domain. Chapter 4 provides background information about the CCTP program that was the study setting. Chapter 5 provides a description of the methods used in the study including the research design, the setting, the targeted research participants and recruitment, the data collection method, and the data analysis process. Chapter 6 includes detailed descriptions of the research participants and of the results found for each of the three specific aims of the study. Chapter 7 includes a discussion of how each of the three conceptual models cited in this study could be used to integrate the study findings into an emerging conceptual model of interprofessional collaboration in the context of transitional care

for older adults. Finally, Chapter 8 includes an overview of the implications, limitations of the study, suggestions for future research, and conclusion.

Chapter 2. Review of Literature

This chapter reviews the relevant literature pertaining to interprofessional collaboration and interprofessional collaborative competencies in transitional care for older adults.

2.1 Literature Review Process

A literature review was completed to find out what is known about interprofessional collaboration in practice as applicable to transitional care for older adults including both qualitative studies and quantitative studies. A literature search of the CINAHL database was completed including the Major Heading (MH) search terms "readmission" and "continuity of patient care" and "interprofessional relations" and "collaboration" and "transitional care" and text word search terms "readmi*" and "rehosp*" and interprofessional. Search limits included: English language, peer reviewed, age groups 65+ and 80 and over, and publication dates October 1, 2008 to October 1, 2018. Inclusion criteria were the following: 1) Study design was a qualitative or quantitative study; 2) the study addressed some aspect of interprofessional collaborative practice; 3) the study was relevant to interprofessional collaborative practice in the context of healthcare delivery for older adults. The literature search yielded six qualitative studies and three quantitative studies relevant to interprofessional collaboration in transitional care for older adults (Brewster, Kunkel, Straker, & Curry, 2018; Gill et al., 2014; Hung & Leidig, 2015; Hung, Quan, Yakir, & Nicosia, 2018; McDonald, Jayasuriya, & Harris, 2012; McMurray, Ward, Johnston, Yang, & Connor, 2018; Smith & Treschuk, 2018; Uddin, Hossain, & Kelaher, 2012; Wensing et al., 2011).

2.2 Interprofessional collaboration qualitative studies

Four of the qualitative studies focused on various aspects of new program implementation of care transition interventions for older adults, one study focused on family-caregiver-physician triad frustrations in receiving treatment for multi-comorbidities, and one study focused on power dynamics and trust among health professionals (Gill et al., 2014; Hung & Leidig, 2015; Hung et al., 2018; McDonald et al., 2012; McMurray et al., 2018; Smith & Treschuk, 2018). There were no studies that focused specifically on describing interprofessional collaboration in practice; however, both positive and negative characteristics of interprofessional collaboration were described.

2.2.1 Positive interprofessional collaboration characteristics. Several positive characteristics of interprofessional collaboration were described in qualitative studies focused on the care of older adults in the hospital to home transition, or more broadly in the community setting including: an organizational culture of innovation and quality improvement, trust-building between health professionals and between health professionals and older adult patients, shared accountability for program outcomes between leaders and clinical staff, understanding the role of interprofessional colleagues and how each role worked together on the care team, and in-person and virtual interprofessional collaborative care planning where a shared understanding of the patient was reached to ensure patients' needs were met. Professional job satisfaction was also described as an positive outcome of interprofessional collaboration in one study (McMurray et al., 2018).

Hung and Leidig (2015) and Hung et al. (2018) both described an organizational culture of innovation and quality improvement that facilitated the adoption of Coleman's care transition intervention (CTI) program, first as a pilot project on a smaller scale within the hospital, and then

more broadly organization-wide. McMurray et al. (2018) described trust-building as a process between nurse navigators and primary care physicians that occurred over time as a new nurse navigator role was introduced in Queensland, Australia to address the needs of older adults across the continuum of care with multiple comorbidities. It was also described that high levels of trust were established between nurse navigators and older adult patients as patients learned to rely on the fact that navigators understood their needs across care settings. A qualitative study by McDonald et al. (2012), focused on exploring the influence of power dynamics and trust between health professionals involved in caring for patients with diabetes in Australia, also described trust-building as a collaborative care process. Similar to the findings of McMurray et al. (2018), McDonald et al. (2012) explained that staff could describe specific strategies they employed to enhance trust development (positive patient feedback about a colleague, timeliness of a colleague's communication, and thoroughness of a colleague's documentation). Hung and Leidig (2015) and Hung et al. (2018) both described that interprofessional collaboration was enhanced by a shared accountability for goals and outcomes between leadership and clinical staff as Coleman's CTI program was implemented across the organization. McMurray et al. (2018) also described the importance of role clarity as a characteristic of interprofessional collaboration as a new nurse navigator role solidified over time. Both the nurse navigators and primary care physicians learned to understand how the new navigator role integrated within existing roles and also learned how to explain how the interprofessional team worked together to patients.

In-person and virtual interprofessional collaborative care planning were both described as key collaborative care processes in two studies (McDonald et al., 2012; McMurray et al., 2018). Collaborative care planning was described as involving the integration of interprofessional knowledge and experience between navigators and physicians in order to plan for resources to

meet patients' needs. It was explicitly mentioned that patients were actively involved in the collaborative care planning process that was centered on the patients' needs and concerns. Virtual interprofessional care planning through the electronic record was also described (McDonald et al., 2012; McMurray et al., 2018). The electronic health record that was used in the public sector health system in Australia was described as capable of facilitating virtual interprofessional care planning that allowed interprofessional colleagues to share patients' care plans and be able to modify the plan as needed across the continuum of care (McDonald et al., 2012). McMurray et al. (2018) described an electronic health record in Australia that was able to inform the nurse navigator of a pending hospital discharge of a patient.

Finally, one outcome to interprofessional collaborative was described by McMurray et al. (2018). Nurse navigators in Australia described a high level of job satisfaction related to their perceived effectiveness of the collaboration with their physician partners, and their experience of positive impacts to patient quality and experience. It may be that effective interprofessional collaboration not only can have a positive impact on patient quality outcomes, but also on patient and staff experience.

2.2.2 Negative interprofessional collaboration characteristics. Negative interprofessional collaboration characteristics described in qualitative studies resulted from a lack of development of key collaborative care processes or a lack of interprofessional collaborative competency development of members of the interprofessional team. Negative interprofessional characteristics included: poor in-person collaborative care planning and ineffective virtual collaborative care planning capability, a lack of leadership or clinical staff engagement in transitional care improvement strategies, and a lack of clarity in regard to roles and responsibilities. In contrast to the effective interprofessional collaborative care planning

described by McDonald et al. (2012) and McMurray et al. (2018), in a study by Gill et al. (2014) that focused on describing care challenges experienced by older patients with multiple comorbidities and their caregivers and physicians in Canada, poor collaborative care planning was described. Patients felt that physicians and other health professionals in the community failed to engage in patient-centered collaborative care planning and did not come to a shared understanding of their care needs. Gill et al. (2014) described older adult patients' perception that there was poor communication among health professionals in the community regarding their medication management and poor coordination among physicians in regard to scheduling procedures (causing duplicative procedures and creating multiple trips for procedures that could be planned together). Smith and Treschuk (2018), in a qualitative case study designed to understand collaboration between transition coaches involved in Coleman's CTI and home health nurses, described poor care coordination and a failure to develop a collaborative partnership. Health professionals in this case study described that a verbal or a face to face handoff was almost non-existent between transition coaches and home health nurses. Instead, documentation in the electronic health record was relied upon but there was no method to verify that electronic notes were read during the transition from acute or sub-acute care to home. In fact, health professionals described the communication interface between transition coaches and home health nurses as dismal. A lack of interprofessional information sharing was also described by McDonald et al. (2012). In this case, general practice physicians in the community demonstrated a lack of willingness to share information with allied health professionals. This was perceived as related to the physician's desire to maintain autonomy and power in the provider-patient relationship and between health professionals. Challenges were also described in virtual care planning within the electronic health record by McMurray et al. (2018). Here, the electronic health record was noted to be poorly

organized, making it difficult to come to a shared understanding of the patient electronically through case reviews that were overly time-consuming to complete.

Another negative characteristic of interprofessional collaboration found in the qualitive studies was a failure to engage executive leadership or clinical staff in transitional care program implementation and decision making (Hung & Leidig, 2015; Hung et al., 2018). This was described as leading to an initial slow buy-in to program goals that included interprofessional collaboration with an Area Agency on Aging. Finally, a lack of role and responsibility clarity was described by Smith and Treschuk (2018) between transition coaches and home health nurses as the Coleman CTI was implemented. Smith and Treschuk (2018) described that there were specific expectations in the transition model around medication reconciliation and schedule of physician follow-up, but the majority of home health nurses interviewed expressed no knowledge of these expectations. The home health nurses also expressed no understanding of the CTI model, making collaboration with the transition coaches difficult to achieve.

Qualitative studies described both positive and negative characteristics of interprofessional collaboration in the practice setting that serves as a baseline understanding of ways in which interprofessional collaboration operates in practice, including challenges that may exist. A summary of the qualitative studies including study setting, participants, design, study purpose and a description of positive and negative interprofessional collaboration characteristics in practice is shown in Table 1.

Table 1.

Summary Table of Positive and Negative Interprofessional Collaboration Characteristics Described in Qualitative Studies in Transitional Care of Older Adults.

First Author, Year	Location; Setting	Study Participants	Design	Study Purpose	Interprofessional Collaboration Characteristics and Barriers
Gill, A., 2014	Toronto Canada; ambulatory primary care and an academic hospital	Triad interviews: patient, caregivers, and provider; N = 27 (triads)	Qualitative, inductive thematic analysis from interviews.	To explore care challenges experienced by older patients with multiple morbidities, their informal caregivers, and their physicians	– IPCC: failure of physicians to engage in patient-centered collaborating care planning. –IPCB: Poor communication among health professionals in regard to medication management and poor coordination of procedures.
Hung, D., 2015 & 2018	United States; Acute care hospital	Staff and key members of a 1 year pilot of Coleman's CTI (2015); Program directors and staff engaged in organizational implement of Coleman's CTI (2018). N=17	Qualitative hybrid inductive and deductive thematic analysis from interviews.	To examine the implementation of Coleman's CTI in an acute care hospital unit during a one year pilot.	+IPCC: Organizational culture of innovation and continuous quality improvement. +IPCC: Shared commitment to continuous quality improvement +IPCC: Shared goals and outcomes among staff and leadership. – IPCB: staff not included in program decision-making -IPCB lack of executive engagement in transitional care program
McDonald, J., 2012	Australia; Private and public primary healthcare settings	Clinical staff (N = 35); managers (N=10); patients (N = 8). 13 health professional types and 19 organizations were represented.	Qualitative case study, thematic analysis. Two level coding and cross case comparison.	The aim of this article is to explore the influence of power dynamics and trust on collaboration between health professionals involved in the management of diabetes and their impact on patient experiences.	+IPCC: Trust was established through positive patient feedback about a professional colleague, timeliness of communication, and thoroughness of documentation. +IPCC: Public sector had an electronic health record that allowed for virtual collaborative care planning. – IPCC: General practice physicians limited information sharing with allied health professionals.

Notes. + IPCC = Positive Interprofessional Collaboration Characteristics; **–**IPCC = Negative Interprofessional Collaboration Characteristics

Table 1 (Continued)

Summary Table of Positive and Negative Interprofessional Collaboration Characteristics Described in Qualitative Studies in Transitional Care of Older Adults.

First Author, Year	Location; Setting	Study Participants	Design	Study Purpose	Findings within IPCC domains
McMurray, A., 2018	Queensland, Australia. Nurse navigator program	Focus Groups (N = 7); nurse navigator (N= 8); patients (N = 33)	Qualitative: realist synthesis.	Evaluation of the nurse navigator role in integrating care for chronic disease patients across primary and secondary services	+IPCC: high level of trust between nurse navigators and community partners that developed over time. +IPCC: patients learned to trust that navigators understood their needs across the continuum of care +IPCC: Navigators and community-based physicians were able to integrate knowledge and experience to ensure patient received adequate services and resources in a patient-centered collaborative care planning process. +IPCC: role ambiguity initially with new navigator role with role clarify solidifying over time. Navigator and other health professionals able to explain the role of the navigator to patient and other health professionals, and how the navigator worked with other members of the team. +IPCC: Electronic health record was effective for communicating discharge to the nurse navigator +IPCC: navigators and community health professions had a common shared understanding of patient information, care and treatment. + IPCC: Navigators expressed high levels of job satisfaction. – IPCC: Electronic health record was poorly organized and time-consuming for case reviews,
Smith, A. 2018	Michigan	Transition coaches (N = 8); home health nurses (N = 8); leadership stakeholders (N= 3)	Single embedded qualitative case study	To derive in depth understanding of the collaboration between nurse transition coaches and home health nurses in the context of home health care.	– IPCC: Disconnected communication between transition coaches and home health nurses. –IPCC: Contrary perceptions of coordination and collaborative partnerships. –IPCC: Challenges in implementing the transition model processes.

Notes. + IPCC = Positive Interprofessional Collaboration Characteristics; **–**IPCC = Negative Interprofessional Collaboration Characteristics

2.3 Interprofessional Collaboration Quantitative Studies

Three quantitative studies resulted from the literature search that examined some aspect of interprofessional collaboration. One study examined the relationship between partnership characteristics between Area Agencies on Aging (AAAs) and other healthcare or social service agencies and readmission rates and Medicare spending at the county level (Brewster et al., 2018). Another study examined the characteristics of physician collaborative networks (PCNs) on readmission rates and hospitalization costs (Uddin et al., 2012). And a third study used social networking methodology to study the connectedness of health professionals involved with the treatment of patients with Parkinson's disease (Wensing et al., 2011).

Brewster et al. (2018) found, in a comprehensive, retrospective correlational study of 368 AAAs, that broad-based informal (non-contractual) partnerships between AAAs and many different types of organization in the counties (18 or more), were associated with a 0.22 percentage point decrease in readmission rates ($p = .04$), but did not result in Medicare cost savings. Conversely, counties with AAAs with a larger number of formal partnerships (contractual) were not associated with a reduction in readmission rates, but were associated with higher Medicare spending per beneficiary. Medicare spending per beneficiary was $588 higher ($p < .0001$) in counties with AAAs that had 10 or more formal partnerships. This finding is counter-intuitive. It would be expected that formal contracts between AAAs and health and social services organizations in the community would result in improved health of the older adult population, and therefore decrease costs in Medicare spending. However, the opposite result was found. Researchers surmised that AAAs with more formal partnerships may indicate communities that are more sophisticated in identifying social determinants of health needs and

finding resources to meet them. If this is true, it may be that the services being delivered are not evidenced-based nor effective. Quantitative studies were also few and showed some development of quantitative measures for professional and interprofessional networking, but did not include any measurement of interprofessional collaboration itself or the correlations between interprofessional collaboration and patient or staff outcomes. Brewster et al.'s (2018) study demonstrating increased Medicare costs associated with contractual partnership between AAAs and healthcare systems demonstrated a need to specifically investigate interprofessional collaboration dynamics between health systems and AAAs to understand the association of these partnership with higher Medicare spending (Brewster et al., 2018). Perhaps there are barriers to interprofessional collaboration between health systems and AAAs that are not yet understood.

Two quantitative correlational studies both measured aspects of professional and interprofessional networking (Uddin et al., 2012; Wensing et al., 2011). Uddin et al. (2012) studied characteristics of physician networks in the hospital setting and showed that a breadth of network contacts and increased degree of connectivity among physician networks could contribute to lower readmissions and lower hospital costs. Researchers surmised that having relationships with multiple physician colleges with frequent interaction opportunities may result in increased sharing of medical knowledge or information that could contribute to higher quality care or better planning for discharge. Wensing et al. (2011) studied connectedness among an interprofessional networks of health professionals in various specialties involved with the treatment of patients with Parkinson's disease. Wensing et al. (2011) found that interprofessional networks were more easily formed in the hospital versus the ambulatory setting. Both studies suggest that in-person contact among professional and interprofessional colleagues (i.e., in the hospital setting where health professionals work in close physical

proximity with frequent interaction opportunities) is important to developing networks. The implication of these findings to interprofessional collaboration in transitional care for older adults is that relationship-building requires some degree of in-person contact. When health professionals are collaborating across care settings, i.e. hospital and community settings, opportunities for in-person interactions must be created so that networks and trusting relationships can form that enable interprofessional collaboration to occur.

2.4 Knowledge Gaps in the Literature

The research literature related to interprofessional collaborative competencies is still very early in its development. There were no studies either qualitative or quantitative with the specific aim of describing interprofessional collaboration processes or interprofessional collaborative competencies in practice in transitional care for older adults. Qualitative studies that shed light on interprofessional collaboration in transitional care for older adults were mostly found incidentally in implementation science studies of transitional care interventions, but these studies were not targeted to gain understanding about the processes of interprofessional collaboration itself. As a result, the descriptions of interprofessional collaborative competencies that emerged from them were lacking in breadth and depth. The qualitative study proposed here, focusing specifically on understanding interprofessional collaborative competencies in practice in transitional care for older adults that includes a health system and an AAA, is the first of its kind and can be a building block for further research in this novel area of study.

Chapter 3. Conceptual Frameworks for Interprofessional Collaborative Competencies

As demonstrated in Chapter 2, the research literature related to interprofessional collaborative competencies relevant to transitional care for older adults is still very early in its development. However, in addition to the qualitative and quantitative studies already described, there were three conceptual papers that described pertinent, non-overlapping concepts related to interprofessional collaborative competencies that were relevant to this study and aided in the design of the data collection and analysis methods, as well as the interpretation of results (American Association of Colleges of Osteopathic Medicine, 2011; Bookey-Bassett, Markle-Reid, Mckey, & Akhtar-Danesh, 2017; D'amour & Oandasan, 2005). Bookey-Bassett et al. (2017) completed a concept analysis and posited that there is a temporal relationship between characteristics of interprofessional collaboration that could be described in terms of antecedents, attributes, and consequences. D'amour and Oandasan (2005) defined the concept of interprofessionality in practice and education and described system factors (micro, meso, and macro) that are the milieu in which interprofessional collaboration in practice occurs. And finally, as described in the Chapter 1, the Interprofessional Education Collaborative (IPEC) developed a conceptual framework and identified 38 core competencies for interprofessional collaborative practice (American Association of Colleges of Osteopathic Medicine, 2011). .

3.1 A Concept Analysis and Temporal Characteristics of Interprofessional Collaboration

Bookey-Bassett et al. (2017) used a literature search methodology to complete a concept analysis of inter-professional collaboration in the context of chronic disease management among community-living older adults that centered on antecedents, attributes and consequences of interprofessional collaboration. A conceptual diagram showing the temporal relationship

between the antecedents, attributes, and consequences of interprofessional collaboration in caring for the older adult in the community is shown in Figure 1.

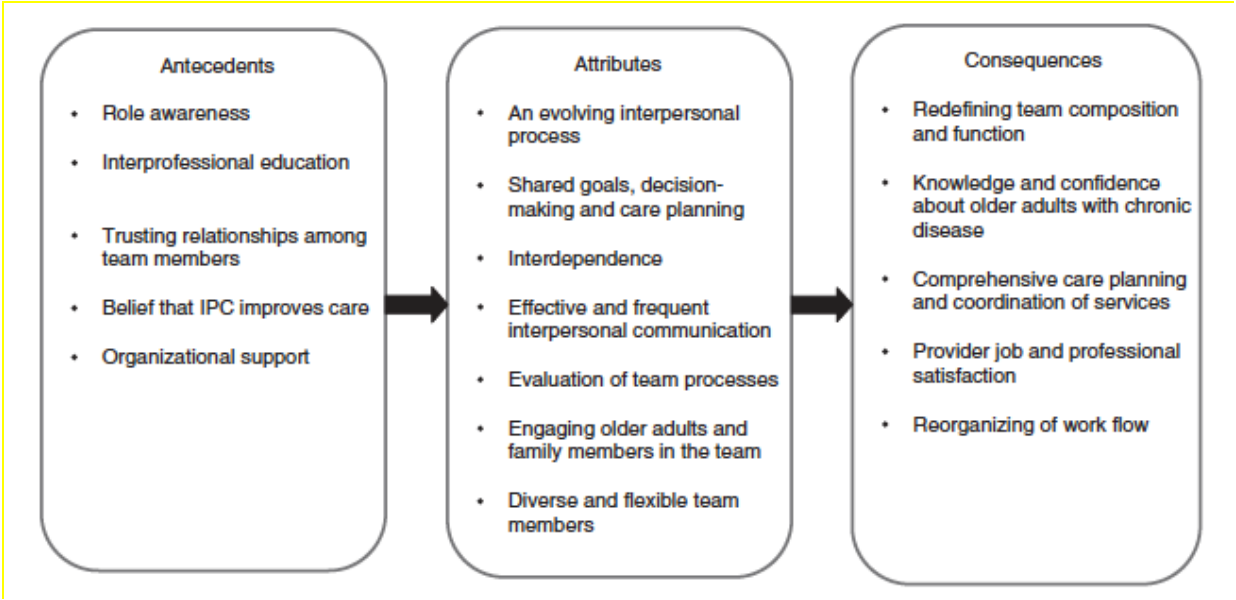

Figure 1. A conceptualization of interprofessional collaboration in the context of chronic disease management for older adults living in communities (Bookey-Bassett et al., 2017, p. 7)

Antecedents to interprofessional collaboration included factors within organizational culture such as support, belief in interprofessional collaboration to improve care, and a shared value of trust among team member. Antecedents also include role awareness and interprofessional education. Attributes of interprofessional collaboration included an evolving interpersonal process, shared goals and collaborative decision making that included the older adult patient and family, effective and frequent communication, diverse and flexible team membership, interdependence between team members, and evaluation of team processes. Consequences to interprofessional collaboration included redefining team composition, functions, and workflows, as well as comprehensive care planning and coordination. Consequences were also characterized as increased knowledge and confidence in delivering care for older adults in addition to job and professional satisfaction. Similarly, McMurray et al.

(2018) also described staff satisfaction as an outcome to interprofessional collaboration in their qualitative study.

3.2 System Factors related to Inter-professionality in Practice and Education

D'amour and Oandasan (2005) explored the concept of inter-professionality in practice and education that is relevant to an understanding of interprofessional collaborative competencies in practice. A conceptual diagram depicting the interdependence between interprofessional practice and interprofessional education is shown in Figure 2.

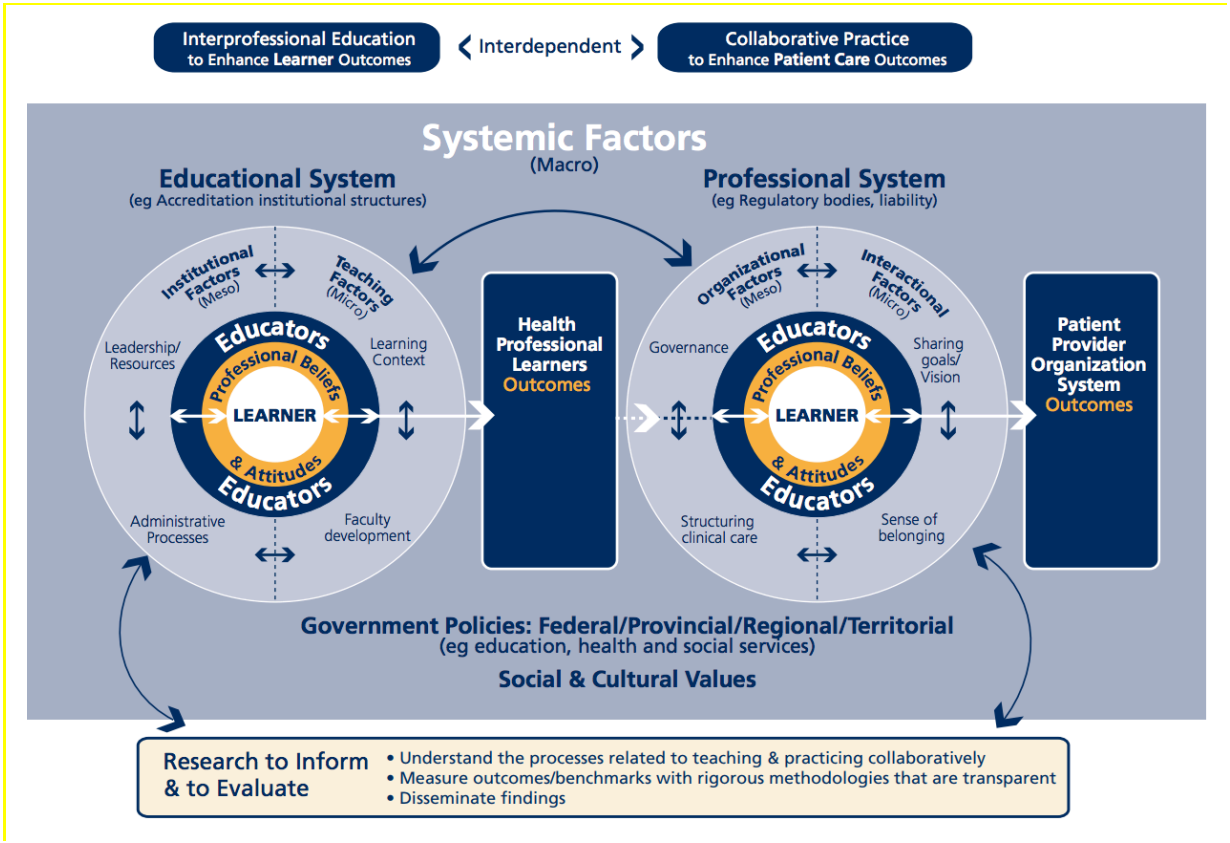

Figure 2. A conceptual diagram depicting the interdependence between interprofessional practice and interprofessional education (D'Amour & Oandasan, 2005, p.11)

D'amour and Oandasan (2005) explained the important distinction between educational system initiatives to enhance learner outcomes and professional practice system initiatives to enhance

patient outcomes, and the interdependence between the two systems. Practice competencies are the enactment of a skill that is based on professional knowledge attained in the education system, but developed through experience in professional practice. The interdependent nature of education and practice is that the educational system provides the health professional learner with knowledge, the knowledge enables the health professional to enact a skill in practice, and in turn the experience and development of the skill in practice can be studied to further inform changes to the education competencies and better prepare health professionals for practice entry.

D'amour and Oandasan (2005) also highlighted that both the educational and professional practice systems function in the context of micro, meso, and macro system factors that influence how they operate. In the professional system, which is the where interprofessional collaborative competencies occur, micro-system factors are interactional processes between health professionals that are facilitated by trusting relationship formation, knowledge and respect of other health professionals' roles, and sharing of patient-oriented goals. There may also be barriers in the micro-system such as interpersonal conflicts or value conflicts. Meso-system factors are at the organizational level where practice occurs. Meso-system factors include organizational culture, power dynamics (ie., between physicians and nurses), leadership influence, or the structures that are in place within the organization to promote collaboration. Barriers in the meso system that may hinder interprofessional collaboration could include staffing limitations, lower levels of staff satisfaction or employee engagement and the resulting turnover, or access to effective health information system and other effective communication technologies. Macro system factors occur at the level of city, county, state and federal systems and are influenced by the health policies in place in those contexts. Macro system factors could include health policies that financially incentivize interprofessional collaboration or outcomes

associated with it. Barriers in the macro system could include limited financial resources for healthcare coverage that inhibits the possibility of interprofessional referral that would be of benefit to the patient.

3.3 IPEC's Conceptual Framework and Interprofessional Collaborative Competencies

IPEC defined interprofessional collaborative competencies as "the integrated enactment of knowledge, skills, and values/attitudes that define working together across the professions, with other health care workers, and with patients, along with families and communities, as appropriate to improve health outcomes in specific care contexts" (American Association of Colleges of Osteopathic Medicine, 2011, p. 2). Barr (1998), as cited by the American Association of Colleges of Osteopathic Medicine (2011), further distinguished three types of competencies relevant to health professionals: common competencies, complementary competencies, and interprofessional collaborative competencies (American Association of Colleges of Osteopathic Medicine, 2011). Common competencies are those that may be within the scope of practice of more than one health professional type. An example would be the skill to perform a head to toe assessment common to a physician, an advanced nurse practitioner, or a registered nurse. Complementary competencies are competencies that are unique to a health professional type, but complement the care of other health professionals. An example is a pharmacist's skill to recognize drug interaction and make a medication change recommendation to a physician. Finally, collaborative competencies are a common set of skills that health and social professionals need to work together with other health professionals across various specialties and settings.

IPEC's conceptual framework identified four interprofessional collaborative practice competency domains, each with a specific competency statement and a defined list of competencies: 1) Values and ethics for interprofessional practice, 2) roles and responsibilities for collaborative practice, 3) interprofessional communication practices, and 4) interprofessional teamwork and team-based practices (American Association of Colleges of Osteopathic Medicine, 2011). The competencies are enveloped in the structural framework initially by patient and family-centered care, and then more broadly by community and population orientation (Figure 3).

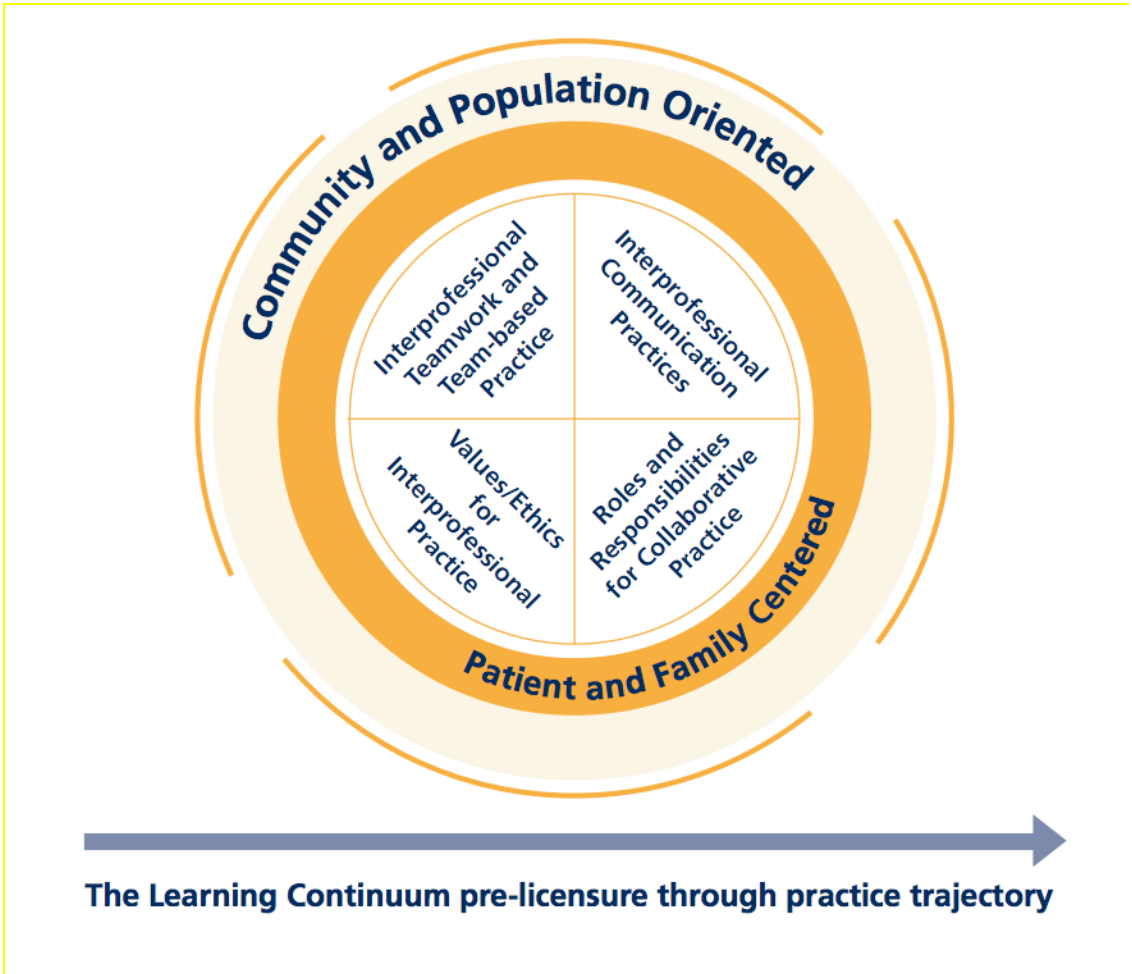

Figure 3. Interprofessional collaborative practice competency domains as designed by the Interprofessional Education Collaborative (American Association of Colleges of Osteopathic Medicine, 2011, p. 15)

Following are detailed definitions and descriptions of each of the four domains, and competencies within each domain.

3.3.1 Values and ethics for interprofessional practice. The competency statement for values and ethics for interprofessional practice was to "work with individuals of other professions to maintain a climate of mutual respect and shared values" (American Association of Colleges of Osteopathic Medicine, 2011, p. 19). IPEC stated that the values and ethics on the interprofessional team should be patient-centered with a community or population orientation. Mutual respect and trust were key concepts that undergird interprofessional relationships. IPEC explained that key values in this domain included: the protection of patient privacy, respect for cultural diversity, respect for the expertise of other health professionals, cooperation (with other health professionals, with patients and family members, and with others who support healthcare delivery), developing trusting relationships (with patients, families, and team members), accountability to high quality care, acting with honesty and integrity, maintaining competence within one's profession, and managing ethical dilemmas specific to interprofessional patient-centered and population-oriented care.

3.3.2 Roles and Responsibilities for Collaborative Practice. The competency statement for roles and responsibilities for collaborative practice was to "use the knowledge of one's own role and those of other professions to appropriately assess and address the healthcare needs of the patients and populations served" (American Association of Colleges of Osteopathic Medicine, 2011, p. 21). IPEC explained that to effect interprofessional collaborative practice, a key concept is that health professionals must recognize the limits of their own expertise and value the contribution of other health professionals. A health professional must understand their own role and operate within legal boundaries of their defined scope of practice. They also must understand

and be able to clearly articulate the roles of others on the healthcare team. IPEC described that collaborative practice necessitates ongoing learning where refinement and improvement of the roles and responsibilities of those on the team occurs over time. IPEC defined aspects of the role and responsibility domain to include: communicating one's role (to team members, patients, families and others), engaging with other health professionals to activate their complementary expertise, understanding the roles of others on the healthcare team, forging interdependent relationships with others on the healthcare team, and utilizing one's own unique and complementary skills to deliver safe, effective and efficient care.

3.3.3 Interprofessional Communication Practices. The competency statement for interprofessional communication practices was to "communicate with patients, families, communities, and other health professionals in a responsive and responsible manner that supports a team approach to the maintenance of health and the treatment of disease" (American Association of Colleges of Osteopathic Medicine, 2011, p. 23). (American Association of Colleges of Osteopathic Medicine, 2011). A key concept that IPEC included in this domain was using a common language and avoiding discipline specific jargon. IPEC also outlined that it is important to effectively use informatics, defined here as the "optimal use of information, often aided by the use of technology, to improve individual health, health care, public health, and biomedical research*"* (Hersh, 2009). Health information is often stored in an electronic health record which may or may not be accessible to all members of the healthcare team, particularly across the inpatient to outpatient continuum. The organization of information within the electronic health record can either facilitate or impair collaboration, depending on its effectiveness. The use of communication technologies was also a key factor in interprofessional communication and may include privacy-compliant secure e-mail or texting, tele-health, or the

use of iPads to collect patient information, etcetera. IPEC described that communication can be impeded by hierarchies that exist among health professionals, or unique cultures or communication practices specific to a particular profession type. These differences can limit sharing of expertise or knowledge that could benefit a patient. Finally, IPEC outlined that learning to give and receive feedback in a respectful manner and resolving conflict in a professional manner are also key competencies. Developing effective communication practices is central to interprofessional collaboration as technological advances and transforms healthcare delivery. It includes communicating in-person, by telephone, within information systems, and while using other emerging secure technologies.

3.3.4. Interprofessional Teamwork and Team-based Practices. The competency statement for interprofessional teamwork and team-based practices was to "apply relationship-building values and the principles of team dynamics to perform effectively in different team roles to plan and deliver patient-/population-centered care that is safe, timely, efficient, effective, and equitable" (American Association of Colleges of Osteopathic Medicine, 2011, p. 25) (American Association of Colleges of Osteopathic Medicine, 2011). Teamwork is enhanced when a shared patient-centered goal is embraced by all team members. Teamwork practices included coordinating one's care with other health professionals to reduce gaps in care, redundancies, and errors. A willingness to forego professional autonomy and power to some degree in order to share in problem solving and decision making promoted teamwork. Effective teams develop a sense of interdependence among team members to meet targeted patient-centered goals. Understanding effective and professional conflict resolution techniques was an important competency as team members share disparate areas of expertise and may assert dominance or power that could impede effective team functioning. Effective leadership within the team

includes working to draw all contributions from all team members and guiding the team to reflect and improve on team dynamics. Quality improvement processes and using evidence-based practices have also been cited as key team-based practices.

3.4 Conceptual Frameworks Use in Data Collection, Data Analysis and Result Interpretation

The three distinctive, non-overlapping conceptual frameworks reviewed in this chapter each provided a unique understanding of interprofessional collaboration that was used in this study for data collection, data analysis, or interpretation of results. The concept analysis of Bookey-Bassett et al. (2017) that described the antecedents, attributes and consequences of interprofessional collaboration in the context of caring for community-dwelling older adults provided an understanding of the temporal nature of the characteristics of interprofessional collaboration. Specifically, the description of organizational culture as an antecedent to interprofessional collaboration was used in the interpretation of the results from this study. D'amour and Oandasan (2005) explored the concept of inter-professionality in practice and education and defined system factors as a micro, meso, and macro system levels. The concept of system factors was used to explore barriers to interprofessional competency enactment (specific aim 3) in the semi-structured interviews and was used in the interpretation of the results. Finally, IPEC's conceptual framework and definitions of core competencies for interprofessional collaborative practice was used in three critical phases of this study: 1) the four domains for core competencies for interprofessional collaborative practice were used to design the semi-structured interview questions for data collection, 2) the 38 defined core competencies for interprofessional collaborative practice were used to develop the initial deductive coding scheme utilized in the first phase of data analysis, 3) the four domains for core competencies for interprofessional

collaborative practice were also used in the inductive phase of data analysis to organize and interpret results.

Chapter 4. Background of the Community-based Care Transitions Program

The Community-based Care Transition Program (CCTP), the study setting, was a federal program that required area hospitals to collaborate with a community-based organization (CBO) in order to receive grant funds administered through the Centers for Medicare and Medicaid Services (CMS) (Centers for Medicare and Medicaid Services, n.d.-b). The CCTP program was limited to Medicare Fee-For-Service (Medicare FFS) insured patients. Medicare is a federally funded health insurance program for U.S. citizens and permanent legal residents 65 years or older. Medicare has 4 parts: 1) Part A is hospital insurance, 2) Part B is medical insurance, and 3) Part C is an option to enroll in a private health plan contracted with Medicare called Medicare Advantage (Centers for Medicare and Medicaid Services, n.d.-c, n.d.-d). Medicare Advantage (Part C), as of 2015, had roughly 500,000 more enrollees than Medicare FFS, and enrollment has been increasing in recent years (Beaton, 2018). Because most of these plans limit the patient's choice of providers, Medicare Advantage beneficiaries have experienced improved care coordination, better health outcomes, and reduced costs of care compared to Medicare FFS beneficiaries. In contrast, Medicare FFS beneficiaries have Medicare Part A and Part B, but do not opt in to Part C. Medicare FFS beneficiaries have no limits on the provider choice, and many seek care from providers across multiple health systems. Medicare FFS beneficiaries have been shown to have higher costs of care resulting from lack of coordination and duplication of services, and were therefore the target of the CCTP program (Beaton, 2018).

CMS initially funded 101 CBO partnerships in June 2013 for 2 years, and extended the grant opportunity to 44 sites for an additional 6 months to 1 year, including the San Diego County CCTP site (Ruiz et al., 2017) . The San Diego County CCTP site implemented combination of three distinct evidence-based interventions that were modified to fit the CCTP

program model. Coleman et al.'s (2006a) Care Transition Intervention (CTI) was implemented using a community-based public health nurse (PHN) versus the advanced practice nurse (APN) in the original studies. CTI is a standardized intervention including hospital and home visitation and follow-up phone calls utilizing a patient empowerment model (Coleman et al., 2006a). The CBO also employed community-based social workers in CCTP that could be referred to a patient by the PHN to address social determinants of health. A hospital-based pharmacy medication reconciliation and teaching intervention was also initiated for CCTP, similar to an evidence-based registered nurse (RN)-pharmacy partnership intervention model (Koehler et al., 2009) Finally, a hospital-based APN was used following Naylor et al.'s (1999) model of comprehensive discharge planning, but with the home follow-up portion completed by the PHN. The APN did engage in home follow-up phone calls in collaboration with the PHN or for patients who were not referred to the CTI intervention. Medicare patients enrolled in the CCTP program at the study site may have received one, two, or all three of the interventions depending on the hospital-based APNs assessment of needs.

The program outcomes of hospital readmissions and costs were evaluated at the San Diego County CCTP site during the course of the program (2013-2015) by Econometrica, Inc., a consulting agency employed by CMS (Ruiz et al., 2017). A cross-sectional regression analysis was completed to examine contemporaneous differences in outcomes between participants and their matched comparisons using a propensity scoring methodology. To assess CCTP impacts, they performed a Difference in Differences analysis (DiD) analysis for all Medicare Fee-For-Service discharges at partner hospitals versus matched comparison hospitals. The targeted outcomes included: 1) Participant readmissions, 2) hospital readmissions, and 3) average net difference in Medicare Part A (hospital insurance) and Part B (medical insurance) expenditures.

At the San Diego County CCTP site, among the 14 hospitals collaborating with the CBO, there was a reduction in participant readmissions versus a matched comparison group by 3.83%, but it was not statistically significant ($p = 0.44$). There was a reduction in hospital readmissions assessed at the individual hospital level by 0.76%, but it was not statistically significant ($p = 0.74$). There was a statistically significant net increase in Medicare Part A and Part B expenditures per discharge of $1,816 ($p < .01$), driven by higher non-inpatient expenditures (Medicare Part B). The site asserted that the increase in non-inpatient expenditures was a result of CCTP high risk patients being underserved prior to CCTP who subsequently increased access to necessary community-based health and social services as a result of the program that included increased home health, primary care, laboratory tests, and prescriptions. Next, Chapter 3 provides operational definitions and descriptions of the constructs involved in interprofessional collaborative competencies as well as a detailed description of Interprofessional Education Collaborative (IPEC's) conceptual framework for core competencies for interprofessional collaborative practice.

Chapter 5. Methodology

5.1 Research Design

This study was a descriptive, qualitative study design utilizing a thematic analysis method following processes outlined by Braun and Clarke (2006). It has been argued that thematic analysis is now widely used and stands on its own as a foundational method for qualitative analysis, similar to other methods like grounded theory, ethnography, or phenomenology (Braun & Clarke, 2006; Nowell, Norris, White, & Moules, 2017). Thematic analysis has been described as a method for identifying, analyzing, organizing, describing and reporting themes found in a data set that can produce trustworthy and insightful findings (Nowell et al., 2017). Thematic analysis was chosen (versus other options such as grounded theory, ethnography, narrative, etc.) because it has been posited that thematic analysis as a method offers theoretical freedom, is a highly flexible approach, and is a useful method in particular for examining the perspectives of different research participants, highlighting similarities and differences, and generating unanticipated insights which is what was needed in this study to capture the health professionals' experience of interprofessional collaborative competencies in practice (Nowell et al., 2017).

5.2 Study Setting

The setting of this study was the San Diego site of the Community-based Care Transition Program (CCTP) as described in Chapter 4. The coordinating agency for the San Diego CCTP site was Aging and Independent Services (AIS), a community-based organization serving older adults in San Diego County (County of San Diego Health and Human Services Agency, n.d.). The health system site that was the focus of this study was an academic health system, operating as one of four area hospital systems in collaboration with AIS.

AIS is part of the County of San Diego Health and Human Services agency, employing more that 750 persons, coordinating volunteer time of more than 2,000 individuals, and operating on a budget of more than $200 million dollars annually. AIS provides a wide range of services in the County of San Diego for older adults including direct services through contracts with vendors and agencies that includes in-home support services, respite care, meals, health promotions, legal assistance, adult day care, transportation, education opportunities, employment, money management, and counseling programs (County of San Diego Health and Human Services Agency, n.d.).

At the time of CCTP, the academic health system was a 595-bed Magnet-designated system with two hospital locations in Southern California. Per the health system's electronic records, during the three-year period (2013-2015) when the CCTP program was in operation, it was estimated that the academic health system admitted approximately 29,000 Medicare Fee for Service (FFS) patients and enrolled approximately 5,800 Medicare FFS patients that were assessed as high risk for readmission into the CCTP program.

5.3 Participants and Recruitment

Targeted research participants in this study were social services and hospital health professionals directly involved with the implementation of the transitional care interventions at the CCTP site. The rationale for this targeted participant selection was that these social services and health professionals had direct experience with interprofessional collaboration on two levels: 1) between community-based health and social services professionals and hospital-based health professionals involved in the transitional care intervention, and 2) between health professionals involved in the transitional care intervention and all other health professionals on the patients care team (physicians, discharge case managers, discharge social workers, physical therapists,

occupational therapists, dieticians, staff registered nurse, primary care physicians, specialists, home health nurses, etc.). They were also identifiable for recruitment as they were specifically employed to implement the CCTP program by either the academic health system or AIS. Other health professionals, particularly at the hospital site, may have cared for some of the patients enrolled in CCTP or interacted with the CCTP program staff, but their involvement was peripheral to the program itself. It would have been difficult to identify them for the purpose of interviews at the time of study recruitment in 2018, three years after the program ended.

Targeted participants included both administrative (director or manager) and clinical staff. Directors were defined as administrative health professionals responsible for the implementation of the CCTP program who had direct reports at the manager level. They also had other areas of clinical responsibility and oversight in addition to CCTP. Managers were defined as administrative health professional responsible for the implementation of the CCTP program who had direct reports at the clinical staff level. Targeted clinical staff participants operated in four professional roles: 1) hospital-based APNs in the role of a Transition Nurse Specialist, 2) hospital-based transition pharmacists, 3) community-based public health nurses (PHNs) in the role of a Transition Coach, and 4) community-based social workers.

Potential participants for the study were initially obtained from administrative leadership in the departments of interest and included health professionals who were actively employed by the organizations of interest. Next, a snowball sampling method was used where research participants who consented to an interview were asked to identify additional potential participants who had been employed in the CCTP program with whom they had ongoing contact (either those who were currently employed in the target organization or who had left for other employment) (Noy, 2008). Participants were asked to seek permission from potential participants

to release their contact information. After contact information was obtained, a recruitment email or phone call occurred. All potential participants who consented to interviews were subsequently interviewed.

5.4 Human Subjects Research Protection

This study was approved as an exempt study by the Human Subjects Research Protection Program (HRPP) at University of California, San Diego. In addition, reliance on the approving HRPP was obtained by the University of California, Irvine. A waiver of documented consent was approved. Text of the initial recruitment email was approved by the HRPP and verbal consent was obtained via phone call and reinforced during the in-person interviews. All interviews were voluntary, no incentive was paid. Participants were informed that they could refuse to answer any question or could cease to participate in the interview at any time.

5.5 Data Collection

Health professional interviews were determined to be the best method of capturing the health professionals' descriptions of interprofessional collaborative competencies in practice as they reflected on their work experience in the Community-based Care Transition Program (CCTP). Interviews occurred from September 2018 through February 2019. The CCTP program was implemented in 2013 through 2015, so interviews 2-3 years after the program end date. For that reason, the targeted participants were health professionals directly involved with the CCTP program implementation that could be identified for recruitment by administrators 2-3 years after the CCTP end date. While there were other health professionals who interacted with CCTP staff during the program implementation (i.e., physicians, case managers, hospital-based social workers, dieticians, and others), they could not be identified for interviews after the closure of the program. Also, the study focus was on the experience of health professionals

involved in interprofessional collaboration, so information on patients in the CCTP program was not sought and patients were not targeted for interviews.

All interviews were audio-recorded using a hand-held device, and subsequently downloaded to Trint, an on-line, secure, transcription software program (Trint, n.d.). All interviews were conducted in-person by the principal investigator. A short demographic questionnaire was administered at the start of the interview that included: 1) participants role(s) in the CCTP program, 2) years of professional experience, 3) professional degrees, and 4) gender. Following, a semi-structured interview script was utilized, with additional follow-up questions developing during the course of the interview. The interview questions were designed to elicit participant descriptions of experiences that were relevant to interprofessional collaborative competency enactment in practice, including descriptions of the participants role and responsibilities, descriptions of training that was received, and descriptions of the processes used for patient recruitment. The four domains in the Interprofessional Education Collaborative's (IPEC) conceptual framework for core competencies for interprofessional collaborative practice were used as a construct to elicit intuitive descriptions from research participants as they reflected on their experiences within each domain. Interviews were semi-structured, with follow-up questions asked to further explain more details about their experience, or to reflect on barriers or challenges to competency enactment in each domain that they experienced. Administrative staff were asked an additional question about recruitment, hiring and staffing to elicit descriptions of competencies that were sought in interviews for hiring health professionals into the program. Finally, research participants were asked to explain their thoughts about lack of sustainability of the program in order to elicit possible descriptions of

barriers or challenges to program continuation that could be related to barriers to collaborative competency enactment. The semi-structured interview script is shown below in Table 2.

Table 2.

Semi-Structured Interview Questions.

Level of Health Professional	Interview Question
D, M, S	1. Please describe your what you did in the CCTP program. How did this change over time, if it did?
D, M	2. Please describe your experience with recruitment, hiring and staffing for the CCTP program.
D, M, S	3. Please describe training for the CCTP program.
D, M, S	4. Please describe patient enrollment in the CCTP program.
D, M, S	5. There are 4 domains of competencies that have been identified for inter-professional practice (show participant the list below): a. Inter-professional Teamwork and Team-based practices b. Inter-professional Communication practices c. Values and Ethics for Inter-professional practice d. Roles and responsibilities for collaborative practice Please describe the ways in which some (or all) of these domains were relevant to your experience in the CCTP program. Were there any skills not described here that you feel were relevant?
D, M, S	6. Please describe any barriers or challenges experienced in enacting the interprofessional collaborative competencies in practice?
D, M, S	7. The CCTP program was not sustained. Please share your thoughts about the sustainability of the program.

Notes. D = Director-level; M = Manager-level; S = Staff-level.

5.6 Data Analysis

Audio recordings were initially transcribed using the Trint transcription software, then subsequently listened to and edited for accuracy by the principal investigator (Trint, n.d.). In addition, after interviews were completed, themes, ideas or concepts were written down by the principal investigator and added to throughout each initial interview transcription.

5.6.1 Data analysis method description. This study used a hybrid deductive and inductive thematic analysis approach, similar to that described by Fereday and Muir-Cochrane (2006), where the a priori construct of the IPEC's conceptual framework for core interprofessional collaborative competencies was used to frame interview questions and develop a priori codes used in the analysis. This deductive process was followed by an inductive process of revising the initial codes, creating new codes, and organizing codes into meaningful themes using a constant comparison process (Braun & Clarke, 2006; Fereday & Muir-Cochrane, 2006). A theme was defined as something important about the data that speaks to or expands upon the concept of interprofessional collaborative competencies (Braun & Clarke, 2006).

Initial deductive codes that were developed by the principal investigator from the text of the IPEC framework for interprofessional competencies, and then validated by a second co-researcher (American Association of Colleges of Osteopathic Medicine, 2011). The initial coding scheme is included in Table 3.

Table 3.

Interprofessional Collaborative Competency Domains and Coding Scheme

Domain Title	Values and Ethics for Interprofessional Practice	Roles and Responsibilities for Collaborative Practice	Interprofessional Communication Practices	Interprofessional Teamwork and Team-based Practices
Competency codes	VE1a: Patient-centered care VE1b. Population orientation VE2a. Patient Dignity VE2b. Patient Confidentiality VE3a. Cultural diversity. VE3b. Respect for individual differences VE4. Respect for other health professions VE5. Cooperation VE6. Trust VE7a. Demonstrate ethical conduct VE7b. Perform at a high level of quality VE8. Manage ethical dilemmas VE9. Act with integrity and honesty VE10. Maintain competence	RR1. Communicate one's role and responsibilities RR2. Recognize one's limitations RR3. Engage others' expertise RR4. Explain the role of other providers and how the team works together RR5. Use full scope of knowledge of all team members RR6. Clarify each team members responsibilities RR7. Forge interdependent relationships RR8. Engage in continuous professional and interprofessional development RR9. Use the unique and complementary abilities of all members of the team.	CC1a. Choose effective information systems CC1b. Choose effective communication technologies CC2. Communicate information in an understandable form (avoid discipline-specific terminology. CC3a. Express one's knowledge and opinion with confidence, clarity and respect. CC3b. Work to ensure a common understanding of information, treatment, and care decisions. CC4a. Listen actively CC4b. Encourage ideas and opinions of other team members. CC5a. Give feedback that is timely, sensitive and respectful. CC5b. Receive feedback respectfully from others. CC6. Use respectful language CC7. Recognize one's own uniqueness in the interprofessional relationship including hierarchy, power, culture, and level of experience. CC8. Communicate consistently the importance of teamwork.	TT1a. Understand team development TT1b. Understand roles/practices of effective teams. TT2. Develop consensus on the ethical principles to guide care and teamwork. TT3. Engage other health professional in patient-centered problem solving. TT4. Integrate the knowledge and experience of health professionals to inform care decisions. TT5. Apply leadership practices that support collaborative and effective teams. TT6. Engage self and others to constructively management disagreements among team members or with patients and families. TT7. Share accountability with other professions for care outcomes. TT8. Reflect on individual and team performance to improve care. TT9. Use process improvement strategies to increase the effectiveness of care. TT10. Use available evidence to inform effective teamwork. TT11. Perform effectively within the team.

Notes. VE = Values and Ethic,; RR = Roles and Responsibilities, CC = Interprofessional Communication Practices, TT = Teamwork and Team-based Practices.

Dedoose, a web-based software used for qualitative analysis and mixed methods research, was utilized to store codes linked to transcript text identified by participant type, to organize codes into themes, and to create an audit trail of the analysis process (dedoose, n.d.).

The thematic analysis then followed the six-step process outlined by Braun and Clarke (2006) including: 1) transcribing the data, reading transcripts and noting initial ideas, 2) coding transcripts initially using a priori constructs, and then using codes emerging de novo from the data, 3) collating codes into potential themes both within and across competency domains, 4) reviewing themes relevance to coded extracts and then to the entire data set, 5) generating names and clear definitions for each theme, and 6) producing a report of the analysis. Transcripts were analyzed using a constant comparison approach returning to previously coded transcripts to ensure consistency and reviewing co-occurrences of codes within and across competency domains to capture collaborative care processes that may encompass competencies in more than one domain. A second researcher reviewed all transcripts and collaborated on codes and themes as they emerged. A third researcher with expertise in qualitative analysis collaborated as a consultant and reviewed themes as they were developed during the analysis process.

5.6.2 Trustworthiness. Trustworthiness criteria is met in thematic analysis by establishing confirmability, credibility, transferability, and dependability (Nowell et al., 2017). Confirmability relates to establishing that the researcher's interpretations and findings are cleared derived from the data and requires that the researcher demonstrate how conclusion were reached (Nowell et al., 2017) Confirmability is attained by establishing credibility , transferability and dependability. Following is a description of how these three criteria were met in this study throughout the analysis process.

5.6.2.1 Credibility. Lincoln and Guba (1985), as cited by Nowell et al. (2017), claim that "credibility of a study is determined when coresearchers and readers are confronted with the experience, they can recognize it". Credibility was established in this study in two ways: 1) researcher triangulation, and 2) data triangulation across the 3 levels of research participants (director, manager and staff) and between research participant health professional types. Three researchers collaborated, as described, on the code and theme development to establish researcher triangulation. In addition, themes were reflected by more than one staff level (director, manager, or staff) and by more than one health professional type to establish data triangulation. The one exception to a theme that was not reflected across more than one staff level is a barrier theme related to staff turnover that was only described at the director level, but this theme was supported as a valid theme by co-researchers. It may be that the impact of staff turnover is more readily observed and experienced at the director level.

5.6.2.2 Transferability. Tobin and Begley (2004), as cited by Nowell et al. (2017), describes transferability in qualitative research as the transfer of findings from one site to another. While the researcher cannot know which sites might wish to transfer findings, the researcher is responsible for providing a thick description of the findings so that other researchers could judge transferability for themselves (Nowell et al., 2017). Rich descriptions both in table format and in text are provided in the results section of this study that meets the transferability criteria.

5.6.2.3 Dependability. Tobin and Begley (2004), as cited by Nowell et al. (2017), explain that to establish dependability, researchers must ensure that the research process is logical, traceable, and clearly documented. In this study, notes were kept by the primary investigator as themes emerged at the in-person interview stage, and at the transcription and text review stage.

In addition, as analysis occurred, coding changes were tracked in notes as initial codes were revised, as codes were moved into themes with other codes either within or across competency domains, and as codes were merged, parented or reparented with one or more or codes or themes. Themes containing coding extracts were maintained with the Dedoose software also creating an additional audit trail of the analysis process. Through research notes and through the Dedoose software, dependability was established in this study. Chapter 6 follows and includes detailed descriptions of the research participants and of the results found for each of the three specific aims of the study.

Chapter 6. Results

6.1 Research Participants

6.1.1 Research participant descriptions. Twelve research participants were recruited for this study and consented to participate. Table 4 shows a description of the research participants. The three targeted levels of health professionals (director, manager, and clinical staff) were reflected in participants in both the hospital-based and community-based portion of the Community-based Care Transitions Program (CCTP). The hospital-based health professionals included APNs and pharmacy, and the community-based portion of the program included the PHN transition coaches. Social workers working in the community-based program were recruited, but none consented to participate.

Table 4.

Description of Participating Health Professionals

CCTP role	Health Professional Types	Organization Types	Average Years of Professional Experience	Degrees	Gender	# of staff in target roles
Directors	Nurse, Pharmacist, Public Health Administrator	Hospital (2) and CBO (1)	28	DNP, PharmD, MPA	66.7% Male; 33.7% Female	3
Managers	Nurse, Pharmacist, Public Health Administrator	Hospital (2) and CBO (1)	19	Master's CNS, PharmD, BS Human Development	100% Female	3
PHN Transition Coach	Nurse	CBO	19	BS Nursing (2) and MSN Leadership	33% Male; 66% Female	3*
Transition Nurse Specialist	Nurse	Hospital	27	MSN: CNS, CNE, Leadership	100% Female	3*
Transition Pharmacist	Pharmacist	Hospital	4	PharmD	100% Female	2*
				Total		14

Notes. APN = Advanced Practice Nurse; BS = Bachelor's of Science; CBO = Community-Based Organization; DNP = Doctorate in Nursing Practice; MPA = Master's in Public Administration; MSN = Master's of Science in Nursing; PharmD = Doctor of Pharmacy PHN = Public Health Nurse; RN = registered nurse;; * = health professionals were counted in these categories 2 times if they served in dual roles.

At least two clinical staff were interviewed for each represented health professional type (hospital pharmacist, hospital Transition Nurse Specialist, community PHN Transition Coach). Two individuals fulfilled dual roles during the course of the program: 1) one served as the transition pharmacy program manager and, clinically as a transition pharmacist and, 2) another served as a community-based PHN Transition Coach, and as a hospital-based Transition Nurse Specialist.

APNs serving in the role of hospital Transition Nurse Specialist had varied educational backgrounds but were all master's prepared. All of the community PHN Transition Coaches had

bachelor's degrees. Nine of 12 interviewees were female. Director-level staff had the most years of professional experience (28), but that was followed closely by the hospital Transition Nurse Specialists (27 years). The advanced clinical experience level of the Transition Nurse Specialists was interesting, indicating they were likely expert-level advanced nurse clinicians, well-prepared for their newly developed role as the Transition Nurse Specialist, and possibly very experienced with interprofessional collaboration throughout their career development.

6.1.2. Saturation. Saturation was reached as the coding scheme remained unchanged after the 7th interview and remained consistent across the 12 interviews, with no new themes emerging. Data from the final 5 interviews was used to add depth, detail, and clarity to the theme descriptions. In addition, no new domains emerged from the entirely of the data set that were not in the deductive coding scheme based on the conceptual framework that was constructed a priori to the interviews.

Final themes overall were broadly reflected by all levels of staff (director, manager, staff) with four exceptions: 1) co-opetition or forced cooperation that was only described at the director and manager level; 2) the barrier of staff turnover was only described at the director level; 3) the barrier of resource limitation was only described at the manager and staff level; and 4) the barrier of role conflict was only described at the manager and staff level.

6.2 Interprofessional Collaborative Competencies Evidenced in Practice (Specific Aims 1)

Following is a description within each domain of interprofessional collaborative competencies as evidenced in practice (**specific aim 1**). Next, the descriptions in practice of interprofessional collaborative competencies are compared and contrasted to the conceptual model as developed by IPEC (**specific aim 2**). Finally, descriptions of the barriers described to interprofessional competency enactment are presented (**specific aim 3**).

The four domains identified in the conceptual model for interprofessional collaborative competencies developed by the IPEC were validated by descriptions in practice in the CCTP program including: 1) values and ethics for interprofessional practice, 2) roles and responsibilities for collaborative practice, 3) interprofessional communication practices and 4) interprofessional teamwork and team-based practices. There was no data that could not be coded to one of the four IPEC domains.

As discussed in the methods chapter, this study used a hybrid deductive and inductive thematic analysis approach (Braun & Clarke, 2006; Fereday & Muir-Cochrane, 2006). A priori codes were developed deductively from the four domains in the IPEC conceptual model of interprofessional collaborative competencies (Fereday & Muir-Cochrane, 2006). Then the deductive process was followed by an inductive process of revising the initial codes, creating new codes, and organizing codes into meaningful themes using a constant comparison process (Braun & Clarke, 2006). The definition of a theme was defined as something important about the data that speaks to or expands upon the concept of interprofessional collaborative competencies (Braun & Clarke, 2006). In the process of thematic analysis particular attention was paid to codes that were cross-coded in the same sections or in multiple sections of data. In these instances, bundles of competencies were combined, and a collaborative care process was defined that best described the entire bundle of competencies. Once the collaborative care processes were defined, the initial deductive codes that were related to it were reparented under that process. Where applicable de novo codes were added that fit within the collaborative care process description. Following are detailed descriptions of these collaborative care processes.

6.2.1 Values and ethics competencies evident in practice. The IPEC definition of values and ethics for interprofessional practice adequately described this domain as evidenced in

practice, “Work with individuals of other professions to maintain a climate of mutual respect and shared values.” (American Association of Colleges of Osteopathic Medicine, 2011). There were no de novo competencies identified in the value and ethics domain; however, the descriptions of several shared values or ethical issues were modified to better reflect the competency as described in practice. In addition, the shared value of trust was originally placed in the values and ethics domain in the IPEC conceptual framework, however, the descriptions of trust that emerged from the data defined trust development more in terms of an intentional process that was engaged in by the health professionals on the team. The theme of trust, therefore, was moved into the team-work and team-based practices domain to better match the domain to the emerging description of the trust competency.

6.2.1.1 Person-centered orientation. CCTP health professionals at all levels and types described being committed to a person-centered orientation, or seeing beyond the patient’s clinical condition to their uniqueness as a human being, and then ensuring their needs were met holistically:

> I think mining the human side of the care we provide, bringing in that humanistic lens…I think it’s those moments of getting people to slow down to remember that the person in front of them is something more than a heart…all of the work done around understanding transitions of care forced us to look at people a little bit more patient centered. (Manager, Hospital CCTP)

Staff discussed experiencing a shared sense that all members of the team were committed to patient safety, doing the right thing, and ensuring that every enrolled patient had their needs met:

> I think overarching it was really grounded in what was right for this patient population…making sure that the services that the patient deserved were actually received. (Director, Community CCTP)

Clinical staff described taking the time required to help the patient understand their clinical condition, using language that was at their level, relating clinical education to something the

patient had experience with i.e. describing the heart as a pump to a mechanic. Person-centeredness involved recognizing patient dignity, appreciating individual and cultural differences, valuing how this person wanted to be treated, partnering with families, honoring confidentiality, and creating commonality by sharing personal details about oneself that were in-common with the patient (i.e., both born in the same state, both like dogs, etc.).

6.2.1.2 Forced cooperation or co-opetition. It was described by administrative staff that the policy structure of the CCTP program as mandated by CMS required that a CBO be the administrator of the grant funds to other participating health organizations. This structure created a dynamic where hospital systems that agreed to collaborate with the CBO to receive grant funds, also had to cooperate with their market competitors. It was described that the status quo of a local, highly competitive, healthcare marketplace had to be overcome in order for cooperation to emerge as a shared value:

Information had to be shared in order to avoid duplication of services that could result in a lack of reimbursement. It also benefited the health systems to share best practices with one another as their programs evolved. This dynamic resulted in a forced cooperation, or "co-opetition" where competitors reluctantly, but inevitably, were transformed into collaborators:

> …providing a platform where you could move from competition to co-opetition. Moving into that mindset was a huge thing…I think the County by leveraging their platform and including a safe place where all the facilities could share information, we impacted the whole of the county from a readmission perspective and improving the health of this population. (Director, Hospital CCTP)

Of interest, the nascent form of population health that emerged was described primarily at the director and manager level, but was rarely described at the staff level. There was one clinical staff member (hospital-based Transition Nurse Specialist) who thoughtfully reflected on

population health and potential interventions that might be explored for disease prevention among older adults, such as pro-active screening for urinary tract infections.

After the initial competitive stance was overcome, true cooperation and collaboration were described as emerging and then continuing to persist even after program completion:

> And that is really what made the San Diego CCTP absolutely unique in this country because it was the only CCTP program that first brought all 16 hospitals together. That was number one. But number two we really agreed upon shared interventions and collaboration to a degree that nobody else in this country had achieved. And so, I think what we saw again then was not only was there acceptance across all four health systems and an abandonment of that sort of competition, but we saw leads in those teams actually become very close and work together. (Director, Community CCTP)

CCTP administrative health professionals explained that after CCTP grant funding ended, the Medicare reimbursement penalties that were in place to exert economic pressure for health systems to reduce readmissions were perceived as not significant enough for the health systems to see funding an ongoing CCTP program at the organizational level as a financially viable option. One CCTP program administrator described that ending the CCTP program was a missed opportunity to take the nascent form of population health that emerged and nurture its development further:

> I think we participated in CCTP as a way to leverage some of our other metrics that the state and federal government were holding us accountable for, which was primarily a readmission rate. And I think we as an organization viewed this very narrowly…versus viewing this as a stepping stone and a bridge to actually transform our organization, of recalibrating all of our resources to actually move into population health. (Director, Hospital CCTP).

Several CCTP health professional staff expressed regret that it was not possible to make a financial case to fund the program organizationally after the federal CCTP grant funds ceased, and they wished that the program had continued.

6.2.1.3 Emerging mutual respect. Mutual respect was described as developing over time as health professionals gained first-hand experience of the value of other team members'

expertise. A shared understanding of the patient occurred as medical and social services perspectives were merged through "Ah-hah" moments:

> I think that having a different lens, and this is maybe me being even more subjective, but I can think of a few cases where the TNS (transition nurse specialist) interjected some pearls of wisdom around a social determinant that was impacting and I can think of three distinct times the physician had to almost step back and say, 'Hey, wow! I didn't really think of it that way. (Manager, Hospital CCTP)

CCTP program health professionals described that hospital-based physicians rarely sought out the perspective of community-based professionals, even when their clinical notes were accessible to them in the hospital electronic health record. Information regarding the social determinants that impacted the patient's ability to be compliant with medical regimens had to proactively be brought to the physicians' attention. However, breakthrough moments of coming to a shared understanding of the patient were described:

> When I think of values and ethics…it's like this one doctor was so critical of a patient who...was a pre-existing meth user. But he was swearing he was not a substance user at that point in time and really no one believed him. The physician didn't. And then we had the nurse go out and do the home visit, and really I always remember this. He was eating tuna and that was high in salt, so he had heart problems because of his fluid overload. And he was living out of his car. But he didn't tell anyone that. And I think when we brought that back to the physician it changed the whole lens of how he saw the care that he was going to provide to this patient. (Manager, Hospital CCTP)

Mutual respect between medical and social services systems was also seen as an antecedent to being able to achieve the transparency and sharing of information across systems that would be required to achieve true population health:

> I don't think we are ever going to have… a person-centered care system with complete transparency and coordination across all of these different organizations. That we understand that we have an individual that's at the center of care and that individual is both a patient within the health care system and a client in our social services system. And if we are going to address the highest drivers of health care cost and outcomes which are the social determinants of health, we've got to do a good job of communication and coordination across and respect. Respect for those systems of care. (Director, Community CCTP)

It emerged as a key point that population health approaches should intentionally include both health systems and community-based social service systems that together can address medical needs as well as the social determinants of health.

6.2.1.4 Shared commitment to quality. A commitment to quality was described as an important value commonly held among most team members leading to a strong sense of job fulfillment.

> I think we were all kind of in lock and step. Most of the nurses that I interacted with wanted to do what's right for the patient, and when you find out how messed up things can be! I think everybody cared about patients. And so that was nice. It wasn't just a job. They were invested. (Manager, Hospital Transitions Pharmacy)

All of the CCTP health professionals interviewed expressed regret that the CCTP program ended. Participation in the program provided a high level of job satisfaction. CCTP health professionals expressed pride in the high quality of work that they and their interprofessional team members were committed to and delivered. They felt good about securing high quality medical care and social services as a team on behalf of vulnerable older adult patients with multiple, complex clinical conditions that often were combined with social determinant needs.

At times, the commitment to quality was described as unequal between health professional colleagues. When this occurred, conflict arose, and frustration was expressed. Oftentimes this was described as a personal commitment to a holistic perspective of caregiving, compared to other colleagues that were seen as task-oriented and who felt obligated to check off a job responsibility without the end result in mind. Differing levels of commitment to quality was described in terms of failing to meet one's expectations for honesty and integrity in one's work:

> I think in the end because a lot of the nurses rather than making a home visit since they were given the option, opted out for the telephone call. And the telephone calls were more of a 'ha-ha, hoo-hoo' call. Like it's fun. You are not their friend at that time. You

> are a professional calling a patient. And this needs to be taken seriously. Just pretend that this life is dependent on you. And you need to go over each medication... (Staff, Community PHN Transition Coach)

One strategy that was sometimes described to address a perceived unequal commitment to high quality care was peer review, a competency that is described under the Interprofessional Communication Practices domain.

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6.2.1.5 Coping with ethical angst. The most prominent theme in the ethics domain that emerged from the data from multiple CCTP health professionals was the inability to compensate for limitations in the health and social safety nets for all patients creating a sense of ethical angst. CCTP health professionals described using all resources at their and their interprofessional colleagues' disposal, but still failing at times. Ethical angst is defined here as a feeling of powerlessness expressed by a health professional who are working within a health or social services system that they do not perceive as ethical in its underlying structure.

Health professionals described one way that they coped with system limitations was by enrolling patients who were not eligible for the program (i.e. not Medicare fee-for-service insured), but who both the health system and the social services agency agreed would benefit from program services. In these cases, it was mutually decided that services would be provided without reimbursement. Health professionals also described successfully meeting the needs of patients in the short-term, but feeling uneasy that the solutions they put in place would be adequate in the long-term.

> I wanted more long-term solutions put in place than what sometimes happened. But I don't know if that was a poor expectation on my part, or if it was really something that fell through. To me, that is how the program would work. It's all great to be in the short game, that they got repatriated to primary care and somebody that is going to care and keep following them for the long term. Or that they get the services for food securement. That is great you gave them things now. But what's the plan for two months from now, and three months from now, and four months? (Staff, Hospital Transition Nurse Specialist)

The feeling of ethical angst also surfaced when health professionals experienced a lack of sufficient resources (adequate staffing) in the transitional care program itself. They described feeling that it was not right when they had to cut corners or decrease the type or quality of services they were asked to deliver in order to meet patient case load expectations. A similar ethical dilemma surfaced when PHNs were assigned to patients discharged to nursing homes or with clinical conditions that had a predictable and unavoidable deterioration that would cause a readmission (i.e. cancer or end stage renal failure), where they felt that the intervention that was designed could not adequately address the needs of the patient or prevent a hospital readmission.

While ethical angst over health and social system inadequacies was the predominant theme, two other ethical issues surfaced among the older adult patients. Among older adult patients with cancer diagnoses, ethical challenges emerged around the timeliness of goals of care or end-of-life conversations, and clear and direct communication around disease trajectory and prognosis were sometimes lacking. One CCTP health professional expressed the perception that at times futile treatments were being delivered that all members of the healthcare team did not agree were beneficial. In addition, capacity determination at times could be clouded as older adults may be facing early dementia or acute delirium, and it could be difficult to determine when they were no longer capable of making clear decisions about their care and treatment.

6.2.1.6 Summary of shared values and ethical issues in the values and ethics for interprofessional practice domain. Table 5 shows a summary of the interprofessional collaborative competencies in the values and ethics for interprofessional practice domain as described by health professionals in the CCTP program.

Table 5.

Presents Shared Values, Ethical Issues, and Descriptions with Quotes related to the Domain of Values and Ethics for Interprofessional Practice

The Domain of Values and Ethics for Interprofessional Practice		
Shared Values and Ethical Issues	**Description**	**Quote**
Person-Centered Orientation (D, M, S)	A person-centered orientation was a shared value that transcended health professional type or organizational affiliation.	"I think mining the human side of the care we provide, bringing in that humanistic lens…I think it's those moments of getting people to slow down to remember that the person in front of them is something more than a heart…all of the work done around understanding transitions of care forced us to look at people a little bit more patient centered."(M, hospital CCTP Program)
Forced Cooperation or "Co-opetition" (D, M)	A forced cooperation emerged and slowly transformed into genuine collaboration that included a nascent approach to population health.	"…providing a platform where you could move from competition to co-opetition. Moving into that mindset was a huge thing…I think the county by leveraging their platform and including a safe place where all the facilities could share information, we impacted the whole of the county from a readmission perspective and improving the health of this population." (D, hospital CCTP Program)
Emerging mutual respect (D, M, S)	Mutual respect developed over time as health professionals experienced the value of other team members' expertise.	"I think that having a different lens … I can think of a few cases where the TNS interjected some pearls of wisdom around a social determinant that was impacting and I can think of three distinct times the physician had to almost step back and say, 'Hey, wow! I didn't really think of it that way." (M, hospital CCTP program)
Shared commitment to quality (D, M, S)	A shared commitment to quality was an important value leading to a high level of job fulfillment.	"I think we were all kind of in lock and step. Most of the nurses that I interacted with wanted to do what's right for the patient, and when you find out how messed up things can be. I think everybody cared about patients. And so that was nice. It wasn't just a job. They were invested." (M, pharmacy)
Coping with ethical angst (M, S)	Health professionals described needing to cope with ethical angst when they were unable to compensate for limitations in the medical and social safety net.	"I wanted more long term solutions put in place than what sometimes happened. But I don't know if that was a poor expectation on my part… It's all great to be in the short game, that they got repatriated to primary care and somebody that is going to care and keep following them for the long term. Or that they get the services for food securement. That is great you gave them things now. But what's the plan for two months from now, and three months from now, and four months? "(S, Transition Nurse Specialist)

Notes. D = Director, M = Manager, S = Staff (level of professional that expressed theme)

6.2.2 Roles and responsibilities competencies evident in practice. The IPEC definition of roles and responsibilities for collaborative practice adequately described this domain as evidenced in practice: **"**Use the knowledge of one's own role and those of other professions to appropriately assess and address the healthcare needs of the patients and populations served" (American Association of Colleges of Osteopathic Medicine, 2011). A de novo collaborative care process emerged in the roles and responsibilities domain that was "role clarity and responsibility flexibility" and two a priori codes were reparented under it including: 1) communicate one's roles and responsibilities, and 2) explain the role of other providers and how the team works together.

6.2.2.1 Forge Interdependent relationships. The ability to forge interdependent relationships where staff learned to rely on other health professionals to deliver coordinated care was an overarching collaborative care process that encompassed other related competencies. This collaborative care process was expressed by managers, directors and staff among all health professional types in both the hospital and the community setting. CCTP health professionals learned to rely on each other's expertise:

> I think the key component that made CCTP work so well was that it was a very team-based approach. It was multi-disciplinary in terms of we were the pharmacist. I would get in contact with the team and they would appreciate all of the recommendations I had pertaining to the med histories. And also, I would still work very closely with the nurse (*Transition Nurse Specialist*) that actually referred me in terms of any communication that needs to be followed up on…. I think the success for the program is a very team-based approach. I can attest to that (Staff, Hospital Transitions Pharmacist)

The ability to forge relationships was seen as a skill set that was intentionally sought out:

> I think we were careful to choose people that were relational. That said, not always did we win at that…but I think that relationship building is huge. (Manager, Hospital CCTP).

An interdependent relationship was described between the community-based health professional team (nurse and social worker) and the hospital-based health professional team:

> …Or if AIS (*Aging and Independent Services*) went out there and found a problem and you needed to do some of the legwork or the follow-up. If it was something related to your physicians, or an order or something, or a follow up where I had better knowledge then they did, we could work as a team. They were the eyes in the home, and we could do the follow up. (Staff, Hospital Transition Nurse Specialist)

The community-based transition nurse coaches learned to rely on the social workers and vice versa:

> It was actually working with the social workers, working with them, was amazing! I learned a lot. Like what kinds of things they can do. We were able to help a lot of patients. Some of them were not able to pay. I saw social workers work miracles. (Staff, Community PHN Transition Coach)

Other competencies were contained within this competency that included understanding and engaging the expertise of others and understanding how your limitations could be supported by the skills of other health professionals.

6.2.2.2 Role clarity and responsibility flexibility. Clarification of each team members role was described by CCTP health professionals as a process of team development that occurred over time:

> In the initial year as we were building out the program, there was a significant amount of time spent defining roles and responsibilities. Each organization had clear definitions of roles and responsibilities within their own organization. And then we also, for those interventions that needed to be across the whole program, we clarified and came to common definitions for those roles and responsibilities. (Director, Hospital CCTP).

Refining and standardizing patient assessments and work processes grounded in the research evidence was part of the process:

> Well first of all I think it was very helpful the fact that we had an evidence-based practice with very specific tools and requirements for adherence to the Coleman Model. (Director, Community CCTP).

As roles were clarified, it was described that a key competency was the ability to check one's span of control and allow for flexibility in responsibilities. A key aspect of teamwork was allowing for a team member to proactively step in and meet a patient's need as it was encountered versus holding to a strict list of responsibilities. In practice a given responsibility could be within the scope of practice of more than one health professional. Working to one's highest scope of practice meant understanding the roles of all team members, but allowing for responsibilities between health professionals to overlap (i.e. the physicians' and pharmacists' role in medication management, the transition nurse specialists' and the nurse case managers' role in discharge preparation and planning, or the community-based transition nurse coaches' and the social workers' role in ensuring medication access and patient knowledge):

> I would say there was a lot of conversation about swim lanes. That was usually about the fact that there wasn't good clarity always. Or wanting to make sure that we had it. Everyone wanted their swim lane. And the reality was that some of this is gray. We needed to be acting like a team. (Staff, Hospital Transition Nurse Specialist)

The process required staff mentoring and education as social services based health professionals learned to understand medical complexity, and medical- based health professionals learned to understand social determinants of health:

> In an earlier case the public health nurse called me, and she said, 'I'm in the kitchen, all the dishes are broke and she's down and I don't know what to do.' And it was just so interesting because it's like 'Get on the phone and dial 9-1-1'. That was an amazing wake-up. Like oh my goodness, we were not only training the TNS (*transition nurse specialist*) team, we were training public health nurses and social workers to work in the complex population that were fresh from a discharge. (Manager, Hospital CCTP)

The process also included understanding one's own role and how it was different (and not duplicative) of other team members:

> I think sometimes some of the issues we had was trying to sell them (*patients*) on the experience. I guess because oftentimes you see patients…you know who are in the hospital. You have a case manager, three nurses, you have CNAs (*certified nursing aides*), three doctors maybe. There are tons of different people. You can imagine me

> going in there and saying 'Hi, I'm your public health nurse.' (*Patient*): 'What are you?' It was trying sell them on how this is beneficial. (Staff, Community PHN Transition Coach)

It required one to be able to explain to patients, families and team members how one's role fit in with and complemented other health professional roles with which they were more familiar. Teaching other team members about one's own scope of practice was also key to encouraging them to utilize the entirety of one's skill set to optimize patient care delivery:

> The need for cross discipline communication, the education to the disciplines about what each role can bring. And educating them as to their expertise, always provided a level of respect. For instance, our medical providers, they know what a social worker is, but what they don't get…they don't understand that they are trained to provide therapy. LCSWs (*licensed clinical social workers*) are trained to provide therapy. They can absolutely do that. They can absolutely do a capacity declaration. They can absolutely do certain things within their license…And so providing that level of education helps them utilize them as though this is another resource I have. (Manager, Community CCTP).

Enabling all team members to work at their highest scope of practice was reflected in several CCTP health professionals' descriptions of their roles and the roles of other health professionals on their team.

6.2.2.3 Professional and interprofessional development. Staff at all levels described engaging in continuous professional and interprofessional development. Professional development was described as occurring both in the practice setting, across health systems, and within the professional community:

> It was a lot of group learning because this was a new role here at (*name of academic health system*) and so we did a lot of case scenarios…We sent nurses to local conferences…And so it was really modeled off of the professional practice of peer review and that is how they really got to the expertise. (Director, Hospital CCTP)

Staff described sharing their experiences at local professional meetings (such as the San Diego Society of Health System pharmacists), at professional conferences (American Case

Management Association, Association for Clinical Nurse Specialists), and sharing across other ancillary departments within San Diego Health and Human Services.

6.2.2.4 ***Summary of collaborative care processes in the roles and responsibilities for collaborative practice domain.*** Table 6 shows a summary of interprofessional collaborative competencies in the roles and responsibilities for collaborative practice domain as described by health professionals in the CCTP program.

Table 6.

Presents Collaborative Care Processes and Descriptions with Quotes related to the Domain of Roles and Responsibilities for Collaborative Practice

The Domain of Roles and Responsibilities for Collaborative Practice		
Collaborative Care Processes	**Description**	**Quote(s)**
Interdependent relationships (D, M, S)	Interdependent relationships were forged with team members as they learned to rely on one another to deliver coordinated care.	"I think the key component that made CCTP work so well was that it was a very team-based approach. It was multi-disciplinary in terms of we were the pharmacist. I would get in contact with the team and they would appreciate all of the recommendations I had pertaining to the med histories. And also, I would still work very closely with the nurse (*Transition Nurse Specialist*) that actually referred me in terms of any communication that needs to be followed up on…. I think the success for the program is a very team-based approach (S, Hospital Pharmacist)
Role clarity and responsibility flexibility (D, M, S)	Clarifying one's role and the role of others was important, but interprofessional collaboration required flexibility in responsibilities.	"I would say there was a lot of conversation about swim lanes. That was usually about the fact that there wasn't good clarity always. Or wanting to make sure that we had it. Everyone wanted their swim lane. And the reality was that some of this is gray. We needed to be acting like a team." (S, Transition Nurse Specialist).
Professional and interprofessional development (D, M, S)	To participate in professional and interprofessional development within and across professions and within and across health care and social services systems.	"It was a lot of group learning because this was a new role here at (*academic health system name)* and so we did a lot of case scenarios…We sent nurses to local conferences…And so it was really modeled off of the professional practice of peer review and that is how they really got to the expertise." (D, Hospital CCTP program)

Notes. D = Director, M = Manager, S = Staff (level of professional that described the collaborative care process)

6.2.3 Interprofessional communication practices evident in practice. The IPEC definition of interprofessional communication practices adequately described this domain as evidenced in practice, "Communicate with patients, families, communities, and other health

professionals in a responsive and responsible manner that supports a team approach to the maintenance of health and the treatment of disease" (American Association of Colleges of Osteopathic Medicine, 2011). In the interprofessional communication practices domain, a de novo collaborative care process emerged that was entitled "engage in collaborative care planning". As described, the collaborative care planning process was central to interprofessional collaboration. Most of the codes contained within this the collaborative care planning process fell under the communication domain, but a few of the teamwork and team-based practices were moved to be re-parented under this process as it was a best fit for that code. Also, a new de novo code was added under this collaborative care planning that was "involving the patient and family in decision making". The other de novo collaborative care process in the interprofessional communication domain was to employ peer review. This process was described using this exact term as a group reflective process, but was also described in real time as CCTP staff gave and received feedback both to other health professionals on the intervention team and with health professionals in the health system structure outside of the intervention (i.e. staff nurses, attending physicians, residents, etc.). Finally, another de novo collaborative care process that emerged in this domain was entitled to "use interpersonal communication strategies that optimize relationship building". This collaborative care process included using several a priori codes related to interpersonal communication. One de novo code was also added under this process for creating opportunities for in-person interactions, a frequently described idea in the data especially with teams that were practices across geographic distances.

6.2.3.1 Maximize effectiveness of electronic information systems and software. CCTP health professionals described employing measures to maximize the effectiveness of virtual collaboration in the electronic health record, despite the fact that the electronic information

infrastructure was seen as ineffective for creating transparency of information between health systems, between the health systems and the CBO, and between the CBO affiliated with CCTP and other social service agencies in the county. What was described were workarounds to system barriers such as duplicating progress notes in two systems and creating labels for progress notes that highlighted the heath professional's role in care transitions hoping that other team members would seek out that information. Information sharing enhancements were created such as granting access to community-based health and social services professionals to electronic health records of health systems.

> We used Health Connect (*a system that allowed community-based health professionals to access the hospital electronic health record*). We could access that from the County building. And we also had laptops that we could utilize. So, on the road or out in the field…it was nice to have that communication available and have that accessed information. (Staff, Community PHN Transition Coach)

The four health systems, however, had distinct electronic health record systems that did not communicate, and each required unique training to navigate.

> So, we actually had to get credentialed in each system…Some of them we had to do an online course…take the test. We all had to get badged and kind of …certified like any contractor would at their hospital. And then we would do training with them to get to know what was going on. (Manager, Community CCTP)

In addition, encrypted software systems were either deployed for tracking of information or for sharing information across systems that was not possible in the existing electronic information infrastructure. A software system was deployed to track referral and intervention completion that had minimal integration with the electronic health record and could not be seen by all team members within the hospital or community. The software system required a separate login, required a quality review to correct entry errors, and was described as "not user-friendly". In addition, it was noted that many patients did not stay within one health system, but instead sought care from multiple health systems throughout the County of San Diego. This created a

need for the CBO to create an encrypted database specifically for the CCTP program so that information about what program services had been delivered could be shared transparently across the health systems. CCTP health professionals described that the systems created were effective workarounds to enhance collaboration:

> So anytime a referral came through it was immediate, because we only had 72 hours to see the person, they (hospital-based health professionals) would have immediate knowledge of who was going out. It was either through e-mail, or through the (*software system name*). We also had a homegrown system which was developed for CCTP only, only for billing purposes. And we communicated that way. (Manager, Community CCTP)

Despite challenges with electronic information sharing, clinical progress notes were at times described as effective for interprofessional collaboration.

> The other cool thing was the charting piece. We did chart into their systems. And they would have the social worker notes in the system and so they would see the notes and say 'Oh my gosh! They're living in this environment where there is hoarding, or there is infestation. There is this or that going on.' So, it really did open up their eyes and I think it helped with the collaboration piece. They valued one another. (Manager, Community CCTP)

Timeliness and detail were two aspects that were described as important for collaboration in electronic documentation. It was noted that progress notes alone were not sufficient because they could be difficult to locate within the electronic health record. Several health professionals expressed wishing for interoperability between health records, a level beyond simple information transparency. They described wishing for an interprofessional, inter-hospital, inter-system (health and social services systems) electronic care plan that would optimize collaboration that did not yet exist.

> I would rely more on the case manager notes and the social work notes. And … you had to filter their notes. It wasn't obvious. It wasn't something like a flag in (*the electronic health record*), or anything like that you can identify immediately. I think that would've been really helpful…But we still don't have something like that interdisciplinary-wise, like that everybody can look at like a face sheet and say 'Oh, this patient has low health

> literacy, or needs help with their meds…I think that is still lacking. I wished we could optimize at that time. (Manager, Hospital Transitions Pharmacy)

It was expressed that an effective interprofessional care plan should be integrated into the workflows of all the health professionals involved, and should not require a separate login or even require a health professional to access a different area within the electronic health record that was not routinely used for daily documentation. It was noted that an effective collaborative care planning feature that included all the hospital systems and community-based social services interventions would greatly enhance work efficiency and prevent duplicative work.

6.2.3.2 Engage in collaborative care planning. Collaborative care planning was described by CCTP health professionals as a proactive process where team members came to a shared understanding of patients' needs based on their unique professional expertise, and then sought to address unmet needs together. It involved expressing oneself with confidence and clarity, followed by an interprofessional colleague being open to adapting their view of the patient based on the new knowledge:

> In my case, I made sure like if I saw in the doctor's note that the patient is noncompliant, and I had already made a home visit. And I found out actually no, it wasn't. I would personally go to the doctor and say, 'Hey doctor. I saw your notes, but I just want to let you know the patient's still here. I saw him last month. And it was not because he was noncompliant. He just is very timid. He lives alone. He ran out of money.'…I would see the doctor's note change. But that made a difference. (Staff, Community PHN Transition Coach)

Confidence was described as coming from a deep understanding of one's unique contribution to the interprofessional care plan based one's scope of practice:

> I think part of what the success was is that…I studied that chart. I knew the patient. I knew the questions to ask to pull out what the problems were or were not. Every trained nurse is not going to be able to do that. That advanced practice lens really helped to be able to help patients. Without that, patients did not self-identify…A lot of times it was not about *them* telling *you*, it was you relying on your gut and knowing the specific patient and being able to pull out some things that were not handled how they needed to be. (Staff, Hospital Transition Nurse Specialist)

Collaborative care planning involved being respectful to the role of others on the team and proactively seeking opinions of others as the care plan was developed:

> She would go (the discharge planner) and see the patient and say, 'Hey (*name of public health nurse)*, I've gone through this. These are my notes. Why don't you look through them? (Staff, Community PHN Transition Coach)

Several health professionals described the importance of proactively closing the loop on interventions that were referred to them for follow-up:

> Well as far as keeping them in the know if somebody tasks me with an issue, say they call the patient and their insurance isn't covering something from a medication standpoint. I would always once I finished with the patient obviously document. But I usually would give that nurse say a heads up as well to let her know that the issue was closed, and she could take it off her list. (Manager, Hospital Transitions Pharmacy)

It was described as important to avoid the use of profession, or site-specific language as this impaired communication. An example given was hospital-based staff's use of "STAT" to indicate urgency when applied to a community-based intervention. Community-based staff assessed that this term was not applicable to their context of care. Finally, collaborative care planning included involving the patient and the family in the team assessment of needs and care planning:

> …They (family members) had a nurse coming into their home. They could help them with checking to make sure it was a safe environment…. We would help them assess and see what is it that they needed to continue to live independently. And then providing that support…So the family was crucial, when we did have family, in helping the intervention and making it work. (Manager, Community CCTP)

Patients and family's needs were frequently described as the focus point and purpose of all of the interprofessional competency domains.

6.2.3.3 Employ timely and effective peer review. The importance of real-time, face-to-face peer review, where constructive performance feedback was given to and received from interprofessional colleagues was frequently described. Feedback was given and received

between interprofessional colleagues within CCTP, such as collaboratively problem-solving a standardized assessment tool or finding the right medication boxes that best served the older patient population. Peer review was also described between CCTP program staff and interprofessional colleagues involved in a patient's care more broadly, particularly when a quality lapse in the discharge process was noted.

> A real quick scenario was this patient who had vision problems…the nurse goes in to do the discharge and hands the lady the after visit summary and says, 'Go ahead and read this, and I'll come back.' And I went, 'Oh wow! This poor lady can barely see!.' So, we tried to intervene to make sure that the patient was as safe as possible. And the nurses were like, 'What's wrong with doing that?'. So, then you bring it back to the nurse and their either accept it and learn from it, or they become defensive. (Staff, Hospital Transition Nurse Specialist)

Defensiveness was addressed by reminding colleagues of the shared goal to provide high quality care that met patients' needs:

> To make sure that everybody knew that the overall goal was to look after the patient. Once people thought about it in those terms, you would see some of the walls just break down. 'Ok cool. We will work together'. Otherwise, people felt they were being attacked. Like they were not being heard." (Staff, Transition Nurse Specialist)

Peer review was described between community-based and hospital-based health professionals at the management and staff levels, resulting in care improvements i.e. with the after-visit-summaries, with timeliness of charting, or with resolving specific personnel performance issues:

> I would go back (*to the hospital*) and of course I was an outsider. So, I had to be tender-footed. But I tried to make sure people got the message…and then we saw improvements…there was vast change.. (Staff, Community PHN Transition Coach)

Both constructive feedback and positive feedback or praise were described. Peer review was noted to be a skill that required relationship building and a thoughtful, respectful communication style:

> Trying to frame your feedback in a way that is not threatening and that you are really trying to have a conversation. How in the future could we do this better? (Staff, Hospital Transition Nurse Specialist)

Care planning itself involved peer review as interprofessional colleagues considered input from other professions and collaborated together on the correct treatment plan. At times, peer review was pre-emptive and prevented a quality issue from occurring.

> Sometimes it was pre-emptively trying to say, 'You know…they live way out in Jamul and delivery of the DME (*durable medical equipment*) is going to be really difficult. Can we make sure that we get that before discharge?' (Staff, Hospital Transition Nurse Specialist)

Collaborative treatment planning was also frequently described between physicians and pharmacists in regard to medical management from admission to discharge.

6.2.3.4 Use interpersonal communication strategies to optimize relationship building.

Relationship building was central to interpersonal communication strategies that were patient-focused, reinforced teamwork, and involved consistent, direct person-to-person contact. Collaboration occurred when cooperation was achieved due to a shared patient focus:

> In the physician offices, some of them initially were a little more resistant to share or talk to you but then as they realize 'Oh, you're actually trying to help the patients that we are trying to help. You are not just trying to impact my clinic day.'…So, once they figured out you were a link to that; they were a lot more open with you than when they felt you were thwarting their practice. (Staff, Hospital Transition Nurse Specialist)

Persistence and reminding colleagues of the importance of teamwork was also described as an effective interpersonal communication strategy:

> I would go there (the hospital) and it was like people did not know what care transitions was…So every day I would go, and I would knock on the social worker's door, and they were like, "I'm sorry. I'm busy.' And then I was just there. I got to know the charge nurses, the secretaries, the doctors and slowly, slowly. I told them, 'you know I am not here to step over your jobs. I am here to work with you guys. We are here as partners.' (Staff, Community PHN Transition Coach)

Interpersonal communication was described as involving a variety of communication tools including mobile phones, encrypted email, shared task management software, electronic communication, and direct face-to-face contact. While all of these tools were used for

interpersonal communication, direct face-to-face contact was repeatedly described as essential for the relationship building.

> …We (*community-based social worker and public health nurse*) worked in the office building. So, a little cubicle in the morning time and I would say, 'Hey, Mr. John Doe. I saw you had a meeting with him yesterday. Was there anything I should know about? And we would touch base and debrief on something. 'Oh, he was saying he had confusion about his antibiotics at discharge. Can you address that?' So, then I would go visit and call him and discuss that. We would have weekly meetings.' (Staff, Community PHN Transition Coach)

In-person contact enabled the trust formation that allowed for collaboration to thrive.

6.2.3.5 Summary of collaborative care processes in the interprofessional communication practices domain..

Table 7 shows a summary of interprofessional collaborative competencies in the interprofessional communication practices domain as described by health professionals in the CCTP program.

Table 7.

Presents Collaborative Care Processes and Descriptions with Quotes related to the Domain of Interprofessional Communication Practices

The Domain of Interprofessional Communication Practices		
Collaborative Care Processes	**Description**	**Quote**
Maximize effectiveness of information systems and software (D, M, S)	Despite suboptimal information system infrastructure, health professionals did find ways to optimize their electronic communication and virtual collaboration.	"The other cool thing was the charting piece. We did chart into their systems. And they would have the social worker notes in the system and so they would see the notes and say 'Oh my gosh! They're living in this environment where there is hoarding, or there is infestation. There is this or that going on.' So, it really did open up their eyes and I think it helped with the collaboration piece. They valued one another." (M, Community CCTP program)
Engage in collaborative care planning (D, M, S)	Collaborative care planning was described as a proactive process where team members came to a shared understanding of patients' needs based on their unique professional expertise, and then sought to address unmet needs together.	"In my case, I made sure like if I saw in the doctor's note that the patient is noncompliant, and I had already made a home visit. And I found out actually no, it wasn't. I would personally go to the doctor and say, 'Hey doctor. I saw your notes, but I just want to let you know the patient's still here. I saw him last month. And it was not because he was noncompliant. He just is very timid. He lives alone. He ran out of money.'…I would see the doctor's note change. But that made a difference." (S, Public Health Nurse)
Employ timely and effective peer review (D, M, S)	Real-time peer review was described where performance feedback was given and received between interprofessional colleagues.	A real quick scenario was this patient who had vision problems…the nurse goes in to do the discharge and hands the lady the after visit summary and says, 'Go ahead and read this, and I'll come back.' And I went, 'Oh wow! This poor lady can barely see.' So, we tried to intervene to make sure that the patient was as safe as possible. And the nurses were like, 'What's wrong with doing that?'. So, then you bring it back to the nurse and their either accept it and learn from it, or they become defensive. (S, Hospital Transition Nurse Specialist)
Use interpersonal communication strategies to optimize relationship building (D, M, S)	Relationship building was central to interpersonal communication strategies were patient-focused, reinforced teamwork, and involved consistent, direct person-to-person contact.	"I would go there (the hospital) and it was like people did not know what care transitions was…So every day I would go, and I would knock on the social worker's door, and they were like, "I'm sorry. I'm busy.' And then I was just there. I got to know the charge nurses, the secretaries, the doctors and slowly, slowly. I told them, 'you know I am not here to step over your jobs. I am here to work with you guys. We are here as partners." (S, Public Health Nurse)

Notes. D = Director, M = Manager, S = Staff (level of professional that described the collaborative care process)

6.2.4 Interprofessional teamwork and team-based practices competencies evident in practice.

The IPEC definition of interprofessional teamwork and team-based practiced adequately described this domain as evidenced in practice, "Apply relationship-building values and the principles of team dynamics to perform effectively in different team roles to plan and deliver patient and population-centered care that is safe, timely, efficient, effective, and equitable" (American Association of Colleges of Osteopathic Medicine, 2011). As described previously, the shared value of trust that was originally in the IPEC domain of values and ethics for interprofessional practice was moved to the teamwork and team-based practices domain and modified to "establish trust between health professional and with patients and families". The original IPEC competency coded as "use available evidence to inform effective teamwork" was eliminated as it was not described by health professional in the CCTP program. Instead, using evidence to guide clinical practice was maintained as a collaborative care process and described below. There were no de novo competencies identified in the teamwork and team-based practices domain; however, the descriptions of several collaborative care processes were modified to better reflect competency as described in practice.

6.2.4.1 Establish trust between health professionals and with patients and families.

Trust was described by CCTP health professionals as developing through a process that staff consciously initiated. Staff spoke about strategies they used to establish trust as a precursor to collaboration. The trust-building process was described both with interprofessional colleagues and patients and families.

> It's trust and seeing a person. I also think this job is not for everybody. You need to be a people person. You need to because you've got to just go in there and when you walk into even a patient's room there are four family members sitting there. You need to know how to acknowledge them. I made it more personal with each patient…But the same thing with the staff. I had to be there, and it got so comfortable with them that they didn't

> even know I was from the County…You become one with the program." (Staff, Community PHN Transition Coach)

Strategies were described that were used to optimize trust-building between patients and interprofessional colleagues like telling the patients a colleague's name (even in their absence) and endorsing their expertise, role and reliability.

> … trying to partner and understand what we are doing and what they are doing again, until those relationships are set up. Then the communication was there…the nurse that was working with us saw 100% of the patients before they went home. Consequently, the person was more willing to let them in the home…If they didn't know who they were…when I am talking to them I can give them their card and say, '(*name of public health nurse*) is going to call you. She's going to want to come out and see you. Let her in. And she is going to do this, this, and this for us. And she's gonna help me to make sure that you're connected with this or that…" (Staff, Hospital Transition Nurse Specialist)

As trust was established over time, informal referrals for interprofessional care and consultation began to manifest.

> It eventually got to where people realized we really could work as a team. If you want these people going out and staying out…or you know somebody at risk, we would start getting calls from some of the case managers, 'Hey can you make sure you see so-and-so' But it took a long time to get to that. (Staff, Hospital Transition Nurse Specialist)

One strategy described was to assign a health professional to a role in a unit or location where they already had established relationships. This was a method to speed up trust development and allow for peer review (particularly in regard to constructive performance feedback) to occur without manifesting unwarranted fears of reprisal.

> It was a turf issue. You know what I mean? When I was over at (*name of a particular nursing unit*), oh they knew those transition nurses were coming over. But luckily we had (*name of Transition Nurse Specialist who was previously a staff nurse on the unit*) who kind of cut through. So that's where we did a lot. Because she had previously worked there. Because she was one of them…they didn't know me. And who was I to come in and tell them like 'Try to talk to your patients more. Try to do this. Do the discharge coaching.' (Staff, Hospital Transition Nurse Specialist)

In the absence of established relationships, it was described to take considerable time and effort establish trust between health professionals.

6.2.4.2 Embed structures and processes that promote collaboration. CCTP health professionals highlighted that administrative leadership was required to embed structures and processes that promoted collaboration in order for teamwork to thrive. Leadership, particularly at the executive level, was crucial to help establish consensus around shared vision and goals.

> I think you have to have leadership. I mean you have to have someone at the helm that truly has expertise and the ability to bring people together and to reach consensus. And I do think that takes leadership…Someone…that really has the ability to coordinate and communicate and create a shared vision and goals that everyone can agree to. Someone who can…put aside their individual agenda and work for what's best. (Director, Community CCTP)

It was described that leaders created structured meetings to periodically review processes at all levels: executive, management and staff.

> …In addition to the staff and the manager meeting, we met as administrators as well. That's where the expectations were laid out. Where we talked with the different administrators from different facilities and really hashed out what we needed to do; And what we wanted our staff to really get on board with. And it was equal all around…We really tried to maintain consistency with that. (Manager, Community CCTP)

It was noted that in-person meetings were preferable, allowing for time and space for trusting relationships to develop.

> We did a lot of team-based meetings…in-person. We tried to use phone only if it was a last resort. But we'd like to do it in person for the collaboration piece. (Manager, Community CCTP)

The structure of meetings among clinical staff placed hospital and community-based health professionals together and included processes for reviewing team performance and problem-solving any disagreements or differing points of view in a professional manner.

> …We'd have our PHN (*public health nurse*) meeting in conjunction with (*hospital name*) …and discuss how everything was kind of working together. Say for instance I took issue with getting some referrals that were not necessarily the ones I thought would

> be good candidates. I would touch base… at that time. I would say 'Hey, I don't know if that person would be appropriate. (Staff, Community PHN Transition Coach)

Clinical staff meetings also included processes to identify challenges, share lessons learned, disseminate best practices, and conduct retrospective root cause analysis and reflective practice.

> To identify where there were challenges and share best practice and learning. Because what we found was some coaches had an easier time getting into the home…and to actually reduce readmissions more successfully than others. And so, they shared best practices. Ways that they would engage the patient prior to discharge. (Director, Community CCTP)

The processes in the meetings at all levels as described were reflective of an embedded culture of continuous quality improvement that was shared between health systems, and between the health system and the community-based organization.

6.2.4.3 Use evidence to guide clinical practice. CCTP health professionals described designing their roles and interventions based on the research evidence, but having to adopt changes due to challenges they encountered in the practice setting. The role of the PHN Transition Coach was modeled after Coleman's Care Transition Intervention, a standardized intervention focused on patient empowerment and coaching (E. A. Coleman, C. Parry, S. Chalmers, & S. J. Min, 2006b). CCTP administrative health professionals described using standardized training that included sending clinical staff to the Coleman Institute where they received master coach training, and then returned to train others. CCTP clinical staff discussed the challenges of staying faithful to the model due to time pressure, applying the model to diagnoses where clinical deterioration would require rehospitalization and could not be prevented, or being asked to apply the model to patients in nursing homes versus in the home setting as originally designed:

> Also, the program went more toward SNF (*skilled nursing home*) patients. I thought that should have been a separate model…I didn't see how that would work if I follow a patient into a skilled nursing home where they are under a doctor's order…The Dr. Eric

> Coleman model again goes into coaching the patient. I couldn't do anything at a skilled facility because I could just suggest. (Staff, Community PHN Transition Coach)

One of the changes implemented was allowing for a telephone call to replace the one home visit designed in the intervention, first for patients that lived far away, and then more broadly if the PHN had time constraints due to the patient case load. PHN transition coaches also found fidelity to the Coleman model challenging in that holding strict to the coaching model was too time consuming and work arounds were required to achieve efficiency:

> I don't totally believe in the Coleman model, because they wanted the patient to write the meds down and do their own little history. Well, that would have been a five hour visit. And sometimes, I would have to spell the words. When I tried it, it was so laborious for the patients with their handwriting. I couldn't even read it. So, I just turned out and I would write it for the patients. (Staff, Community PHN Transition Coach)

The experience of standardized transition coach training was not maintained with complete fidelity throughout implementation either. This training was fully described by the PHN transition coach hired at the initiation of the CCTP program, but was not the experience of a later hire who described receiving a more traditional orientation to his job:

> To be honest I don't recall about the coaching…I remember we would touch base. I remember we had certain in-services within the county and then we would just try to kind of see what interventions we could use as nurses to get them (*patients*) connected, and then sharing information with the patient. (Staff, Community PHN Transition Coach)

The hospital CCTP manager described using the Naylor model that utilized an APN for comprehensive discharge planning as a guide for the hospital Transition Nurse Specialist role. Challenges were described in choosing what type of APN would be the best fit for the role and multiple types were hired including Nurse Educator, Clinical Nurse Specialist, Nurse Leader (Master's in nursing leadership), and Nurse Practitioner. It was described that the role required a combination of all these skills and more, including an understanding of case management.

> …we thought about trying to take a case manager out of a task role of kind of cuing things up and then moving on to the next, and asking them to be in a more relational role with patients…and we quickly found that that didn't work. So, then we brought in the CNE (*clinical nurse educator*) who was good… But that's where we decided to bring in the CNS's (*clinical nurse specialists*) … the hope was at the time that the CNS would be the nonjudgmental patient educator, the one who could see globally the picture and carry things across the transition and have some kind of blended role between Coleman and… Naylor. But we never had them going out to do the home visits. (Manager, hospital CCTP)

The hospital CCTP manager described partnering with a local school of nursing to create a certification program in transitions of care to build the skill set for nurses who may want to fill a role in care transitions, as no existing advanced practice role came ready with all the skills that were required to succeed.

The pharmacy transitions manager described using evidence-based interventions to create a standardized institution specific training to cover the processes involved in high quality medication management:

> …the pharmacist did get, well anybody that worked in transitions of care would go through, not a certificate process, but making sure they knew how to do a proper med reconciliation, how they needed to change it in the medical record, some things to identify on discharges, as well as working with the outpatient pharmacies and prior authorization. So really just the entire medication management piece from the front end to the back end, because we learn a lot clinically but don't really teach you how to do all the stuff in between. (Manager, Hospital Transitions Pharmacy)

It is important to note that evidence-based practice was described in terms of clinical practice, but not in terms of team processes where the research evidence was not as robust or readily available for health professionals to refer to in practice.

6.2.4.4 Share accountability with other professions for processes and care outcomes.

Shared accountability was described by CCTP health professionals at the administrative and clinical levels for both work processes and care outcomes. Administrative staff described sharing supervision accountability between the hospital and the community:

> There was shared responsibility in the supervision. There was shared responsibility in the credentialing. There was shared responsibility in making sure folks were competent, because we were touching their patient. And they were touching our patients. So, we wanted to make sure that we were all on the same page. (Manager, Community CCTP Program)

A key practice that was described was to share readmission outcomes at all levels: at the level of individual clinical staff, hospital site-specific, and county-wide so that everyone was aware of the overarching goals as well as how they were contributing to it:

> When we did the boots on the ground it was really shared. Everyone had their own numbers. Everyone knew where they were at. Every nurse knew how many cases they received and what their readmission rate was…Down to the individual level. (Manager, Community CCTP Program)

Another key practice that was described was to share accountability for a patient between hospitals for 180 days from patient enrollment:

> One of the values we did was that any organization that had provided an intervention for the patient, you owned that patient for 180 days even if that patient went to another facility. And that was important about sharing the data across systems so that they knew what interventions we had applied so they were … either not duplicating, or they could continue to carry out what we had already set up. So, I think that type of value-based structure and trust that our partners in the community would carry out a plan was very hard. (Director, Hospital CCTP)

This type of collaboration between hospitals was described as a new and emerging practice in San Diego County.

6.2.4.5. Summary of collaborative care processes in the teamwork and team-based practices domain..

Table 8 shows a summary of interprofessional collaborative competencies in the teamwork and team-based practices domain as described by health professionals in the CCTP program.

Table 8.

Presents Collaborative Care Processes and Descriptions with Quotes related to the Domain of Teamwork and Team-based Practices

Collaborative Care Processes	**Description**	**Quote**
Establish trust between health professionals and with patient/family (D, M, S)	Trust was described as precursor to collaboration that was developed through conscious process with both interprofessional colleagues and patient and families.	It's trust and seeing a person. I also think this job is not for everybody. You need to be a people person. You need to because you've got to just go in there and when you walk into even a patient's room there are four family members sitting there. You need to know how to acknowledge them. I made it more personal with each patient…But the same thing with the staff. I had to be there, and it got so comfortable with them that they didn't even know I was from the County. (S, Public Health Nurse)
Embed structures and processes that promote collaboration (D, M, S)	Leadership embedded structured meetings at all levels (executive, manager, clinical staff), preferably involving direct face-to-face contact, where individual and team performance work processes were reviewed.	…In addition to the staff and the manager meeting, we met as administrators as well. That's where the expectations were laid out. Where we talked with the different administrators from different facilities and really hashed out what we needed to do; And what we wanted our staff to really get on board with. And it was equal all around…We really tried to maintain consistency with that. (M, Community CCTP)
Apply evidenced-based interventions to guide clinical practice (D, M, S)	Research findings were used to design standardized training and define roles and responsibilities, but complete fidelity to the evidence was difficult to maintain in the face of challenges in the practice environment.	I don't totally believe in the Coleman model, because they wanted the patient to write the meds down and do their own little history. Well, that would have been a five hour visit. And sometimes, I would have to spell the words. When I tried it, it was so laborious for the patients with their handwriting. I couldn't even read it. So, I just turned out and I would write it for the patients. (S, Community PHN Transition Coach)
Share accountability with other professions for processes and care outcomes (D, M, S)	Outcomes were shared at all levels (executive, manager, and staff) to ensure accountability to outcomes.	When we did the boots on the ground it was really shared. Everyone had their own numbers. Everyone knew where they were at. Every nurse knew how many cases they received and what their readmission rate was…Down to the individual level. (M, Community CCTP Program)

Notes. D = Director, M = Manager, S = Staff (level of professional that descrbied the collaborative care process)

6.3 Compare and Contrast Interprofessional Collaborative Competencies in Practice with the IPEC Conceptual Model (Specific Aim 2)

Specific aim 2 was to compare and contrast interprofessional collaborative competency enactment in practice with the interprofessional collaborative competencies in the conceptual model as written by the IPEC (American Association of Colleges of Osteopathic Medicine, 2011). Throughout the thematic analysis process, modification of a priori codes, movement of a priori codes across domains to reparent under an overarching collaborative care process, and consolidation of a priori codes under a unifying collaborative care process was tracked. In addition, the emergence of de novo collaborative care processes and codes was also tracked.

6.3.1 Comparisons. All of the a priori codes created from IPEC's conceptual framework and core competencies for interprofessional practice were found at least one time or more in the CCTP health professionals' descriptions of interprofessional collaborative competencies in practice with only one exception. The exception previously described that was not found was to "use available evidence to inform effective teamwork". Given that the health professionals were not given specific descriptions of each of the domains nor a list of the 38 interprofessional collaborative competencies, the fact that the vast majority of a priori codes derived from the IPEC model were validated intuitively by at least one health professionals' description demonstrates the strength of the IPEC model in describing the processes of interprofessional collaboration in practice in transitional care for older adults.

Many a priori codes were maintained without modification. Some of the a priori codes were elevated as written to overarching collaborative care processes and other a priori codes were re-parented under that process. These overarching collaborative care processes encompassed more than one interprofessional collaborative competency.

6.3.2 Contrasts. There were two primary ways that CCTP health professionals' descriptions of interprofessional collaborative competencies differed from IPEC original list of interprofessional collaborative competencies: 1) health professionals' descriptions of the competency in practice did not fit exactly with the a priori code and needed to be modified; or 2) the health professionals' descriptions of the competency was a better fit in a different domain or within a collaborative care process that emerged in another domain.

Modifications of a priori codes in the values and ethics domain included: 1) changing patient-oriented to person-oriented to better reflect that staff were consciously seeking to understand the humanity behind the patient status of their clients, 2) cooperation was changed to forced cooperation or co-opetition to reflect that competition between health systems had to be resolved before cooperation emerged, 3) mutual respect was changed to emerging mutual respect, showing that particularly with physicians (where power dynamics between physicians and other health professionals may have been in play) health professionals had to proactively seek to inform them of their different perspectives of the patient before respect emerged, 4) the shared value of "performing at a high level of quality" was modified to "a shared commitment to quality" that better reflected the staff's description, 5) the ethics code of "managing ethical dilemmas " was modified to "coping with ethical angst" and all ethics-related codes were reparented under it to show that this was the predominant ethical issue, and 6) trust was moved and modified from the value and ethics domain to the teamwork and team-based practices domain to better reflect that is was more frequently described as a process versus a shared value. The collaborative care process of building trusting relationships that emerged in the teamwork and team-based practices domain was also expanded to not only include trust building between

health professionals but also trust building between health professionals and patients and families.

In the interprofessional communication practices domain one of the a priori codes was "to choose effective information systems". In the health professionals' descriptions, it was clear that there was no effective information system available to choose from as the electronic health record capability needed had not been developed between health systems or between the health and social services systems in order to achieve the information transparency and the interoperability that would allow for virtual interprofessional care planning that the staff desired. Instead, they described work arounds and ways that they were able to maximize the effectiveness of an imperfect system.

Finally, in the teamwork and team-based practices domain an a priori code was to "apply leadership practices that support collaborative and effective teams". As described by health professionals, the leadership practices most frequently described that promoted interprofessional collaboration and teamwork were structured meetings that included intentional processes for reflection on both clinical process and teamwork. The code was elevated to a collaborative care process and modified to: "Embed structures and process that promote collaboration".

6.3.3 De novo codes and collaborative care processes. De novo codes and collaborative care processes that emerged from the data were previously described within each of the domains, but are summarized here. In the roles and responsibilities domain, a new collaborative care process emerged describing role clarity and responsibility flexibility. This collaborative care process reflected the health professional descriptions of successfully resolving potential role conflicts in areas where scope of practice overlapped by being flexible with

responsibilities and allowing more than one health profession type to address patient needs as they were encountered to best promote teamwork.

In the interprofessional communication practices domain, several de novo collaborative care process emerged. The first de novo collaborative care process was to "engage in collaborative care planning". Collaborative care planning was described as a central process for interprofessional collaboration that encompassed several a priori competencies a majority of which were within the communication domain, but a few codes that best fit under this process were classified by IPEC in the teamwork and team-based practices domain. A de novo code that was added under collaborative care planning was involving the patient and family in decision making. Another de novo collaborative care process under the interprofessional communication domain was to employ peer review that involved giving and receiving feedback in real time and within structured meeting that contained reflective processes. Finally, another de novo collaborative care process that emerged in this domain entitled to "use interpersonal communication strategies that optimize relationship building". One de novo code was added under this process for creating opportunities for in-person interactions.

6.3.4 Summary of comparisons and contrasts of interprofessional collaborative competencies in practice with the IPEC conceptual model. In summary, the domains and list of competencies within domain overall was reflected significantly in the health professionals' descriptions of interprofessional collaboration in practice. There were modifications to a priori codes, movement of a priori codes between domains, and de novo codes and collaborative care processes that emerged from the data. Table 9 shows the final collaborative care processes in each domain, and all of the codes reparented under that process either from a priori codes or from de novo codes that emerged from the data.

Table 9.

Presents Interprofessional Collaborative Care Processes, and Codes Parented within Collaborative Care Processes as they Emerged from the Data

Domain Title	Values and Ethics for Interprofessional Practice	Roles and Responsibilities for Collaborative Practice	Interprofessional Communication Practices	Interprofessional Teamwork and Team-based Practices
Collaborative Care Processes and Codes	**VE1: Person centered orientation** + Patient dignity + Patient confidentiality + Cultural diversity + Patient safety **VE2. Forced Cooperation or "Co-opetition"** + *Nascent* population orientation **VE3. Emerging mutual respect** + Respect for individual differences + Respect for other health professions **VE4. Shared commitment to quality** + Act with integrity and honesty + Maintain competence + Perform at a high level of quality **VE5. Coping with ethical angst** + Demonstrate ethical conduct + Manage ethical dilemmas + Develop consensus on the ethical principles to guide care and teamwork.	**RR1. Role clarity and responsibility flexibility** + Communicate one's role and responsibilities + Explain the role of other providers and how the team works together **RR2. Forge interdependent relationships** + Use the unique and complementary abilities of all members of the team. + Use full scope of knowledge of all team members + Engage others' expertise + Recognize one's limitations **RR3. Engage in continuous professional and interprofessional development**	**CC1. Maximize effectiveness of electronic health records and software** **CC2. Engage in collaborative care planning** + Communicate information in an understandable form (avoid discipline-specific terminology. + Express one's knowledge and opinion with confidence, clarity and respect. + Work to ensure a common understanding of information, treatment, and care decisions. + Encourage ideas and opinions of other team members. + Recognize one's own uniqueness in the interprofessional relationship including hierarchy, power, culture, and level of experience. + Engage other health professional in patient-centered problem solving. + Involve patient and family in decision making + Perform effectively within the team. + Integrate the knowledge and experience of health professionals to inform care decisions	**TT1. Establish trust between health professionals and with patient/family** **TT2. Embed structures and processes that promote collaboration.** + Understand team development + Understand roles/practices of effective teams. + Use process improvement strategies to increase the effectiveness of care. + Reflect on individual and team performance to improve care. **TT3 Use evidence to guide clinical practice**. **TT4. Share accountability with other professions for care outcomes.**

Notes. VE = values and ethics for interprofessional practice domain; RR = roles and responsibilities for collaborative practice domain; CC = interprofessional communication practices domain; TT = teamwork and team-based practices domain; + = competency codes

Table 9 (*continued*).

Presents Interprofessional Collaborative Care Processes, and Codes Parented within Collaborative Care Processes, as they Emerged from the Data

Domain Title	Values and Ethics for Interprofessional Practice	Roles and Responsibilities for Collaborative Practice	Interprofessional Communication Practices	Interprofessional Teamwork and Team-based Practices
			CC3. Employ timely and effective peer review + Give feedback that is timely, sensitive and respectful. + Receive feedback respectfully from others. + Engage self and others to constructively management disagreements among team members or with patients and families. **CC4. Use interpersonal communication strategies that optimize relationship building** + Use respectful language + Listen actively + Choose effective communication technologies + Communicate consistently the importance of teamwork. + Create opportunities for in-person interactions	

Notes. VE = values and ethics for interprofessional practice domain; RR = roles and responsibilities for collaborative practice domain; CC = interprofessional communication practices domain; TT = teamwork and team-based practices domain; + = competency codes

6.4 Barriers to Interprofessional Collaborative Competency Enactment (Specific Aim 3)

Barriers to interprofessional collaborative competency enactment were also described by CCTP health professionals within each domain. As described, D'amour and Oandasan's conceptual model included system factors that could influence how interprofessional collaboration manifested in practice (D'amour & Oandasan, 2005). Based on this model, interviews included questions about barriers or challenges experienced within each of the interprofessional collaborative competency domains. A barrier to interprofessional collaborative competency enactment was defined as something that got in the way or presented a challenge to health professionals in enacting the competency domain in practice.

6.4.1 Barriers to Values and Ethics for Interprofessional Practice.

6.3.1.1 Value conflict. A barrier that surfaced in health professionals' descriptions of shared values was a value conflict between a social services model and a medical model. This conflict surfaced in two main areas: 1) advocacy for self-determination versus medical compliance, and 2) focus on efficiency versus service delivery.

The first value conflict was between the social services health professionals' duty to advocate for patients' self-determination versus the healthcare professionals' commitment to patient compliance with a prescribed medical regimen.

> It is …the medical model and the social determinants are kind of like over here somewhere. And when the medical world opened up to what the social work world was, they wanted to handle it medically…the social workers are advocates…they have the right to determine their life. They have every right to do what they want. And we have to respect that. We can't force them to take medications…We can assist them and give them the tools they need." (Manager, Community CCTP)

The second area where a value conflict arose was unequal accountability to efficiency and cost-savings between hospital-based and community-based health professionals. Hospital-

based administrators and health professionals were held to account to demonstrate a return on investment as an outcome of the transitions program evidenced by reducing hospital readmissions and overall healthcare costs. Conversely, the model in community-based social services was that funding was received for services rendered. This led to a central focus on ensuring the needs assessed were matched with services. This value conflict was described as follows:

> I think in the hospital system a lot of it was kind of cost base, financial. It was always what's the ROI (return on investment)? Are we getting the best bang for our buck? And coming from the County, you're non-profit. You do what is best for the people, for the community. (Manager, Community CCTP)

A shared understanding was expressed by one hospital-based administrator that the two values can co-exist. That by providing the resources that a patient needs, costs would likely be reduced over the long term and it may of benefit to begin making that cultural shift. Of interest, both hospital-based and community-based health professionals expressed that a missed opportunity was to measure and report social outcomes in addition to financial outcomes like readmission rates. These additional outcomes could include a patients' quality of life, community or population health metrics, level of independence (i.e. ability to stay in the community versus a nursing home), or patients' overall health status.

6.4.1.2 Local competitive healthcare marketplace (San Diego County). The competitive local healthcare marketplace in San Diego was described as an initial substantial barrier to achieving information transparency critical for broad -based interprofessional collaboration:

> …there was a lot of discussion to start within the steering committee about how I share the information about my patients … and ensure my competitors do not have access to that information. Because I don't want them to know who my patients are and what services I've provided. (Director, Community CCTP)

The health professionals in the CCTP program were able to overcome this barrier during the course of the program and arrive at a shared value of cooperation. However, before and after the grant-funding expired, several of the health systems either created or continued to develop an Accountable Care Organization (ACO) structure for their Medicare FFS patients (Centers for Medicare and Medicaid Services, n.d.-a). An ACO is a healthcare organization that ties payments to quality metrics and the cost of care and is formed from a group of coordinated health-care practitioners. This structure does not have any limitations on provider choice, so patients could theoretically continue to seek care from multiple health providers in the community. This necessitates that health systems create more robust informatic infrastructure to share health records across systems while maintaining patient privacy, despite the risk that competitors may learn information about services rendered that could be of benefit in increasing their organizational market share. In addition, with the structure of an ACO the collaboration between health systems and CBO's such as Aging and Independent Services would not necessarily exist unless formal contracts or informal agreements to fund these services were in place. Without a strong incentive for health systems to fund social services, the social services system would return to being shut out of the population health management strategy.

> … it's very interesting how health systems view population health management and how the world outside of health systems view population health management.. If you talk to someone within a health system and say, "Well what's at the basis, what's the foundation of your population health management strategy?". They'll talk with you about you know their acute care setting, their emergency department, their clinics, their post-acute clinics, their associations with skilled nursing facilities, their partnership or their relationship with acute rehab centers and home health. But they never speak about the relationship or collaboration with the community-based organizations that are in the homes every single day working with this patient. (Director, Community CCTP)

A strong perception emerged that population health would require competitors to become collaborators and health systems to merge with social service systems to create a cohesive

healthcare infrastructure with patients and families at the center, and the overarching goal of population health for the entire community of older adults embraced by all players.

6.4.1.3 National health and social services systems in the U.S.. The national health and social services systems were perceived as inadequate to meet the health and safety needs of all patients.

> From an ethical standpoint, I think it's pretty crappy that we do a lot for our patients and then they can't always get the meds that they need even when it's a generic medicine…Like ethically, I don't agree with how we do healthcare obviously. But the good thing is that everybody kind of recognizes that, and works to help patients…and so there were a lot of good stories. (Manager, Hospital Transitions Pharmacy)

This reality created difficulty in fully resolving ethical dilemmas resulting from an inability to close the gaps in the health and social safety nets. CCTP health professionals described working diligently to close the gaps that they could by reducing the patient cost of medications, working with pharmaceutical companies to provide critical medications for free, or providing health or social services without reimbursement because it was the right thing to do. All of these strategies were still sometimes ineffective to meet the needs of the patients and staff were left to cope with this unresolvable ethical dilemma.

6.4.2 Barriers to roles and responsibilities for collaborative practice.

6.4.2.1 Resource Limitations. Resource limitations were identified at the manager and staff level within the hospital and community-based practices. The process of fulfilling roles and responsibilities as originally outlined became difficult as the number of enrolled patients with complex care needs increased. Resources were stretched creating the need for staff to triage services to only the highest risk or modify interventions to what was possible versus what was designed (i.e. implement a phone call versus a home visit):

> The patient load was very high and with limited resources you had to kind of triage to the highest risk…but I think more resources is probably just across the board, whether it's a

> pharmacist, or one of the nurses who was helping with the program. It was just a lot. Once the patients go home it was a lot of continuity issues and trying to coordinate those was just time consuming." (Manager, Hospital Transitions Pharmacy).

Managers and staff also described times where they advocated for and received additional resources.

6.4.2.2 Role Conflict. Role conflict also emerged as a barrier to role definition and clarification. Staff described challenges as they defined new care transition roles within an existing practice environment. Staff in existing roles were threatened by new care transition roles that overlapped with their own responsibilities:

> No, I wouldn't say there was role clarity. There were definitely some role conflict issues…I guess going back to that now, both the interdisciplinary teams as a whole in the hospital and the case management team. There were a lot of them that seemed to feel threatened by the TNS's *(transition nurse specialists)* because we were asking some of the same questions. (Staff, Hospital Transition Nurse Specialist)

Role conflict also occurred when staff in new care transition roles were required to complete quality oversight and give constructive feedback to existing staff. Finally, role conflict emerged when scope of practice for different health professionals (i.e. nurses and social workers) allowed for more than one health professionals to complete the same responsibility.

> The only role confusion I would say is sometimes with social workers because I believed I learned their role had expanded…In their social work guidelines they can now talk about medications and I didn't know that…So (*community-based transition nurse coach*), I remember that she said that since nurses are here, the social workers, even though they're told they can, they don't need to talk about medications."(Staff, Community PHN Transition Nurse).

This created the need for responsibility clarification and refinement with one member of the team primarily responsible, but the other ready and available to step in and meet the patient need if required.

6.4.3 Barriers to interprofessional communication practices.

6.4.3.1 Communication silos. CCTP health professionals described that the program itself allowed for barriers to be broken down for a limited time in the persistent communication silos that existed between the health and social services systems and between individual hospital-based health systems.

> We broke down barriers that I believe exist; Not only believe but I know exist. Right now, in this country we have siloed systems of care. We have our healthcare delivery system that is siloed, and has now branched out to coordinating across care centers and entities. But there is no communication with the system of care that is in these patient's home on a day to day basis providing a level of support that is helping them manage their health every single day. These systems, these organizations operate in silos. We have such fragmentation. (Director, Community CCTP)

Similarly, even though information infrastructure was inadequate for transparency of information, the program offered a temporary reprieve from the silos between hospital-based health systems by leveraging new relationships between CCTP program staff:

> Even I think within hospitals too. We could not get into each other's records. We could not cross that gap. The great thing during the program was that, because you had that collaboration with one another, we could call each other and say, 'Hey your patient. You just saw him two months ago. He is now here in my hospital and this is what is going on.' And we would talk with them about what we did, and what may not have worked, and what they can do, and we learned from that. (Manager, Community CCTP)

CCTP health professionals described multiple strategies and workarounds to enable them to succeed despite the information infrastructure that created these communication silos..

6.4.4 Barriers to interprofessional teamwork and team-based practices.

6.4.4.1 Geographic Isolation. CCTP health professionals repeatedly described the barrier that geographic distance creates to trust development and collaboration. Community-based health professionals described designing their work day to ensure that there was face-to-face contact time with the inpatient teams before they went into the community to carry out their home visits.

> At first it was hard, depending on the hospital But I found out that for this program to work successfully in the first few years, I had to be there every day in the hospital. I couldn't be at my telephone. I saw the telephone calls weren't as effective as in-person. (Staff, Community PHN Transition Coach)

In addition, the structured in-person meetings that were described at the executive, management, and clinical staff level also provided the opportunity for in-person contact which was considered essential for collaboration to thrive when team members worked across geographic distances.

6.4.4.2 Staff turnover. Turnover among staff was described as a barrier to team development. Turnover created the need to rebuild rapport and trust with the new team member. Because process began anew, and it took time to redevelop the rhythm in working together that was already established with the previous colleague:

> I don't think it (turnover) was necessarily because things were especially bad. It's just that there's a fair number of people that are in transition at any one point in time…there was a lot of turnover at the time. And so, it made it a little difficult to build the kind of rhythm that you would normally get. You didn't always have the same three people that were assigned…It felt to me, second hand, …like we were constantly having to either explain, to teach somebody sort of what we thought our role was in the process. And, or, help them try to help us. (Director, Hospital Pharmacy)

Because turnover is inevitable, this may be something that can proactively be addressed and facilitated as new team members are added.

Barriers to interprofessional collaborative competency development could also be understood according to the context in which the barriers surface. At the institutional level, resource limitation and role conflicts emerged. At the local level (city, county, state), value conflicts, competition in the healthcare marketplace, and communication silos emerged. At the national level, limitations of the national healthcare system to meet patient needs, Medicare policy influences, and state of the art of health informatics infrastructure to reflect health information transparency and facilitate virtual interprofessional care planning were described.

6.4.5 Summary of barriers to interprofessional competency enactment. A summary of barriers to interprofessional competency enactment by domain type is included in Tables 10a and 10b below.

Table 10a.

Presents Barriers to Interprofessional Collaboration and Descriptions with Quotes related to the Values and Ethics and Roles and Responsibilities Domains.

Domain	Barriers	Description	Quote
Values and Ethics for Interprofessional Practice	Value conflict (D, M, S)	Value conflicts were a barrier to creating shared values include conflicts between 1) self-determination and compliance and, 2) cost efficiency and service delivery.	It is …the medical model and the social determinants are kind of like over here somewhere. And when the medical world opened up to what the social work world was, they wanted to handle it medically…the social workers are advocates…they have the right to determine their life. They have every right to do what they want. And we have to respect that. We can't force them to take medications…We can assist them and give them the tools they need." (M, Community CCTP)
	Competitive healthcare market (San Diego County) (D, M)	The competitive local healthcare marketplace was a barrier to achieving cooperation in regard to information transparency.	"…there was a lot of discussion to start within the steering committee about how I share the information about my patients … and ensure my competitors do not have access to that information. Because I don't want them to know who my patients are and what services I've provided." (D, Community CCTP)
	National healthcare and social services systems (United States) (D, M, S)	The national health and social services systems were perceived as inadequate to meet the health and safety needs of all patients.	"From an ethical standpoint, I think it's pretty crappy that we do a lot for our patients and then they can't always get the meds that they need even when it's a generic medicine…Like ethically, I don't agree with how we do healthcare obviously. But the good thing is that everybody kind of recognizes that, and works to help patients…and so there were a lot of good stories." (M, Hospital Transitions Pharmacy)
Roles and Responsibilities for Collaborative Practice	Resource Limitations (M, S)	Resource limitations changed responsibilities creating the need to triage interventions to highest risk or reduce the intensity of interventions (i.e. forego a home visit and call instead).	"The patient load was very high and with limited resources you had to kind of triage to the highest risk…but I think more resources is probably just across the board, whether it's a pharmacist, or one of the nurses who was helping with the program. It was just a lot. Once the patients go home it was a lot of continuity issues and trying to coordinate those was just time consuming." (M, Pharmacy)
	Role conflict (M, S)	Role conflict emerged in both hospital and community settings as responsibilities of new roles in care transitions overlapped with responsibilities of other health professionals in existing roles.	"No, I wouldn't say there was role clarity. There were definitely some role conflict issues…I guess going back to that now, both the interdisciplinary teams as a whole in the hospital and the case management team. There were a lot of them that seemed to feel threatened by the TNS's because we were asking some of the same questions." (S, Transition Nurse Specialist).

Notes. D = Director, M = Manager, S = Staff (level of professional that described the barrier)

Table 10b.

Presents Barriers to Interprofessional Collaboration and Descriptions with Quotes related to the Interprofessional Communication and Teamwork and team-based Practices Domains.

Domain	Barriers	Description	Quote
Interprofessional Communication Practices	Communication silos (D, M, S)	Persistent communication silos were described between the health and social services systems, and between hospital-based health systems.	"We broke down barriers that I believe exist; Not only believe but I know exist. Right now, in this country we have siloed systems of care. We have our healthcare delivery system that is siloed, and has now branched out to coordinating across care centers and entities. But there is no communication with the system of care that is in these patient home on a day to day basis providing a level of support that is helping them manage their health every single day. These systems, these organization operate in silos. We have such fragmentation." (D, Community CCTP Program)
Teamwork and Team-based Practices	Geographic isolation (D, M, S)	Strategies were used to overcome the barrier imposed by geographic distance between community-based and hospital based team members.	At first it was hard, depending on the hospital. But I found out that for this program to work successfully in the first few years, I had to be there every day in the hospital. I couldn't be at my telephone. I saw the telephone calls weren't as effective as in-person. (S, Community PHN Transition Coach)
	Staff turnover (D)	Turnover among staff was a barrier to team development that created a delay in collaboration as teams rebuilt rapport and trust.	I don't think it (turnover) was necessarily because things were especially bad. It's just that there's a fair number of people that are in transition at any one point in time…there was a lot of turnover at the time. And so, it made it a little difficult to build the kind of rhythm that you would normally get. (D, Hospital Pharmacy)

Notes. D = Director, M = Manager, S = Staff (level of professional that Described the barrier)

Chapter 7. Discussion

7.1 Introduction

The overall purpose of this study was to describe interprofessional collaborative competencies in practice in the setting of a transitional care program for older adults. The central research question was: How did interprofessional collaborative competencies manifest in practice, and what (if any) barriers existed to interprofessional collaborative competency enactment? This chapter includes a discussion of how each of the three conceptual models related to interprofessional collaboration helped to integrate the findings from this study: 1) D'amour and Odansan's conceptual framework for interprofessional collaborative competencies in education and practice; 2) IPEC's conceptual framework for interprofessional collaborative competencies; and 3) Bookey-Bassett et al.'s concept analysis of interprofessional collaboration in the context of chronic disease management among community-living older adults (American Association of Colleges of Osteopathic Medicine, 2011; Bookey-Bassett et al., 2017; D'amour & Oandasan, 2005). At the end of this chapter, an emerging conceptual model for interprofessional collaboration in practice in the context of transitional care for older adults is discussed that synthesizes the three conceptual models and expresses the findings in this study.

7.2 D'amour and Odansan's Conceptual Framework for Interprofessional Collaborative Competencies in Practice

D'amour and Oandasan's (2005) model of the professional system where interprofessional collaboration occurs was valuable in understanding and interpreting the findings in this study, particularly in reference to two areas: 1) the relationship between IPEC's value and ethics for interprofessional collaborative practice domain and the other three domains, and 2) the barriers found to interprofessional collaborative competency enactment. Here it is

useful to refer back to IPEC's definition of interprofessional collaborative competencies, as described by the American Association of Colleges of Osteopathic Medicine (2011), which was "the integrated enactment of knowledge, skills, and values/attitudes that define working together across the professions, with other health care workers, and with patients, along with families and communities, as appropriate to improve health outcomes in specific care contexts" (p. 2). The inclusion of values and attitudes in this definition of competency, along with the application of knowledge and skills in practice, may be problematic to arriving at a deeper understanding of how interprofessional collaboration operates in practice. Definitions of the concept of competency in nursing have been more limited to application of knowledge and skills in practice, and have not included values and attitudes (Tilley, 2008). Values and attitudes, along with beliefs and ethical principles, may be more in line with definitions of organizational culture than competency (Schein, 1990). What emerged from this study was that the domain of values and ethics for interprofessional practice may be more reflective of an interprofessional collaborative culture within and across health and social services organizations that is more characteristic of the milieu in which interprofessional collaboration occurs rather than a competency of a health professional involved in that collaboration. Schein (1990) has defined organizational culture as "a pattern of shared basic assumptions learned by a group" (p. 18). This definition is more inclusive of the values, beliefs, attitudes and ethical principles that are included in the values and ethics for interprofessional practice domain in the IPEC conceptual model (Schein, 1990). It is posited here that the domain of values and ethics for interprofessional practice, rather than being defined as a competency per se, is better defined as a component of an interprofessional collaborative culture. A new definition posited here of interprofessional collaborative culture is shared values, attitudes, beliefs and ethical principles shared among health professionals who are

in collaborative practice together. As such, it is more of an organizational system factor (similar to those described by D'amour and Oandasan) that is an antecedent to interprofessional collaboration, than it is a competency. A characteristic of the interprofessional collaborative culture that emerged from the data was that the culture was evolving and developing over time as exemplified by the shared values of emerging mutual respect, or the description of co-opetition that proceeded cooperation.

A key example of the evolution and development over time of interprofessional collaborative culture was the shared value of emerging mutual respect in the value and ethics domain. Community-based public transition coaches and hospital-based transition nurse specialists both described in this study the need to pro-actively inform physicians about their understanding of the patients, particularly in regard to social determinants of health, in order for the physicians to find value in that information. This occurrence reflects a similar theme that was found in the qualitative study by McDonald et al. (2012) that described interprofessional power dynamics between physicians and nurses in regard to information sharing. It was described in this study that without pro-active, in-person communication, the physicians most often did not take the time to read the notes of the public health nurses even when they were available to them in the electronic health record. This power dynamic that existed in practice was overcome in time with pro-active and intentional effort of the public health nurses and transition nurse specialists.

D'amour and Oandasan's (2005) model of the professional system where interprofessional collaboration occurs was also useful for organizing and understanding the barriers to interprofessional competency enactment that emerged from the study. D'amour and Oandasan's (2005) described system factors at the micro level (interactional), meso level

(organizational), and macro level (county, city, state or nation). In this model, all of the barriers to interprofessional competency developed described by health professionals in this study could be categorized as one of these system factors. For example, values and role conflicts could be understood as micro system factors operating at the interactional level between health professionals. Resource limitations and communication silos can be understood at the meso system level, within and between organizations and health and social services systems. In addition, the interprofessional collaborative culture that was just defined to encompass the domain of values and ethics for interprofessional practice, could be understood as an meso system factors that is a facilitator to interprofessional collaboration. Finally, barriers in the macro system that were described in this study included the competitive healthcare marketplace in San Diego County, the limitations of the national healthcare and social services systems that created ethical angst among CCTP health professionals, and the geographic distances between health professional operating from different sites throughout San Diego County that were a barrier to trust development.

D'amour and Oandasan's (2005) model of the professional system where interprofessional collaboration occurs conceptualized the patient at the center of collaborative practice, in contrast to IPEC's model that depicted patient and family centeredness at the outset of collaborative practice indicating is was more a characteristic or consequence of collaborative practice than an attribute. As reflected in the findings of this study, person and family centeredness was a shared value, but was also center to the collaborative care processes that emerged such as establishing trust between health professionals and patients and families, or involving patients and families in decision making that was at the core of collaborative care planning. For this reason, conceptualizing person and family centeredness at the center of the

collaborative care processes, similar to D'amour and Oandasan's (2005) model, is most reflective of the findings in this study.

7.3 IPEC's Conceptual framework for Interprofessional Collaborative Competencies

Thirty-seven of the 38 identified interprofessional collaborative competencies in the IPEC model were operationalized to this study. The only IPEC competency that was not found within the study data was in the teamwork and team-based practices domain and described using "available evidence to inform effective teamwork". While health professional described using research evidence to inform their clinical practice and transitional care intervention strategies, it may be that the research evidence available to inform effective teamwork is not robust enough to be readily used by health professionals to guide teamwork practices. The finding that 37 of 38 competencies were reflected in the study does show, however, that most of the identified interprofessional collaborative competencies are relevant to interprofessional collaboration in the context of transitional care for older adults.

In addition, key collaborative care processes were defined that encompassed individual interprofessional collaborative competencies. These collaborative care processes were characteristic of the knowledge and skills enacted in practice of health professionals working together and fit within the three domains of: 1) roles and responsibilities for collaborative practice, 2) interprofessional communication practices, and 3) interprofessional teamwork and team-based practices. The collaborative care processes were also described as in a stage of development where clinical experience with interprofessional collaboration refined and developed the skill. This is similar to the Benner model of novice to expert that has been posited in nursing (Benner, 1982). An example of this is the collaborative process of peer review where some staff nurses readily accepted feedback about how a discharge process could be improved,

and others were less receptive and defensive. The Transition Nurse Specialist, however, could increase the receptivity to the constructive feedback by reminding the clinical nurses of the shared goal of patient safety, by developing trusting relationships with the nurses, and by using language that was non-threatening as constructive feedback was shared. This demonstrates how interprofessional competencies such as peer review are developed and refined through experience with other health professionals in practice.

Another finding from this study was that interprofessional collaborative competencies did not always fit neatly within one of the four defined IPEC domains, but rather interprofessional competencies within domains were interwoven and interrelated. Two examples of this were the interprofessional competencies related to trust and person-centered care. As described in the results, trust was originally categorized as a shared value in the IPEC conceptual model but was moved to the teamwork and team-based practices domain because it was described in practice more as an intentional process that was undertaken to establish teamwork. This study finding that trust is a process was also found in McMurray et al.'s (2018) qualitative study where health professional described strategies they used to establish trust with interprofessional colleagues that included experiencing timely communication from an interprofessional colleague, reviewing thorough documentation of an interprofessional colleague, and hearing patients commend the work of an interprofessional colleague. A similar finding occurred with person and family centered care where it emerged as a frequently cited shared value among health professional in the CCTP program so it was categorized as a shared value in the value and ethics domain, but it also emerged as a critical component of collaborative care planning in the interprofessional communication domain and as a key aspect of establishing trust between health professionals and patients and families within the teamwork and team-based practices domain.

Finally, there were several de novo collaborative care processes identified in this study that included: 1) role clarity and responsibility flexibility, 2) engaging in collaborative care planning, 3) employing timely and effective peer review, and 4) using interprofessional communication strategies that optimize relationship building. These overarching collaborative care processes encompassed a priori competencies. These de novo collaborative care processes were reflected in the IPEC conceptual framework in the form of individual competencies, however, defining the overarching collaborative care processes that encompassed those competencies is useful to help health professionals in the academic and practice settings organize the information and more easily integrate the new knowledge into practice. The de novo codes that were identified and parented under collaborative care processes included involving the patient and family in decision making in the process of collaborative care planning and creating opportunities for in-person interaction in the process of using interpersonal communication strategies to optimize relationship building. These de novo codes reflected characteristics of the collaborative care process that were described by CCTP health professionals in practice that were not specifically identified by IPEC. More research would be needed to identify if these characteristics were unique to the CCTP program or to transitional care for older adults, or are reflected more broadly other examples of interprofessional collaboration.

7.4 Bookey-Bassett et al.'s Concept Analysis of Interprofessional Collaboration

Bookey-Basset et al.'s (2017) concept analysis model that posited a temporal relationship between characteristics of interprofessional collaboration in the context of caring for community-living older adults is also valuable for integration of the findings of this study. Bookey-Basset et al.'s model included organizational support as an antecedent to interprofessional collaboration. Organization support can be conceived of as a component of interprofessional collaborative

culture that was defined above and contained the elements of the IPEC value and ethics domain. In this respect, interprofessional collaboration culture can be conceptualized as a meso-system factor at the organizational level that is a facilitator to and proceeds interprofessional collaboration. The attributes ascribed to interprofessional collaboration by Bookey-Basset et al. are reflected in (but not inclusive of) the collaborative care processes that emerged in the roles and responsibility, interprofessional communication, and interprofessional teamwork domains. The collaborative care processes identified in the study were more comprehensive than those identified by Bookey-Basset et al. in part because they relied upon the list of identified interprofessional collaborative competencies previously identified by IPEC.

The majority of the consequences to interprofessional collaboration identified in the Bookey-Basset et al. model were included in the collaborative care processes identified in this study, which would be conceptualized more as attributes rather than consequences to interprofessional collaboration; however, provider and professional job satisfaction was discussed by CCTP health professionals as an outcome (or consequence). Similarly, McMurray et al.'s (2018) qualitative study also described that the nurse navigators involved in the transitional care intervention derived satisfaction resulting from their positive experience of collaboration with their community-based physician partners. This outcome can be more specifically defined as a particular type of staff experience described and defined by Stamm as compassion satisfaction, or, satisfaction derived from professional caregiving that has been previously found in other studies (Stamm, 2005).

This study did not specify an aim related to identifying the consequences or outcomes of interprofessional collaboration, however, the interview data did capture CCTP health professional staff's perception of some outcomes of interprofessional collaboration. Staff clearly

described the goals of the program to include improvements in the quality of care as measured by a reduction in avoidable hospital readmissions. Population health also was described by CCTP executive staff as a targeted quality outcome that was only realized in nascent form and needed further development. In addition, impacts to the outcome of patient experience were described in these study findings such as the trust that developed between the patient and the Transition Nurse Specialist, that was expanded intentionally to the community-based PHN Transition Coach by introducing the PHN by name and endorsing his/her qualifications and dependability. Trusting relationships between patients and staff would be an outcome indicator of patient satisfaction.

Finally, the costs of care also were tracked by CMS as an outcome (or consequence) to CCTP and the reduction of healthcare costs was frequently mentioned as a program target particularly at the administrative level. As previously discussed, in the CMS program evaluation of the San Diego CCTP site, there was a statistically significant net increase in Medicare Part A and Part B expenditures per discharge of $1,816 ($p < .01$), driven by higher non-inpatient expenditures (Medicare Part B) (Ruiz et al., 2017). This finding was similar to the counter-intuitive finding by Brewster et al. (2018) that a higher number of formal contractual relationships between AAAs and health systems resulted in higher Medicare spending. Some insight was gained in the findings of this study that could help to explain this outcome. In this study, a value conflict was described between the health system and the social services system between the value of cost efficiency reflected by health system staff compared to the service delivery value of the social services agency. It may be that this conflict reveals an opportunity to focus more on understanding the effectiveness and efficiency of interventions in the social services sector. More research should be conducted not only where the needs of older adults go

unmet, but also how best to address those needs in a cost efficient manner that will positively impact health quality and decrease healthcare costs.

7.5 Emerging Conceptual Model of Interprofessional Collaboration

The three conceptual models reviewed prior to this study all provided insight that helped to integrate the findings of this study to better understand how interprofessional collaboration operates in practice in the context of transitional care for older adults (American Association of Colleges of Osteopathic Medicine, 2011; Bookey-Bassett et al., 2017; D'amour & Oandasan, 2005). When the three models are synthesized, a new conceptual model emerges that serves to organize and describe abstractly the findings from this study. The outcomes of interprofessional collaboration depicted in the emerging conceptual model encompass all four of the Institute for Healthcare Improvement's (IHI) quadruple aim targets: 1) quality care, 2) cost, 3) patient experience, and 4) staff experience (Bodenheimer & Sinsky, 2017). Figure 4 is a depiction of the conceptual model that emerged from this study's findings that include system factors (including interprofessional collaborative culture) as an antecedent to interprofessional collaboration, the newly identified overarching collaborative care processes and their underlying competencies as attributes of interprofessional collaboration, and IHI's quadruple aim as outcomes of (or consequences to) interprofessional collaboration.

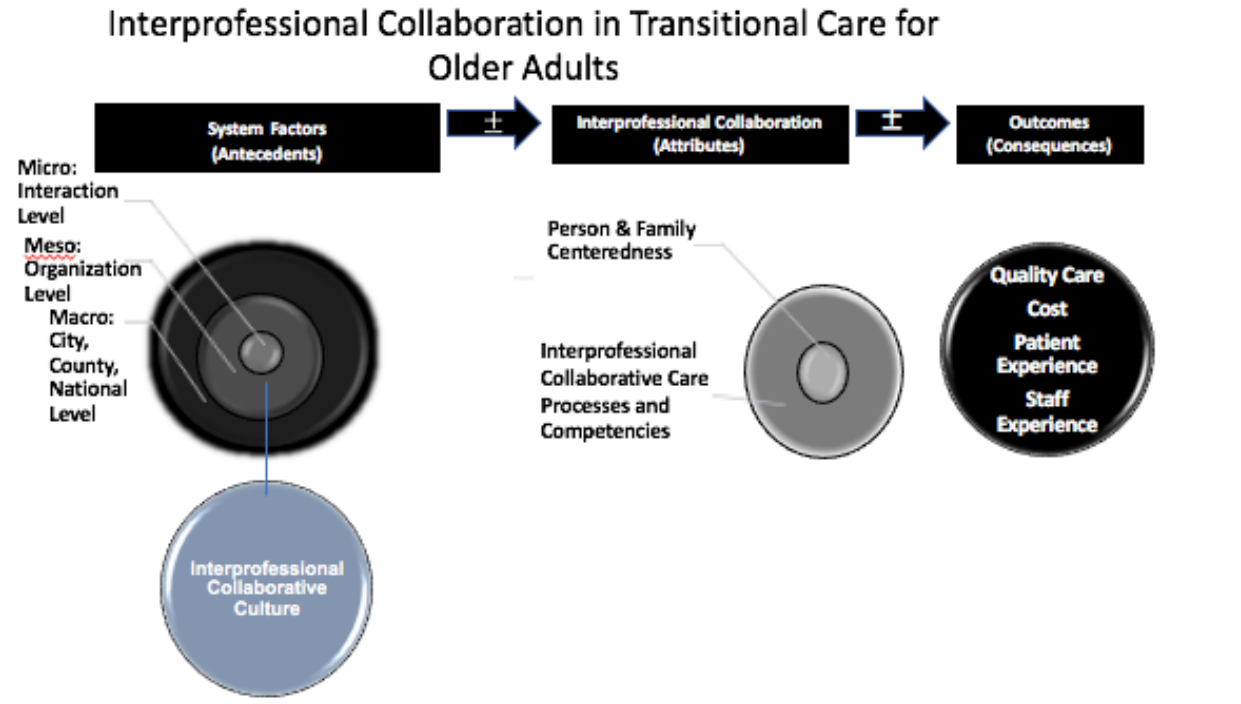

Figure 4. Depicts the conceptual model that emerged from the findings of this study, combining elements of three pre-existing conceptual models of interprofessional collaboration and interprofessional collaborative competencies (American Association of Colleges of Osteopathic Medicine, 2011; Bookey-Bassett et al., 2017; D'amour & Oandasan, 2005)

The emerging conceptual model is not meant to replace the IPEC conceptual model, but rather to serve as a depiction of this study's findings that could serve as the basis for further research into interprofessional collaboration in transitional care for older adults or more generally.

Chapter 8. Conclusion

8.1 Study Limitations

This study reflected the experience of staff involved at the administrative and clinical staff level at one academic health system and the collaborating community-based organization. It was not inclusive of the experiences of all 14 hospitals involved in CCTP at the San Diego site, and each hospital's intervention structure was unique so health professionals' experiences across hospitals could differ. In addition, this study did not directly reflect the experiences of community-based social workers in the San Diego CCTP program whose participation was sought but not attained in this study. In addition, given that the interviews of CCTP health professionals were 2-3 years after the program end date, it was not possible to identify and interview other health professional staff (i.e. physicians, case managers, staff nurses, etc.) that interacted with CCTP staff who may have had different perspectives. Despite these limitations, however, the experiences of unrepresented health professionals engaged in the CCTP program were described by their colleagues, their managers and their directors in their descriptions of the program.

The findings from the study are not generalizable to all health professionals' interprofessional collaborative experience in practice, either specifically related to care transitions for older adults, or more generally to care of patients with chronic diseases that require hospital and community-based management. They may be transferable, however, and it is possible that the collaborative experience in these contexts is similar to what was described in this study. but more research would be needed in those contexts to validate these findings. Further areas of research are described in section 8.3.

8.2 Implications

This study contributed to a broader understanding of interprofessional collaborative competencies in practice in the context of transitional care for older adults. It delineated interprofessional collaborative culture that has implications for healthcare leaders that seek to create an organizational culture that is conducive in interprofessional collaboration. It defined barriers to interprofessional collaborative competency enactment at the micro, meso and macro system level that could be used to proactively mitigate barriers and facilitate interprofessional collaboration. The interprofessional collaborative care processes defined in this study help to organize the defined interprofessional collaborative competencies into more easily understandable overarching processes that may be useful for teaching in the academic and practice settings. As described in the conceptual model of D'amour and Oandasan's (2005), the education and practice systems are interdependent and research in one system can better inform the processes in the other system. The new conceptual model for interprofessional collaboration that emerged provides a framework for future studies, both qualitative and quantitative, allowing other researchers to expand to investigate the relationships between antecedents, attributes, and consequences of interprofessional collaboration in practice.

8.3 Suggestions for Future Research

This study added to research knowledge about interprofessional collaborative competencies specifically in the context of an interprofessional, inter-hospital, inter-system (health and social services system) transitional care program for older adults. The research knowledge specific to interprofessional collaborative competencies in transitional care for older adults was not robust, but is of particular importance as the proportion of older adults increases

in the U.S. Further qualitative studies could be completed in other contexts of transitional care for older adults that could build upon this study's findings and further validate the model of interprofessional collaboration that emerged. This study could also be used to describe and measure the correlational relationships between the antecedents, attributes and consequences of interprofessional collaboration that could add to further understanding of this phenomenon.

8.4 Conclusion

In conclusion, a new conceptual model for interprofessional collaboration in practice in the context of transitional care for older adults emerged from this study's findings that combined the study findings and other conceptual models previously described. IPEC's value and ethics domain for interprofessional collaborative competencies was redefined as part of interprofessional collaborative culture, versus a competency. Interprofessional collaborative culture was further defined as an antecedent to interprofessional collaboration that existed in and between healthcare and social services organizations. Interprofessional collaborative care processes that encompassed competencies were identified and described. Multiple barriers to interprofessional collaborative competency enactment were described and categorized as system factors as the micro, meso and macro levels.

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