2019

Veteran Administration Disease Model to an Interdisciplinary Healthcare Model

Bertha J. Harris
Walden University

Walden University

College of Health Sciences

This is to certify that the doctoral dissertation by

Bertha Stewart

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. James Goes, Committee Chairperson, Health Services Faculty
Dr. Gigi Smith, Committee Member, Health Services Faculty
Dr. Raymond Thron, University Reviewer, Health Services Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2019

Abstract

Veteran Administration Disease Model to an Interdisciplinary Healthcare Model

by

Bertha Stewart

MAOM, Spring Arbor University, 2010

BSN, Spring Arbor University, 2007

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Health

Walden University

May 2019

Abstract

There is a growing need for healthcare teams within the Veterans Administration (VA) healthcare system to effectively collaborate and communicate to improve patient outcomes. The need to improve patient care in the Patient Aligned Care Team (PACT) has been well established. The scholarly literature does not provide evidence whether using the primary care PACT model on communication and teamwork by an interdisciplinary medical team ameliorates these communication breakdowns. Bronstein's design for interdisciplinary collaboration provided the overarching framework for this study. The purpose of this qualitative case study was to investigate the use of the PACT model on communication and teamwork by an interdisciplinary medical team as well as the perceived processes and results that the interdisciplinary collaborative approach has on production data. 18 participants consisted of licensed medical professionals and other licensed and non-licensed support personnel who were part of the PACT team. There were several challenges associated with the model, such as (a) a lack of clearly defined roles, (b) lack of communication and collaboration, and (c) division between the clerical and medical staff that created a hostile work environment. Other participants felt there were benefits associated with the PACT model, included (a) improved communication between team members, (b) increased collaboration among team members, and (c) enhanced care for patients using a comprehensive team approach. These findings may help leaders create policies, improve patient care, and create perceived processes to affect successful long-term programs for the future implementation of the PACT model.

Moving from a Veteran Administration Disease Model to an Interdisciplinary Healthcare Model

by

Bertha Stewart

MAOM, Spring Arbor University, 2010

BSN, Spring Arbor University, 2008

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Health

Walden University

May 2019

Dedication

This dissertation is dedicated to God and His Divine Love for me and my family; my mother, a strong and gentle soul who taught me the value of salvation, prayer and education, to trust myself, believe in challenging work, and that so much can be done with love; my father, for caring, protecting me, and instilling in me that I can do anything I want to do through God; my husband, for his love and support; my family, who believed in me and stayed on the journey with m; and young people: never stop believing in yourself; you can do all things through Christ who strengthen you. Thank-you!

Acknowledgements

"I attribute my success to this - I never gave or took any excuse." Florence Nightingale

Today, I am writing this note of thanks as the finishing touch on my dissertation. It has been a period of intense learning for me, not only in the scientific world but also on a personal level. I have concluded that it takes a village to write a dissertation. This journey has been long, but my husband, daughters, friends, and mentors were truly by my side rallying me to the finished line. Special thanks for all the memories of my mother (Mrs. Lucinda Stewart), my father (Mr. Robert Stewart), and my aunt (Mrs. Florida Moore) left behind to help me when I got tired; they taught me the value of salvation and education, and their prayers sustained me for this day.

Special mention goes to my Research/Evidence-Based Practice Coordinator, Dr. Brooke Pope, for her guidance and mentorship, Ms. Kay Bower, associate director of patient care, for believing in me and giving me the green light to pursue my dream, the Medical Center QUAD leaders, Ms. Kimberly Zippers, current executive director of patient care, my colleagues, and participants for giving me the opportunity to do this study. My Ph.D. journey has been a fantastic experience, and I thank God foremost. Thanks to my Walden University committee members, Dr. Jim Goes, chair, Dr. Gigi Smith, vice-chair, and Dr. Ray Thron, URR, wholeheartedly, who provided invaluable advice, feedback, and consistent encouragement as well as insightful editing assistance.

Similar, profound gratitude goes to Dr. Yvette Petti, who has been a genuinely dedicated principle investigator, friend, and mentor. Special mention goes to my mentors

Ms. Olivia DeMotts and Ms. Crystal Miller for going far beyond the call of duty in editing, advising, and helping me pull it all together. I am particularly indebted to my husband and family, and especially to my daughter Mrs. Mona Lisa Watson for her constant faith in my work, and for her editing assistance and listening skills (my pity times), in which I have very fond memories of.

Special thanks and love to my husband, Mr. Mark Harris, daughters, and their spouses (Mrs. Sharon James-White/ Mr. Leslie White, Mrs. Priscillia James-Lee/ Mr. Rosby Lee, Mrs. Cynthia James-Martinez/ Mr. Sonny Martinez, Ms. Trauna James, Mrs. Mona Lisa Watson/Mr. Anthony Watson, Mrs. Jasmine James Gist/ Mr. Phil Gist and Ms. Alanna Mae Harris, Mrs. Lekisha Vassel/ Mr. Nicholas Vassel, and grandchildren (Alexander White, Michaela James , Mackenzie James-Lee, Kerrigan Gist, Makaria James-Lee, Reina James-Martinez, Anna James-Martinez and Mia Watson).

Also, gratitude and thanks to my sister (Mrs. Rosie Montgomery/Mr. Daniel Montgomery) and my brother (Mr. Jerry Stewart/Ms. Bertha Morgan-Stewart) for their prayers, my ex-husband and children's father, Mr. Robert James, for almost unbelievable support and encouragement, my late Pastor Dr. Matthew Wright, for reminding me of salvation and education, my current Pastor Dr. Strick Strickland for spiritual support, and to my adopted sister Mrs. Dorothy Whitten for her friendship, prayers, and encouragement. They are the most important people in my world, and I dedicate this dissertation to them.

Lastly, I want to thank all those people who, once upon a time, were my teachers and who helped me begin this long journey. Their names are too numerous to mention, but many of them inspired me to continue learning and sharing with others.

Thank you very much, everyone!

Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction to the Study

As many as 440,000 people die annually from preventable medical errors (James, (2013). In the health care environment, delivery processes consist of multiple interactions and patient handoffs among health care providers with different levels of expertise, education, training, and background. The lack of collaborative efforts and communication failures are the foremost issues about patient safety incidents in health care (Canadian Patient Safety Institute, 2011). Over 70% of safety accidents from 1995 to 2003 were a result of communication failures (Joint Commission, 2011). Mujumdar and Santos (2014) claimed that there is sufficient evidence in the literature to demonstrate that communication failure is a detriment to patient safety and that 80% of serious medical errors worldwide take place because of miscommunication between healthcare providers.

Makary and Daniel (2016) found that medical errors accounted for more than 251,000 deaths in the United States in 2013, compared with 611,000 deaths from heart disease and 585,000 deaths from cancer. Health care organizations, including the Veteran Administration (VA), have come under heavy scrutiny and received criticism regarding structure, quality, and cost of health care in the United States (Stremikis, Schoen, & Fryer, 2011). In the original and second report titled *Crossing the Quality Chasm: A New Health System for the 21st Century* the U.S. Committee on the Quality of Health care called for a reshaping of health care with a focus on professionals and organizations (Institute of Medicine, 2001). In 2010, the Office of Inspector General for the Department of Health and Human Services cited that hospitals with less than quality

care contribute to approximately 180,000 patients in Medicare annually. The VA health care system faces many challenges. Among these challenges are (a) changing demographics because of the aging population, (b) lack of coordination along the continuum of care, (c) better access to care, (d) operational inefficiency, (e) safe patient care, and (f) a lack of providers trained to deliver interdisciplinary care (Stremikis et al., 2011). To address some of these challenges, the VA implemented the patient centered medical home model in 2010, now known as the Patient Aligned Care Team (PACT; Stremikis et al., 2011).

This transformation began with primary care as the foundation extending to other areas of the health care delivery system. It is designed to help veterans maintain health, reduce wait-time, and evoke quality improvements in the health care system. Achieving these goals required the VA to implement an interdisciplinary collaboration model to improve care and ensure sustainability of the system (Stremikis et al., 2011).

Teams of professionals, including primary care providers (nurse practitioners, physicians, physician assistants), licensed practical nurses (LPNs), registered nurses (RNs), social workers, and medical clerks make up the team for the delivery of the VA medical model of care (Stremikis et al., 2011). Implementing this model came with a cost requiring a paradigm shift on all levels, including new scheduling methods, training of staff for their team-based roles, and engaging patients as active participants in a new system (Stremikis et al., 2011).

The VA, in a team-building effort to establish a nationwide training program, spent more than $227 million to hire additional clinical staff to participate in regional

learning collaboratives (Stremikis et al., 2011). While health care teams at the VA work to effectively coordinate and manage patient care, their training is lacking in nontechnical skills and interdisciplinary collaboration despite recognition that interdisciplinary teams deliver optimum care (Greiner & Knebel, 2003). Due to this, there are communication breakdowns within interdisciplinary teams, which result in negative effects, thereby jeopardizing VA patients' safety and well-being. To combat this, I examined the use of the primary care PACT model on communication and teamwork by VA teams to see the effects.

Chapter 1 includes a detailed background and outlines the conceptual framework, addressing the connection between interdisciplinary collaboration teams and professional communication, or the lack thereof. The framework led to the central research questions, as well as an investigation of the assumptions, limitations, and delimitations of the study. Chapter 2 includes a review of the literature with an interdisciplinary approach, components of effective collaboration and professional communication, a summary of articles reviewed, and an analysis of the articles. Chapter 3 includes an overview of the study methods and support for the chosen methodology. Chapter 4 includes a breakdown of the data analysis and results, while Chapter 5 includes the final conclusions, recommendations, and implications of the findings.

Background

The United States Department of Veterans Health Administration (VHA) is the largest integrated health system in the world, with more than 1,700 hospitals, primary clinics, extended care facilities, residential areas, recovery-counseling centers, and other

facilities delivering primary and specialty care to veterans (Stremikis et al., 2011). It also offers an array of services in more than 152 medical centers. Given the nature of a fragmented health care system, the VA health care system is not without gaps and missed opportunities, thus affecting high-risk primary care patients. Healthcare providers have increasingly sought to implement programs that coordinate the care patients receive (Stremikis et al., 2011).

With this distinction in mind, VHA decided to alter its approach to patient care, and in April 2010 implemented a patient-centered medical home (PCMH) model in more than 900 primary care clinics across the United States (Stremikis et al., 2011). Considering the need for a highly developed, efficient, and integrated health care system, the inception of the PACT model at one of the local Veterans Integrated Service Network (VISN) hospitals became a reality authorizing a team-based primary care that stresses the provision of care that is accessible, timely, coordinated, continuous, affordable, comprehensive, compassionate, and sustainable.

Bodenheimer & Yoshio Laing, 2007 introduced the team model initiating a Primary Care Innovation. In 2011, the local VA formed a PACT committee to oversee the functional and operational PACT program that consisted of primary care providers (nurse practitioners, physicians, physician's assistants) who lead the interprofessional teams or little teams in the care delivery. The hospital teams include registered nurses (RNs) as care managers, licensed practical nurses (LPNs) or health technicians, social workers, and medical clerks. Together, the teams share responsibility for partnering with patients to manage their care. In 2012, the PACT interdisciplinary teams were fully

implemented and composed of 11 primary care providers for the local VA clinics,15 primary care providers for community-based outpatient clinics (CBOC) A, four primary care providers for CBOC B, three primary care providers for CBOC C, and three primary care providers for CBOC D (see VA PACT Operational Plan, 2012).

According to Klein (2011), The Commonwealth Fund reported that the PCMH model supports the VHA Universal Plan to redesign the health care delivery system through increasing access, care coordination, communication, team collaboration, and continuity of care. With this design, like any other team-based model, effective communication between health care professionals and patients is essential to (a) coordinate health care services across the continuum of primary care settings, (b) integrate comprehensive health care services, and (c) protect patient safety (The Patient Aligned Care Team (PACT) Handbook, (2014, 2017),

Effective Communication and Teamwork

Effective communication and teamwork are essential components for achieving high performance and in creating a culture of "zero tolerance" (Canadian Patient Safety Institute, 2011). Moreover, team collaboration is critical to the delivery processes in health care at all levels (Stremikis et al., 2011). The Sage Journals, (2014), cited that collaborative teams bring unique skills, talents, and knowledge to assist patients and families with health care decision. According to the Joint Commission (2011), when health care professionals are ineffectively communicating or a lack of communication occurs, patients are at risk for medical errors. Maintaining communication is important

because medical errors are caused by a health care team's failure to communicate, which contributes to the injuries and deaths (Joint Commission, 2011).

Barriers and Challenges

Many barriers challenge a team's cohesiveness. Some of the barriers include (a) discipline background, (b) staff turnover, (c) unidimensional approach to care delivery, and (d) professional hierarchy (O'Daniel & Rosenstein, 2008). Considering health care regarding reliability, it is critical for the organization to understand and harness tools that enhance communication as well as teamwork for safe patient care. The Institute of Medicine (IOM; 1999, 2001) recognized the complexity of reducing medical errors and called for an interdisciplinary collaboration approach across disciplines and stakeholders to address these challenges. Since its inception in 2011, the PACT model at the local VISN VA faces perceived barriers and challenges related to PACT communication and team collaboration, staff turnovers, staff vacancies, discipline background, and language. From the inception of the PACT, there were some concerns with the roles of health techs in PACT clinics. This has limited their roles in PACT clinics and has made it difficult for some teams to be fully functional (see VA PACT Operational Plan, 2012).

Literature Gap

A gap in the literature is present because researchers have largely focused on describing the successful elements in individual programs. The current body of literature amply outlines structured communication methods that will help to decrease medical errors. However, more research is needed to effectively handle miscommunication and

communication barriers in pressing situations, establishing a cause and effect relationship between human factors and clinical results (see O'Daniel & Rosenstein, 2008).

Statement of the Problem

Further development of aligned professional communication and team collaboration in the local VA is needed, as indicated by decreased patient satisfaction findings, decreased employee satisfaction findings, and PACT team reports (Stremikis et al., 2011). Per Grant et al. (1995), information sharing is a two-way process, and one of the main reasons for communication failure is the tendency to focus more energy on what we say or what we want to say rather than listening and understanding the information received from others. The general problem is that communication breakdowns in the interdisciplinary model have negative effects on VA teams' abilities to resolve relationship conflicts, communicate effectively with each other, and foster a team collaboration environment to ensure patient safety. The specific problem is that it is unknown whether using the primary care PACT model on communication and teamwork by an interdisciplinary medical team ameliorates these communication breakdowns.

There is a need for sufficient staffing to ensure that all patients are assigned to a patient panel so that they may receive the appropriate health care. The Patient Aligned Care Team (PACT) Handbook, (2014, 2017), outlines that communication between health care professionals and patients is critical to successfully coordinate health care across all care settings, integrate comprehensive health services, and protect patient safety. Additionally, the guidelines emphasize the importance of having informal communication among the PACT team to enhance prompt information to be transferred,

structured communication processes to enhance the team's ability to provide accurate and relevant information regarding patients and patient care, and respectful communication among PACT staff that allows each person to have a voice in making decisions that affect the patient care and team collaboration (The Patient Aligned Care Team (PACT) Handbook, (2014, 2017),

An extensive review of the literature has demonstrated that professional communication, collaboration, and teamwork are not always present in clinical settings. For example, Sutcliffe, Lewton, and Rosenthal (2004) showed that organizational, relational, and social structures contribute to failures in communication that have negatively influenced health care outcomes and safety. Investigating each discipline, the work of the interdisciplinary team, the perceived processes, and results of the interdisciplinary collaborative approach via the qualitative descriptive case study to produce rich data for leadership development in the creation of policies, improved patient care, and perceived methods to affect long-term successful programs could remedy the problem.

Purpose of the Study

The purpose of this qualitative descriptive case study was to investigate the use of the primary care PACT model on communication and teamwork by an interdisciplinary medical team as well as the perceived processes and results that the interdisciplinary collaborative approach had on patient experiences. This may be of interest for leaders to create policies, improve patient care, and create perceived processes to affect successful long-term programs for future implementation of the PACT model. In a large portion of

the literature regarding collaboration, researchers described how collaboration should look, but not the process of collaboration and how to achieve it (Stremikis et al., 2011).

In addition, a comparison of the work of each discipline, the work of the interdisciplinary team, and their possible influence on a more efficient health care delivery system can be attained. This may produce data that could influence the inception and development of policies and improve patient care and perceived processes to affect long-term successful programs and the implementation of future PCMH models.

Conceptual Framework

Bronstein's design for interdisciplinary collaboration provided the framework for this study; various researchers cited an interdisciplinary approach as a model for interdisciplinary collaboration (MIC; Bronstein, 2003; Petri, 2010). Previous researchers thought the MIC model was a generic framework of collaboration among social workers and other health care providers, but through the synthesis of a multidisciplinary theory of collaboration, service integration, part theory, and ecological systems theory, Bronstein's model fundamentally represents a successful collaboration (Bronstein, 2002, 2003). The design consisted of four components: (a) team collaboration for goal accomplishment, (b) newly designed professional activities for the maximization of individual expertise, (c) shared responsibility for goal achievement, and (d) reflection on the process of collaboration to increase member awareness.

The second part consisted of four influences on interdisciplinary collaboration, such as professional affiliation or role, personal characteristics, structural, organizational characteristics, relationships among the team, and history of collaboration (Bronstein,

2002, 2003). Sommers, Marton, Barbaccia, and Randolph (2000) further supported the structure of effective interdisciplinary collaboration in patients; medical home healthcare practices, such as chronic health diseases for seniors. The rationale supporting the use of the MIC (Bronstein, 2002, 2003) as a conceptual framework for the study lies in the similarities of other health disciplines, such as the primary care collaborative practices for chronically ill seniors and hospice.

In reviewing the literature on interdisciplinary collaboration, Bronstein (2002, 2003) extended his understanding to a broader, generic concept of interdisciplinary collaboration based on the multidisciplinary literature that helps to define collaboration as dimensions consisting of processes and outcomes of individuals and organizations that work together. The components of the model include the interprofessional processes from other health care disciplines (Bronstein, 2003):

1. Maximize the individual expertise,
2. Improve team collaboration,
3. Reflect on the process of collaboration,
4. Create new professional responsibilities,
5. Achieve established goals
6. Improve patient care,
7. Maximize the individual expertise,
8. Increase member awareness, and
9. Demonstrate shared responsibility

Oliver, Wittenberg-Lyles, and Day (2007) asserted that the holistic approach to the hospice patient care depends on the expertise of an interdisciplinary team of primary care providers, nurses, social workers, and others. PCMH models and programs use similar interdisciplinary health disciplines. In the design, colleagues from varying professional disciplines, patients, and their families are all committed to patient-centered care. Based upon this premise, Bronstein's (2003) interdisciplinary collaboration model was the most appropriate, overarching theoretical framework to guide this study.

Research Questions

In this qualitative, descriptive case study, the work of each discipline was compared to the work of the interdisciplinary team, and the perceived processes and effects of the interdisciplinary approach were examined closely. Additionally, the study may generate knowledge that could be of interest to leadership development in the creation of policies, improved patient care, and perceived processes to affect successful long-term programs and the implementation of future PCMH models.

The central research question of this study was as follows: How is the primary care PACT model on communication and teamwork used by an interdisciplinary medical team? In this study, the following research subquestions were addressed:

- Subresearch Question 1: What are the challenges, if any, related to resources in implementing an organizational change for the transformation?
- Subresearch Question 2: What has worked well or been a benefit or advantage, if any, of using the interdisciplinary collaborative approach?

- Subresearch Question 3: What were some organizational factors challenges, if any, for establishing standardized, efficient, and effective teamwork and communication training?

Nature of the Study

The nature of the study was a qualitative descriptive case study. Case study research is typically flexible and allows for an exhaustive review of data relevant to a specific bound case (Yin, 2014). The case of interest to this study was an interdisciplinary medical team who has implemented the primary care PACT model. This method was chosen with the intention of gathering rich, detailed data regarding the transition to a primary care PACT model, with a specific focus on the challenges and benefits of this approach and how the implementation of this model contributes to teamwork and communication (see Yin, 2014). Qualitative data are greatly detailed and useful when the aim of the research is to provide a comprehensive overview of participant perceptions (Johansson, 2003). In the present study, members of an interdisciplinary medical team were asked to provide their perceptions regarding the transition to a primary care PACT model and were prompted to describe the use of this model within their setting.

Because the research was descriptive in nature, the quantitative approach was rejected. A quantitative approach is useful when the specific variables of interest are known and the goal is to determine statistically significant effects among variables of interest (Pagano & Arnold, 2010). This approach was inapplicable to the current study, as concepts such as challenges and benefits remain unknown, and the purpose of the study was to describe what these variables may be. For this purpose, the descriptive case

study was chosen. The descriptive case study stands apart from an exploratory case study in that the data collection and case descriptions are directed using a reference theory or model (Scholz & Tietje, 2002). Scholz and Tietje (2002) further defined a descriptive case study as a research method in which a case may be assessed to determine "whether and in what way a case may be described when approaching it from a certain research perspective." Using this method, the social interaction of the roles and communication patterns and mechanisms of the members of the PACT were examined about the interdisciplinary collaboration model. Additionally, the interdisciplinary level and mechanisms of collaboration between team members within a VA Medical Center and four community-based VA outpatient clinics were explored. Bronstein's (2002, 2003) model of interdisciplinary collaboration provided the overarching theoretical framework for this study, and I addressed how this case may be described regarding this theory.

Definition of Key Terms

The operational definitions of the following terms for this study application are presented in this section.

Interdisciplinary health care teams: Interdisciplinary health care teams are defined as a collective group of members from autonomous disciplines who work interdependently and share responsibility for planning, problem solving, and decision-making to reach shared goals and outcomes (Drinka, 1994). For PACT, this includes primary care provider (physician, physician's assistant, and advanced practice nurse practitioner), LPN, RN, social worker, and a clerk (The Patient Aligned Care Team (PACT) Handbook, (2014, 2017),

Multidisciplinary health care team: Multidisciplinary health care teams are comprised of groups of providers working independently to assess, diagnose, treat, and measure outcomes separately and subsequently share results with others (Batorowicz & Shepard, 2008; Choi & Pak, 2006). In the multidisciplinary approach, each team member is only responsible for the activities related to his or her discipline and formulates separate goals for the patients (Batorowicz & Shepard, 2008; Choi & Pak, 2006).

Primary: An organization that uses an interdisciplinary team to provide care to individuals with chronic diseases as regulated by Medicare and other insurance carriers in primary care setting.

Primary care service chief: The primary care service chief in the PACT model is the senior clinical leader in the facility and is accountable for management and operations of the primary care service (The Patient Aligned Care Team (PACT) Handbook, (2014, 2017),

Team clerk: The team clerk in a PACT model acts as the initial point of contact for patients, reviews primary care providers' assignments, and checks veterans in for an appointment or makes appointments when needed to meet patients' needs ((The Patient Aligned Care Team (PACT) Handbook, (2014, 2017),

Team patient care technician (PCT): The team PCT in a PACT model obtains vital signs, completes clinical reminders, completes additional pain screening for pain four and over, performs venipuncture, and obtains lab samples and other duties assigned by the RN (The Patient Aligned Care Team (PACT) Handbook, (2014, 2017),

Assumptions

Leedy and Ormrod (2010) postulated, "Assumptions are so basic that, without them, the research problem itself could not exist" (p. 62). Through the participation in this study, interdisciplinary team members were enabled to provide answers based on experiences regarding the implementation of the primary care PACT model. As such, several research assumptions exist in the study. The first assumption was that the participants responded candidly when completing interviews and offered truthful accounts to me. Another assumption was that the selected participants had experience with the interdisciplinary collaborative approach. To provide informed opinions on the interdisciplinary approach, I assumed participants to have experience with this approach in the work setting.

Delimitations

Delimitations constitute intentionally established limitations constructing the scope of a study (Creswell & Creswell, 2018). The delimitations in this study primarily related to the selected sampling frame in this study. One of the delimitations in this study was that participation were delimited to health care workers within the VA system and CBOCs; I did not include the experiences of those who work in hospitals outside of the VA.

Because of this delimitation, the results of this study may not be generalizable to health care workers in other settings. Further, I delimited sampling to individuals within the following occupational roles: RNs, primary care providers, LPNs, social workers, and

health technicians and clerks. Because of this delimitation, the results generated from this study may not apply to other medical personnel within the VA system.

Limitations

Limitations of a study denote influences that, once a design and method are chosen, are outside of the researcher's control. These influences may influence the research methods or analysis of data (Creswell & Creswell, 2018). One limitation in the current study was the use of purposeful sampling. Because of the use of purposeful sampling, the selected sample for this study may not fully represent the target population (see Creswell & Creswell, 2018).

Further, qualitative data are not useful to determining effects or relationships. As such, through the results of this research, scholars may be unable to infer any relationships between the implementation of a primary care PACT model and effective teamwork or communication with any degree of certainty (see Pagano & Arnold, 2010). Within the qualitative approach, researcher biases may arise. Though a researcher does everything in their power to negate these biases, the researcher remains the instrument through which data flow. Because all data are filtered in this way, certain nuances may not be identified, and some bias may be present in the interpretation.

In addition, the use of a case study binds the research to the specifically chosen case where results are not generalizable outside of the case of interest. Further, the descriptive nature of this case study limits the research to describing the case only within the framework of Bronstein's (2002, 2003) model of interdisciplinary collaboration.

Thus, if a finding cannot be aligned to describe the case outside of this model, it may be impractical to the final analysis.

Significance of the Study

The significance of the study was to address team communication and barriers and to identify effective and ineffective modalities of team communication within a PACT. The results of the study add to the current body of information regarding the benefits of an interdisciplinary collaborative approach to the health care discipline and show how the information can help improve implementation and coordination of the team design. Additionally, though this study, I generated information that could be of interest to hospital board members, stakeholders, administrators, and those in charge of the creation of policies, and the results may lead to improved patient care, improved perceived processes to affect successful long-term programs, and the implementation of future PCMH models.

Team members and leaders could be given an opportunity to identify ways to clarify their role and to enhance team collaboration. Furthermore, exploring the relationship between the team members may increase awareness of the team members, of their areas of strengths, and needed areas for improvement. The study may be important for RNs in the primary care setting, considering the current trend, and for support in evidence-based practice. Nurses focus on self-determination (Luptak, 2004), person-in-environment, and strengths perspectives (Reese & Raymer, 2004) on micro patient-centered care disparities (Kramer & Bern-Klug, 2004).

On a macro level, nurses serve as individual contributors in the interdisciplinary team. Results of the study generated data that may be of interest for leadership development for patient-centered medical homes. Leadership development can deepen the role of the interdisciplinary team members and may lead to further implementation of other patient-centered medical homes.

Implications for Social Change

One implication for positive social change is the potential for knowledge that is helpful to program developers, health care providers, leaders, and other researchers who are searching to identify improved patient outcomes in different primary care settings. Another implication for positive social change is to identify approaches that will ensure the future sustainability of the PACT model and ensure future nontechnical training for health care providers (Stremikis et al., 2011). Furthermore, the results of this study may be useful to VA hospital board members, stakeholders, and administrators, as the results may lead to improved patient care, improved processes to affect successful long-term programs, and the implementation of future PCMH models.

Summary

Healthcare has not historically been viewed as a team business; people used to be treated by one doctor (generalist) who lived in the community, visited homes, and was available to attend to the needs of the people at any given time. If nursing care was required, the family members were often the caregiver, or the care was provided by a private-duty nurse who lived with the family (National Academies of Science, 2016).

Although this concept mirrored teamwork, healthcare has greatly changed, and the pace has become more drastic within the past 20 years (National Academies of Science, 2016).

The purpose of this qualitative descriptive case study was to deepen understanding of the perceived methods and potential barriers to interdisciplinary collaboration in patient-centered medical homes (see Bronstein, 2002, 2003). Interdisciplinary collaboration is supported and promoted as a model of patient-centered, health care delivery; however, barriers, influences, and antecedents to the successful implementation of interdisciplinary collaboration remain elusive (Petri, 2010).

Chapter 2 includes literature reviewed regarding how effective teams are characterized by a common purpose, respect, trust, and collaboration. The rally for employees and leaders should be focused on behavioral standards and their link to patient safety. The rally for employees should also address areas of communication that affect information exchange, collaboration, and the appreciation of the different roles and responsibilities. Chapter 2 includes a review of present and past literature of an interdisciplinary approach, components of effective collaboration and professional communication, a summary of articles reviewed that support the need for interdisciplinary collaboration, and effective communication for successful health care teams in the PACT model.

Chapter 2: Literature Review

The purpose of this qualitative descriptive case study was to investigate the use of the primary care PACT model on communication and teamwork by an interdisciplinary medical team as well as the perceived processes and results that the interdisciplinary collaborative approach has on data production data. Using the primary care PACT model on communication and teamwork by an interdisciplinary medical team, communication breakdowns that result in negative effects are ameliorated. Many challenges face the VA health care environment. Among those challenges are changing demographics reflective of an aging population, lack of coordination along the continuum, pressure on care access, advanced technology, process efficiency, patient safety, and emerging evidence supporting interdisciplinary care (Stremikis et al., 2011). To address these challenges, the VA implemented the PCMH in 2010.

Stremikis et al. (2011) reported that the VA transformation is designed to help veterans maintain health, reduce time wasted for appointments, reduce waiting room time, secure test results, and evoke quality improvements for better patient outcomes. To achieve these goals and ensure sustainability of the healthcare system, the VA implemented interdisciplinary teams (Rubenstein et al, 2014). The PCMH goal is to transform the VA healthcare delivery system through team-based care (Stremikis et al., 2011).

In healthcare, a significant proportion of errors can be attributed to failures in communication and a lack of effective teamwork (Hannaford et al., 2013; Joint Commission, 2010). Communication and teamwork deficiencies have been cited by the

Joint Commission (2010) as the cause in over 70% of adverse events between 1995 and 2003. Therefore, the Joint Commission (2010) published a new guideline for advancing patient-centered care.

While healthcare teams at the VA work to coordinate and manage patient care, they are not trained well in nontechnical skills, including teamwork and communication (Hannaford et al., 2013). Lack of these skills may contribute to unexpected deaths/injuries associated with medical errors (Canadian Patient Safety Institute, 2011). McCarthy and Klein (2011) reported that effective communication and teamwork are essential components for achieving high performance and creating an organizational culture of zero percentage patient harm. Ambiguity in team structure may lead to disagreement within teams particularly on task allocation, authority, roles, and responsibilities (Hannaford et al., 2013).

Literature Search Strategy

Bronstein's model of interdisciplinary collaboration (Bronstein, 2002, 2003) provided the guiding framework for discussing discoveries from the literature and supporting the research for this current study. The purpose of this qualitative, descriptive case study was to deepen the understanding of the perceived processes and potential barriers to interdisciplinary collaboration in patient-centered medical homes (Bronstein, 2002, 2003). In addition, I compared the work of each discipline, the work of the interdisciplinary team, and the potential influence of a more efficient health care delivery system that empowers patients as partners in their care, improves professional communication, and fosters a collaborative team environment.

The search queries commenced with a focus on a wide-range of terms, including *interdisciplinary collaboration, interprofessional collaboration, patient-centered health care, multidisciplinary teams, collaborative practice, integrative health care teams, staff satisfaction, structure, context, processes, outcomes, team effectiveness, cohesiveness, primary care,* and *health teams.*

Specific searches were done to obtain articles from nursing, medicine, and allied health databases, CINAHL, Medline, Medscape, OVID, and PubMed to locate studies related to interprofessional collaboration, as was reported in some of the literature. Some of the searches were successful, and others were not. The reviews also included secondary literature searches in EBSOhost, ProQuest, and ERIC to provide current and historical information on contextual factors and theoretical perspectives on interdisciplinary collaboration. Over 100 peer-reviewed articles were reviewed to compile the literature review.

Overview of Interdisciplinary Collaboration

The changing organization and priorities of the healthcare environment are creating imperatives. Therefore, there is a diverse interest in a new platform for interdisciplinary teamwork (Grumbach, 2009). The interdisciplinary collaboration was further identified as a strategic approach to providing the best quality care for patients who require multiple services or who use acute and primary health care services (Grumbach, 2009). The driving force for enhancement of interdisciplinary collaboration requires supportive structure from the VA healthcare system. However, methodologies

for implementation and outcomes related to interdisciplinary and collaborative care remain abstract within fast-paced health care environments (Grumbach, 2009).

There are many barriers to effective multidisciplinary team development and function. Among these barriers are (a) professional unresolved relationship conflicts and mistrust, (b) diverse disciplines, (c) creation of teams with staff turnovers, (d) the silo approach to healthcare, and (e) professional hierarchies' cultures that affect quality patient care (Canadian Patient Safety Institute, 2011). Considering health care regarding reliability, it is critical that the organization understand and harness tools that enhance teamwork and communication for safe patient care (O 'Daniel, 2008).

Collaborative professional skills become a priority to address the complexity of patients' needs within the framework of primary health care, and the social accountability for health care cost, safety, and access *(*Farrell, Payne, & Heye, 2015). Even though there is some momentum for legislative changes, some researchers have concluded that the overall regulatory and legislative frameworks are not favorable for interdisciplinary collaboration (Wong, 2005).

Overview of Communication and Team Collaboration

The literature includes many definitions for communication; O'Daniel et al. (2008, p.4) asserted that Webster Dictionary defined communication as "the imparting or interchange of thoughts, opinions, or information by speech, writing, or signs." Communication is not just verbally expressed; O'Daniel et al. indicated that 93% of communication is impacted by tone, attitude, and body language, and only 7% of meaning and intent is based on spoken words. The meaning of the word can be

influenced by the delivery and style to include the way the speaker speaks, stands, and looks at someone. However, e-mails, written notes, or text messages can also transmit critical information, which can cause easier miscommunication and negative outcomes (O'Daniel et al., 2008).

O'Daniel et al. (2008) defined collaboration as "health care professionals assuming independent roles, and cooperatively working together, sharing responsibility for problem-solving and making decisions to formulate and carry out plans for patient care" (). Researchers have shown that effective communication among the disciplines encourages teamwork and promotes care continuity and role clarity within a patient care team. Additionally, effective communication encourages collaboration and benefits error prevention (O'Daniel et al., 2008).

This chapter consists of a synopsis of the recent literature related to interdisciplinary collaboration. In the review, I focus more on identifying major features in the literature that inspire discussions about structural and organizational issues related to professional communication and teamwork in advancing interdisciplinary collaboration. The literature in this review emanates from varying types of sources. Researchers have called for a collaborative and patient-centered approach to PACT team success, and I reveal the gap in the literature that supports the need for this qualitative study.

Given the variety of problems influencing interdisciplinary collaboration and the differing ways it is discussed and defined in the literature, I conducted this literature review to support future implementation of interdisciplinary models of care in the VA

healthcare system. I organized the literature review into two parts with subheadings. In the first part, I summarize the articles reviewed, including the citation and a brief description of its purpose, as well as the evidence base supporting interdisciplinary collaboration.

In the second part, I summarize the key findings that stem from the literature and I organize the review according to the following subheadings: (a) interdisciplinary collaboration terminology that clarifies the use of terms related to interdisciplinary care intended to guide stakeholders in considering frameworks, structures, and processes that may facilitate interdisciplinary collaboration; (b) interdisciplinary collaboration and the evidence base that provides a synthesis of some of the evidence in the literature about the role, benefits, costs, and challenges related to interdisciplinary models; and (c) interdisciplinary collaboration and regulatory changes that provide an overview of the regulatory issues and challenges associated with the move toward implementing interdisciplinary models in the VA system and others. For the majority, key reference sources stemmed from evidence-based research related to the rationale for interdisciplinary collaboration and whether it leads to enhanced quality of care for patients.

Interdisciplinary Collaboration and the Interdisciplinary Health Team (IHT): Definition

In the review of the literature, I describe many variations of the meaning of interdisciplinary collaboration, interprofessional collaboration, and interdisciplinary health team. Teams are usually characterized in health care as interprofessional

collaborative because of their ability to integrate and foster partnership, interdependency, and power. The interdisciplinary team concept began in the late 1950s. Later, Luszki, (1958) declared that "an interdisciplinary team is required where there is a need for the integration of different perceptual fields, or for the interrelation of a series of different sorts of observations made by different persons on the same object" ().

According to Ozcelik, Faadiloglu, Karabulut, and Uyar (2014), interdisciplinary collaboration teams have been defined as multiple health care professionals interacting positively with each other to manage the care of the patient. The health care professionals bring unique talents, knowledge, and skills to assist patients and families with health care decisions. This definition of a team is interdisciplinary in nature. Conceptually, teamwork can be integrated within team performance as a set of values and behaviors contributing to the process of high performance.

O'Connor, Fisher, and Guilfoyle (2006) defined teamwork as essential to affect positive outcomes. The literature cites three unique teams in the health care environment: (a) multidisciplinary, (b) transdisciplinary, and (c) interdisciplinary (O'Connor et al., 2006). Even though the term "interdisciplinary" is often used interchangeably with "multidisciplinary," there are important differences. Interdisciplinary teams combine the approach of multiple disciplines, and rely on collaborative communication processes (O'Connor et al., 2006).

A multidisciplinary team utilizes the skills and experiences from varying disciplines without integrating their approaches. The team members work independently with little coordination between the team members to coordinate the care of the patient,

and subsequently share results with others (Mumuni, Kaliannan, & O'Reilly, 2016). In this approach, a process facilitator determines how the team members participate independently. In the transdisciplinary approach, one member is responsible for all the functions under the leadership of the members from the other disciplines involved in the care of the patient (Mumuni et al., 2016).

According to Gadolin and Wikstrom (2016), an interdisciplinary team surpasses physicians and nurses, to include dietitians, social workers, and other disciplines to coordinate the care of the patient. The authors further define the characteristics of an interdisciplinary health care team as both creating common goals with patients and families while also developing a mutual care plan in which each member makes a different, complementary contribution to the services needed.

Matthews and Daigle (2018) defined interdisciplinary collaboration as an interpersonal process where the varying disciplines come together to achieve a common goal. Bronstein (2003) extended the definition of interdisciplinary collaboration from an effective interpersonal process perspective that enables the achievement of goals that are unattainable to the individual professionals.

Orchard, Curran, and Kabene (2005) defined interdisciplinary practice from a partnership perspective between a team of healthcare professionals and a patient in a collaborative, coordinated, and participatory approach to shared decision-making regarding health issues. Wittenberg-Lyles and Oliver (2007) defined interdisciplinary collaboration as an interpersonal process that leads to the achievement of goals that are not attainable to the individual.

Multidisciplinary expresses an interdisciplinary relationship; however, Choi and Pak (2006) asserted a difference between the two. Multidisciplinary teams work parallel, whereas, interdisciplinary teams tend to address a common problem, and work together to find a solution (Choi & Pak, 2006). Samuelson, Tedeschi, Aarendonk, de la Cuesta, and Groenewegen (2012) asserted that, unlike multidisciplinary, interdisciplinary collaboration is the integration of each health care provider's perspectives toward a common patient-centered goal.

Petri (2010) summarized a content analysis of literature to elucidate the meaning, characteristics, and uses of interdisciplinary collaboration in health care. Petri defined interdisciplinary collaboration in health care from an interpersonal process perspective. Health care professionals with common goals, power, and decision-making responsibilities work collaboratively to solve patient care problems characterize interdisciplinary collaboration.

A common characteristic of interdisciplinary health teams is the collaborative process and relationship between each health care provider. Although each provider brings professional expertise, the providers interact collectively to provide holistic health care delivery. Within a team, effective communication draws team members' cohesiveness by building trust and respect of each other perspectives, and shared awareness of the context (Petri, 2010).

Interdisciplinary Health Team (IHT): Historical Perspective

Health care teams have gone through evolution, and philosophical transformation since the early 20th century because of socio-economic, cultural, and political forces

(Agich, 1982). Brown (1982) described the history, and the rise of interdisciplinary health care teams in the United States as transforming within three growth phases including (a) sporadic population growth, (b) high tide, and (c) re-evaluation.

The formation of healthcare teams. The period 1910 to early 1940s marked (a) sporadic population growth, (b) increased medical science and technology, and (c) formation of medical specialization, which necessitated the formation of the health care team of doctors, nurses, educators, and social workers (Brown, 1982). In 1927, an interdisciplinary collaboration between specialists in medicine, public health, and the social sciences emerged, as the Committee on the Costs of Medical Care (CCMC). Invocation of interdisciplinary teams was expressed in 1932 in the "Final Report of the Committee" on the Costs of Medical Care (Brown, 1982).

After World War II the course of history changed with the start of the high-tide growth phase, characterized by: (a) the increase of new hospitals, (b) expansion of existing facilities, (c) introduction of Blue Cross hospital insurance, and (d) marked increased growth of physician specialties (Brown, 1982). Brown described this period as marking the end of solely general practice physicians, and the rising popularity of health teams, and comprehensive care. This era also signified the rise in the equalitarian ideology of nursing and other allied health professions (Brown, 1982).

In the late 1950s and 1960s, (a) the civil rights movements, (b) recognition of poverty, (c) the underprivileged, and (d) the aged, marked federal initiatives changing aspects of medical academic programs fostering loan forgiveness to those who worked on collaborative health care teams in underprivileged urban and rural areas (Brown, 1982).

Preventive, social, and mental health parameters also came to the forefront, and weaved into health programs coordinated by health teams. This era brought about the establishment of the first Department of Health, Education, and Welfare, and the Office of Economic Opportunity that facilitated and oversaw these health programs (Brown, 1982).

Other projects such as The George Silver's Family Health Maintenance Demonstration Project identified characteristics of an interdisciplinary health care team within the context of a comprehensive care health program (Brown, 1982). In 1951, the Community Serve Society, Columbia University College of Physicians and Surgeons, and Montefiore Hospital in New York City, collaboratively sponsored the project. In the demonstration project, researchers randomly selected 150 families out of 8000 families in the Health Insurance Plan of Greater New York and provided them with both therapeutic and preventative services by a team composed of an internal medicine physician, a psychiatric social worker, and a public health nurse (Brown, 1982).

Patient management. Brown (1982) argued that management of the patient must go beyond the solitary treatment by a physician. This new type of health care delivery should be collaborative and egalitarian because each health discipline contributes to the care of the patient (Brown, 1982). The final growth phase of the health care team called for a re-evaluation of the interdisciplinary health care team beyond the words and depicted challenges of health care teams that existed in the early 1980s. Scrutiny of interdisciplinary health teams continues from the 1980s to the 21st century (Brown, 1982).

While it seems apparent that the complexity of medical and health care delivery would demand interdisciplinary health care teams to produce positive results, the author does not confirm if intrinsic barriers and challenges negatively affect patient care or organizational efficiency. Also, the efficacy of interdisciplinary health care teams on patient outcomes is not clear (Schofield & Amodeo, 1999). Gadolin and Wikstrom (2016) asserted some doubt that true interdisciplinary teams existed in health care, even though, the authors emphasized the need to change the paradigm of patient care from the traditional medical model to a more collaborative, patient-centered model.

Schofield and Amodeo (1999) examined the literature concerning interdisciplinary teams. Through content analysis and review of more than two thousand abstracts and research, respectively, the authors discovered that there is limited empirical evidence that supports interdisciplinary health care teams' efficaciousness. The authors revealed the ambiguity of terms, and varied languages are describing interdisciplinary health teams, and their strengths and weaknesses. Schofield and Amodeo (1999) concluded that most research made unsubstantial claims to benefits, and barriers of interdisciplinary health care team. Interdisciplinary team leader roles were also not well defined.

Baggs, Ryan, Phelps, Richeson, and Johnson et al. (1999) examined the association of collaboration between intensive care unit (ICU) nurses and physicians and patient outcome. The researchers' key results revealed that ICU nurses' reports of collaboration were related to patient outcomes. There were not any other associations between patient outcome and individual reports noted. The authors offered support for

the importance of doctor-nurse collaboration within critical care settings (Baggs et al., 1999).

Orchard et al.'s (2005) focus began to change from a medical model of practice to a collaborative, patient-centered practice, which gained support given the complexity, cost of health care, and expectations from stakeholders to provide safe, high-quality, cost-effective care. Reeves et al. (2015) examined the universal innovation in healthcare delivery approach to addressing worldwide human resource challenges.

The World Health Organization (WHO; 2006) asserted that health care workers are experiencing increased insecurity and stress, which is exacerbated by higher population concentrations in urban areas, and the shift from poor to wealthy countries. The transition from acute, tertiary hospital care to patient-centered, team-driven and home-based care requires new skills and collaboration among workers and with patients. The authors argue that health care employees and managers must focus their attention on building teams if they are going to meet the challenges and goals of the future (Reeves et al., 2015).

Interdisciplinary Health Team (IHT): Current Perspective

Petri (2010) cited interdisciplinary collaboration impact on positive results for the patient, provider, and healthcare business. Recent trends in health care promote interdisciplinary collaboration as a model for patient-centered delivery of care because of the many benefits (Petri, 2010). Among the benefits are improved patient outcomes, staff satisfaction, reduced medical errors and enhanced clinical effectiveness, reduced length of hospital stay, and readmission rates, increased productivity and efficiency, reduced

hospital costs, and improved morale, and job satisfaction (Baxter & Markle-Reid, 2009; Christina & Konstantinos, 2009; Crawford & Price, 2003; Martin, Ummenhofer, Manser, & Spirig, 2010; Nelson, Mulkerin, Adams, & Pronovost, 2006; Orchard et al., 2005; Petri, 2010; Schmitt, 2001; Sommers et al., 2000; Yeager, 2005).

The authors asserted that an interdisciplinary collaboration is a model for patient-centered delivery of care because of the many benefits from patients, staff, businesses, the federal, global, professional, and community stakeholders such as the American Geriatrics Society (Wittenberg-Lyles, Oliver, Demiris, & Regehr, 2009), the Joint Committee on Interprofessional Relations Between the American Speech-Language-Hearing Association (Joint Commission, 2010).

Additional supporters include the National Institutes of Health (1991), the World Health Organization (2008), Samuelson et al. (2012), the Enhancing Collaboration in Primary Health Care (EICP) Steering Committee of Canada (2006), the Canadian Nurses Association (2005), and Fried, McGraw, Agostini, and Tinetti (2008) support interdisciplinary collaboration as a model of patient care, and health delivery.

Jansen (2008) provided an analysis of the economic, historical, social, and political professionalism challenges companies face in implementing interdisciplinary collaborative team-based practices. The author argued that it was not cost effective for organizations to achieve broad-based team structures, because it requires considerable resources and effort to train disciplines to address fragmented services, function as a team, and provide system support to sustain and advance teams. Thylefors, Persson, and Hellstrom (2005) asserted that today, team-based models of care are a primary focus in

healthcare environments as well as in the VA system. Such teams can address complex patient needs within a framework requiring accountability (Thylefors et al., 2005).

Effective and Impeding Characteristics of the Interdisciplinary Health Team (IHT)

The decision to implement interdisciplinary collaboration in health care gained momentum after the seminal results of the Institute of Medicine's (IOM) original and subsequent reports, *To Err is Human: Building a Safer Health System* (1999), and *Crossing the Quality Chasm: A New Health System for the 21st Century* (2001), respectively, cited between 44,000 to 98,000 deaths attributed to medical errors. The Institute of Medicine recognized that reducing medical errors is a complex challenge, and called for an interdisciplinary collaboration across disciplines, and stakeholders to address the issues (IOM, 1999, 2001).

Goals of IOM. After the initial reports, the *Health Professions Education: A Bridge to Quality* (IOM, 2003) reported that the IOM goal is to integrate health education core competencies for patient-centered care by interdisciplinary health teams employing evidence-based practice, informatics, and quality improvement. The IOM envisioned health providers working as interdisciplinary teams to communicate, collaborate, cooperate and integrate care to ensure it is continuous and reliable (Greiner & Knebel, 2003).

However, the IOM asserted health professionals were inadequately prepared academically in nontechnical skills, and on-the-job toward interdisciplinary collaboration, despite recognition that interdisciplinary health teams deliver optimum health care (Greiner & Knebel, 2003). Leipzig et al. (2002) validated the argument after an

investigation identified differences in attitudes across medical disciplines regarding leadership and teamwork on interdisciplinary health teams. They examined perceptions of interdisciplinary teamwork of second- year family practice postgraduate students, internal medicine residents, advanced practice nurses, and masters-level social workers (Leipzig et al. 2002).

In the quantitative study, a baseline survey was administered to 591 Geriatrics Interdisciplinary Team Training participants at eight U.S. academic medical centers between 1997 and 1999 to measure attitudes toward team value and efficiency, and attitudes toward physician's leadership, shared-role, and equality among team members (Leipzig et al. 2002). The authors revealed the following: (a) positive attitudes toward team value, and efficiency across disciplines, (b) strength of attitudes were different among disciplines, (3) no significant difference between advanced nurse practitioners, and social workers, and their perception of team value (Leipzig et al. 2002).

Additionally, the authors revealed the power of positive attitude toward team value, and efficiency was less from residents compared to advanced practice nurses, and social workers. Residents were least positive toward shared-responsibility, and 80% of residents surveyed believed physicians have the final authority to make changes in patient care plans, thus superseding team decisions (Leipzig et al., 2002).

In the study, advanced practice nurse and social worker students did not believe physicians made natural leaders, more than 50% of residents surveyed believed physicians were natural team leaders. Differences in perceptions may be attributed to the hierarchical curriculum, and training of residents, whereas nursing, and social work may

stress concepts of interdisciplinary collaboration in the academic curriculum, and training (Leipzig et al., 2002).

Interdisciplinary collaboration. Integrating concepts of interdisciplinary collaboration in medical academic programs is paramount to positive development and implementation of practice (Petri, 2010). The author performed a systematic content analysis of the literature to inductively identify attributes, antecedents, and consequences of interdisciplinary collaboration in health care. He asserted the necessary antecedent for successful implementation of interdisciplinary collaboration in health (Petri, 2010).

Sargeant, Loney, and Murphy (2008) argue that effective interdisciplinary health teams are made of members who actively participate in teamwork fundamentally premised on the technical, cognitive, and affective competence of each member rather than a solitary leader. High functioning health care teams share common goals, respect each member's role, believe each discipline offers benefit to the team, contribute to achieving goals, practice effective communication, and the ability to resolve conflicts by displaying flexibility (Sargeant et al., 2008). A team is built by group interaction and socialization. Knowledge, trust, and respect are built from social learning and exchange (Sargeant et al., 2008).

Bronstein & Wright (2006) asserted that as a model, interdisciplinary collaborative practice, palliative and hospice care offer an (a) holistic approach to meet the needs of the dying patient and require a broad spectrum of health and emotional providers such as physicians, nurses, dietitians, psychologists, social workers, chaplains, and (b) other allied health practitioners and therapists (Bronstein & Wright, 2006).

Wittenberg-Lyles and Oliver (2007) mixed method study using ethnographic observation and the modified index of interdisciplinary collaboration (MIIC) data collection explored the perception of collaboration within the hospice team and their collaborative interactions in team meetings. Although the team had a high perception of role flexibility and interdependence, this was less likely to be enacted in team meetings with or without the presence of caregivers (Wittenberg-Lyles & Oliver, 2007). The subset scale of interdependence and flexibility revealed the most positive mean perception of collaboration. The participation of caregivers in team meetings had a positive impact on collaborative communication (Wittenberg-Lyles & Oliver, 2007).

The analysis of the article highlights differences between the context of interdisciplinary collaboration, perceived collaboration among team members and enacted collaboration practices within team meetings. The study was limited to one hospice program and two hospice team, therefore, supporting the need for future study in the education of the interdisciplinary team regarding their role on the team as well as the role of the team (Lutfiyya, Brandt, & Cerra, 2016) and communication dynamics (Wittenberg-Lyles, Oliver, Demiris, Baldwin, & Regehr, 2008).

Contributing Barriers to Effective Interdisciplinary Teams

Despite support to implement interdisciplinary collaboration as a model of health care practice, Petri, (2010) asserted some key findings to include: (a) the lack of unified understanding of the concept, (b) varied perceptions of interdisciplinary characteristics, (c) divergent experiences among differing health care disciplines, and (c) sparse information supporting a theoretical framework of interdisciplinary collaboration

impedes application. Another contributing barrier to effective interdisciplinary health teams is the failure of providers to understand the role of and contribution of each member (Bronstein, 2003; Orchard et al., 2008; Petri, 2010).

Harr, Openshaw, and Moore's (2010) mixed-method study showed 91% of chaplains perceived positive working relationships with social workers and nurses. However, the qualitative results indicated that chaplains believed social workers did not understand the academic training or clinical experience of chaplains. The chaplains also perceived some social workers as unaccepting of the spiritual ideology and displayed their bias by downplaying the chaplain's expertise or displaying belligerence or unacceptance for the tenet of care offered (Harr et al., 2010).

The misunderstanding of chaplain's expertise often led to territorial social workers who acted as gatekeepers to decide for the patient if spiritual care was warranted (Harr et al., 2010). The chaplains perceived heavy caseloads as a barrier to interdisciplinary collaboration. Collaboration between chaplains and social workers was perceived strongest when the two professionals shared common goals in patient comfort and care (Harr et al., 2010).

From the early 1900s to present day, the petition to deliver health and patient care with interdisciplinary health teams has been promoted by private, governmental, and accrediting health agencies (Harr et al., 2010). Drinka, (1994) argued that even though the empirical evidence was lacking showing how to increase the effectiveness of health care teams, characteristics of team leadership or how health care teams improve patient

outcomes, effective interdisciplinary health teams may be difficult to achieve without suitable leadership.

Leadership and Effective Interdisciplinary Health Teams (IHT)

Many definitions for leadership have surfaced. Leadership is a universal phenomenon, a relationship between an agent and subordinate, a complex pattern of behaviors with the ability to exert intentional influence over another person or persons, an emotional attachment between leaders and followers, and an interactive process between members to attain goals (Avolio & Yammarino, 2008; Bass, 2008; Bennis, 2007; Northouse, 2007; Yukl, 2006). However, leadership in interdisciplinary health teams is challenging because of many variables that naturally contribute to conflict, and uniquely define leadership in this type of group dynamic (Crawford & Price, 2003).

Leadership characteristics. Members who come from different disciplines, each with specific professional culture and language characteristically make up interdisciplinary health teams working together as an identified system or unit (Drinka, 1994). High rate of member turnover, ongoing and incongruent team development, and the lack of long-term history of health care teams define team leadership differently in interdisciplinary health teams (Drinka, 1994).

Leipzig et al. (2002) asserted five characteristics necessary for effective interdisciplinary teamwork and leadership: clear goals, clear role expectations for members, refined flexible decisions-making processes, the establishment of open communication patterns and leadership, and the ability of the team members to celebrate. Axelsson and Axelsson (2009) cited turf dome and territorial behavior among the

professional groups and agencies negates leadership, and contributes to ineffective communication and conflict, making interdisciplinary collaboration difficult (Axelsson & Axelsson 2009).

Wittenberg-Lyles et al. (2009) identified struggles for relational control among team members perpetuated professional competition and stymied collaborative practice. In a qualitative study exploring 81 hospice interdisciplinary team meetings, Wittenberg-Lyles et al., (2009) key findings found interpersonal communication between nurses, social workers, medical directors, chaplains, and other members of hospice teams, was dominated by members vying for control of the exchange rather than engaging in open and collaborative dialogue (Wittenberg-Lyles et al., 2009).

Bokhour, (2006) qualitative study used a combination of participant observation, in-depth interview, and sociolinguistic discourse analysis to explore the communication practices of interdisciplinary geriatric team meetings. The author's results revealed three types of communication practices among geriatric teams consisting of nurses, physicians, nutritionists, social workers, and others in (a) giving report, (b) writing report, and (c) collaborative discussion. Presenting the report were communication practices like a model of care described as fragmented and multidisciplinary, where members assessed and treated patients separately and reported results back to the team (Bokhour, 2006).

Collaborative discussion occurred only when team members contributed collaboratively on a patient-focused problem or concern. Bokhour, (2006) discovered that collaborative discussion occurred roughly 32% of the time. Communication in team meetings was prohibited by bureaucratic requirements and discipline- specific problems,

rather than focusing on patient-centered problem solving. This study concurred with Bronstein's (2002, 2003) assertion that organizational structure is an influence of interdisciplinary collaboration in health care.

Effective leadership in interdisciplinary healthcare teams. Leadership in effective interdisciplinary health care teams is not defined by any single member exerting influence between followers, but rather, many, who take on the role when necessary (Sargeant et al., 2008). Shared-decision making and equality among members are characteristics of effective interdisciplinary health teams (Leipzig et al., 2002; Sargeant et al., 2008). Effective team leadership in interdisciplinary health teams involves members who can relinquish power when necessary to allow other's expertise to resolve conflict or contribute to success (Drinka, 1994).

Leadership in collaborative practice involves the willingness of experienced members to train new members to assume leadership positions (Drinka, 1994). Other authors support this concept asserting that flexibility in leadership promotes equal hierarchy, fosters constructive, and open communication among team members (Farrell, Schmitt, & Heinemann, 2001; Korner, 2010). Leggat (2007) explored what perceived core competencies defined effective health teamwork and leadership. Using a descriptive, quantitative survey, 224 total participants completed the survey. Subjects were in leadership positions such as chief executive officers, senior managers, and middle managers with the Australian health service.

Leadership, ability to influence, and negotiation were perceived as necessary skills of effective teams (Leggat, 2007). Knowledge of organizational strategies and

goals, respect for others, and commitment to working collaboratively for the organization and to increase outcomes were also identified as core competencies of effective teams. Axelsson and Axelsson, (2009) asserted altruistic leadership is necessary for effective interdisciplinary health teams. However, lack of long-term development of teams to invoke trust and open communication stymies this process.

Leadership in interdisciplinary health teams has been studied to evaluate the efficiency and success of the team toward shared goals and implementation of patient-centered teamwork. Annis (2002) presented a case study whereby the success of a critical care interdisciplinary team reflected the *Synergy Model for Patient Care.* The American Association of Critical Care Nurses conceptualized the *Synergy Model for Patient Care* as a holistic and patient-centered approach to care (American Association of Critical Care Nurse, 2010).

The author's key findings revealed (a) flexibility in leadership, (b) equity among members, (c) coordinated efforts, and (d) open, trusting dialogue among team members are essential to effective health team (Bokhour, 2006). Researchers showed the importance of teaching collaborative practice skills in academic programs to influence the degree and success of interdisciplinary teams (Leipzig et al., 2002). Holistic patient care is influenced by internal and organizational factors. Interdisciplinary teams understand and respect member roles, and appreciate the benefits each expertise offers (Annis, 2002; O'Connor et al., 2006).

Leggat (2007) and Sargent et al. (2008) asserted that effective interdisciplinary health team's leadership is a shared endeavor, and responsibility influenced by the skills,

knowledge, competence, and culture of the team (Leggat, 2007; Sargeant et al., 2008). Baggs et al. (1992) and Wells, Johnson, and Salver (1998) expressed sentiment in supporting interdisciplinary collaboration among health care teams in high-risk areas such as acute, critical, and emergent care, and other authors supported the use of interdisciplinary collaborative practice in outpatient and primary care settings (Delva, Jamieson, & Lemieux, 2008; Legare et al., 2008; Tovian, 2006).

Interdisciplinary Collaboration in Patient Centered Medical Home

Herbert (2005) focused on collaborative patient-centered practice as an alternative for health care professionals to work collaboratively with patients to find solutions and set mutual goals. The United States Surgeon General suggested mobilizing the medical community Department of Health and Human Services ((DHHS, 2010) to work collaboratively to assess, identify, and treat chronic health diseases such as diabetes by providing services to patients from a team of administrative, and clinical providers such as social workers, nurses, physicians, and other professionals. Craven & Bland, (2013), asserted that collaborative care team comprised of disciplines such as social workers, nurses, physicians and others who are committed to a shared, patient-centered goal, and interact with clear communication can provide the most effective interventions.

Stremikis et al., (2011) case study profiled the inception of two Patient-Centered Medical Homes in the VA Healthcare System. The implementation of the medical home model in the Veterans Health Administration introduced significant challenges for primary care providers such as changes in the physical infrastructure, new scheduling processes, training of staff for the team, and engaging patients in a new paradigm of care.

The author's results revealed: (a) positive outcomes despite the challenges, (b) significant improvement in quality and access to care. Early preliminary findings from the study indicated (a) the importance of staff training, (b) team building exercises, and (c) need for supportive leadership in an interdisciplinary collaborative practice (Stremikis et al., 2011).

Interprofessional Care Terminology Findings

There is a large amount of variation in the literature regarding terminology that has been used to describe interdisciplinary collaboration. Among the variations in the literature, the most common usage of the terms includes interprofessional; teamwork; collaborative care; team; collaborative practice; multidisciplinary; transdisciplinary, interdisciplinary and interprofessional collaborative care. A review of the literature reveals that interdisciplinary collaboration as it relates to interdisciplinary practice has been based on common underlying concepts and ideologies to include partnership; interdependency, different disciplines coming together to work and learn about each other, and to share responsibilities/accountabilities toward a common purpose (O'Connor et al., 2006).

Interdisciplinary Care and the Evidence-Based Findings

There is a growing body of research related to the interdisciplinary concept and its core values. Most the literature discovered the past and recent experiences related to interdisciplinary models and comments on the successes and barriers related to the implementation of the models. Bourgeault & Mulvane (2006) asserted that very little research has focused on the broader/macro factors that influence the success in

implementing collaborative practice models specially outside of health care settings (Bourgeault & Mulvane, 2006). Additionally, organizations have implemented interdisciplinary care in their way. There is no one correct way to practice interdisciplinary collaboration.

Interdisciplinary Collaboration and Regulatory Changes

Per Watson and Wong (2005), many self-regulating health care professionals argue that current procedures for professional self-regulation often serve as a barrier to integrated health care systems and interdisciplinary practices (Watson & Wong, 2005). Deber & Baumann (2005) argued that regulation and legislation take time and the process to initiate changes is slow, but not impossible (Deber & Baumann, 2005).

Summary

There is a diverse interest in a new platform for health care by interdisciplinary teams. Interdisciplinary collaboration is a key approach to providing the highest possible quality of care for patients requiring acute and primary health care services. Collaboration is critical for the benefit of the patient, and the satisfaction of the health care providers. Insufficient evidence exists in the current literature that supports a model of interdisciplinary collaboration. While the studies provided in the literature review revealed different reasons for the collaborative practice, or described current practice trends, most studies fall short of operationalizing interdisciplinary collaboration, identifying barriers, and enablers, and reporting perceptions.

Enhancing interdisciplinary collaboration is affected by challenges and barriers associated with the implementation stage such as, the lack of policy creation, medical

ethical, and legal issues that prevent (a) team collaboration, (b) inadequate training for team members in communication, and team work, (c) and the lack of leadership involvement.

Additionally, role ambiguity in defining each team member's scope of practice posed significant challenges in implementing interdisciplinary collaboration teams. Compounding the situation is the shortage of health care providers. The existing literature outlines structured communication techniques that may help to decrease medical errors. However, a gap in the literature is present where previous researchers have largely focused on describing the successful elements in individual programs. The existing literature adequately outlines structured communication techniques that will help in decreasing medical errors. As such, additional research is necessary to cope with miscommunication and barriers to communication effectively in pressing situations, confirming a cause and effect link between human factors and clinical results (O'Daniel & Rosenstein, 2008). Findings show that further research is required to better understand the complexity of interdisciplinary collaboration at the practice, education/training, organizational and structural levels. In Chapter 3, the methodology is described that guides this study.

Chapter 3: Research Method

In this qualitative descriptive case study, the work of each discipline was compared to the work of the interdisciplinary team to examine the perceived processes and effects of the interdisciplinary approach. Additionally, the study may generate knowledge that could be of interest to leadership development in the creation of policies, improved patient care, and perceived processes to affect successful long-term programs, and the implementation of future PCMH models. The IRB approved number for this study was 2-15-17-0308704.

The central research question of this study was as follows: How is the primary care PACT model on communication and teamwork used by an interdisciplinary medical team? In this study, the following research subquestions were addressed:

- Subresearch Question 1: What are the challenges, if any, related to resources in implementing an organizational change for the transformation?
- Subresearch Question 2: What has worked well or been a benefit or advantage, if any, of using the interdisciplinary collaborative approach?
- Subresearch Question 3: What were some organizational factors challenges, if any, for establishing standardized, efficient, and effective teamwork and communication training?

Method Overview

I used a qualitative descriptive case study research design to investigate an interdisciplinary approach to the synthesis and integration of two or more disciplines

working towards a common goal. A qualitative research study was appropriate because researchers can best obtain an understanding of the interdisciplinary team and process of care through gathering information on attitudes and perceptions rather than numerical data (see Yin, 2014). Qualitative research includes data that researchers cannot convert into numerical values and that can aid in researching a theme through lived experiences (Creswell & Creswell, 2018).

When conducting a case study, researchers focus on a specific phenomenon though the examination of one or more cases that have a common linkage. Lee (2017) stated that the objective of a case study is to create an understanding of the selected case under study. One of the hallmarks of a case study is that it is not possible to separate the participants from the context (Lee, 2017). A case study requires a qualitative researcher to collect data on a particular individual, program, or event (Leedy & Ormrod, 2010). Researchers conducting case studies seek to answer how or why questions (Yin, 2014).

Further, the use of a case study design enables a researcher to explore a specific situation of interest (Yin, 2014). Researchers who use a case study design have an emphasis on uniqueness (Yazan, 2015). Case study designs combine many research methods and forms of data to explore a case from multiple angles (Lee, 2017).

The data source was open-ended, face-to-face interviews. A semistructured, open-ended interview format was employed, allowing participants to candidly explain the details of their experiences and to ascertain why certain decisions were made, how they were implemented, and the results of those actions (see Yin, 2014). The study involved comparing the work of each discipline and examining the perceived processes and

outcomes of the interdisciplinary collaborative approach. Interviews were conducted with 18 employees comprised of five PACT teams from one of the VISN VA hospital and four CBOCs. Each PACT team consisted of one RN, one LPN, one provider and one clerk.

Yin (2014) stated that there are four distinct stages involved in case study research. The four stages include designing the study, collecting data, analyzing the data, and composing. When conducting a case study, a qualitative researcher must set and follow systematic procedures and collect data from various perspectives to present an accurate depiction of the findings. The purpose of conducting a case study is to understand why certain decisions are made, how they are implemented, and the results of the actions (Yin, 2014). Case studies emphasize placing an observer in the setting to objectively record actions while examining the meaning and redirecting those observations to substantiate the meaning (Yazan, 2015). In this case study, I examined, in detail, the dominant leadership skills of charter school directors that are currently being employed.

Research Design

A qualitative case study design was used to conduct this study. Qualitative methods are appropriate for use when a researcher seeks to explore a phenomenon where little is known and variables are not identified. Qualitative data enable a researcher to consider different experiences and perceptions of a specific phenomenon; they are also inductive in that the results arise from the data. The data in qualitative studies arise from the experiences and perceptions of the participants. Qualitative researchers gather

information from many perspectives, which enables them to allow for experiences that occur and differ based on place and time.

Finally, qualitative research can be said to be personalistic in that researchers who use it look to increase understanding of differences and commonalities occurring in regard to a specific phenomenon (Yazan, 2015). The selection of participants should be limited to a number that yields saturation, or when additional inquiry ceases to yield additional perspective or insight (Mason, 2010). Participants consisted of RNs, primary care providers, LPNs, and social workers.

Approach

I used a case study approach in this qualitative design. Flyvbjerg (2006) indicated that the case study approach to research is the appropriate design to use when context-dependent information is assessed. This is especially true if the context involves interactions between human beings (i.e., the different disciplines). This approach was appropriate to understand further the how and why of the interdisciplinary approach among the individuals who work at a VA hospital and CBOCs.

Yin (2014) discussed the purpose of case studies as a research plan in that case studies allow participants to have control of the research experience. Yin stated that during a case study, the "investigator has little control over events" (p. 1). Common themes and topics unfold throughout as the research is being conducted.

In 2014, the Center to Improve Veteran Involvement in Care indicated that the use of a case study design would aid in the exploration and a better understanding of PACT. Two distinct examples of qualitative research methods emerged and were used to study

PACT. Elo and Kyngas (2008) analyzed the responses using both simultaneous deductive and inductive content analysis. The use of inductive content analysis allowed the researchers to identify novel themes. The deductive content analysis yielded more structured and consisted of identifying meaningful units of data, such as discrete phrases, sentences, or series of sentences that conveyed an idea or one that was related to a set of perceptions that fit within preidentified *a-priori* categories. The *A-priori* codes included both barriers and facilitators to PACT implementation, job satisfaction, and burnout. The researchers viewed:

> While the participants viewed PACT positively as a model and reported improved relationships with patients and increased patient satisfaction, the downside of the report described multiple barriers to achieving functioning teams, and unintended consequences including: (a) reduced time with patients, (b) increased team burn-out, and (c) decrease team efficacy due to low performing team members. (p. 109-110)

Methodological Model

I employed qualitative methodology to conduct this research. Yin (2014) discussed the purpose of using qualitative research in that qualitative research allows a qualitative researcher to study the real-world lives of the participants within the research. Participants were able to say what they wanted to say during the individual interviews and expressed their opinions freely without the restrictions of answering scripted questionnaires that are typical in quantitative studies. Yazan (2015) also discussed the use of qualitative research and the fact that qualitative research is field oriented.

In this study, I focused on the clinical practice effectiveness involving professional communication and team collaboration. Using Yin's methodological model allowed me to generate an understanding of the process in the interdisciplinary approach among the different discipline areas in a healthcare environment. Using open-ended interviews allowed many different experiences and perceptions to be presented.

Rationale

Several common approaches could be selected for qualitative research. Some of the most common approaches include grounded theory, ethnography, case study, and phenomenology. In the following paragraphs, I present background information for each of these approaches and justify why case study was the most appropriate.

Grounded theory is the appropriate design when the goal of the research is to explore the elements of an experience while using information grounded in the data to develop a theory. The theory is developed to understand the nature of the experiences of the object of study based upon examination of the elements and their relationships (Moustakas, 1994). Grounded theory stresses open processes and is inductive; the theory should grow from the data (Moustakas, 1994).

Ethnography is the appropriate design when the goal of the research is to study a culture and evolves from an extreme period of intimate study and residence in each culture (Van Maanen, 1988). It requires extensive fieldwork and should allow for direct observation of the subjects of interest (Moustakas, 1994). The ethnographer may remain in the background for most the study to observe the behaviors of the subjects.

Phenomenology is the examination of phenomena. Transcendental phenomenology focuses on the meaning of the lived experiences by focusing less on the interpretation of a qualitative researcher and focusing more on the experiences of the participant (Moustakas, 1994). It draws on lived experiences for some individuals (Creswell & Creswell, 2018). True phenomenological research is committed to descriptions of experiences, not explanations or analyses (Moustakas, 1994). Phenomenological studies seek to describe the lived experiences of a phenomenon for several individuals (Creswell & Creswell, 2018).

Case study research is an appropriate design when the goal of a qualitative researcher is to conduct an in-depth study on an area of interest through one or more cases bound by a common link, such as the setting. Case study research is conducted to create a greater understanding of the case itself. Creating findings that are generalizable to the larger population is the goal of this design. Case studies are used to gain a better understanding of the how and why (Creswell & Creswell, 2018). Case studies often examine more than one source of data and are best used when a qualitative researcher has clearly identifiable cases within boundaries and seeks to develop an in-depth understanding of the cases. It is for these reasons that a qualitative case study approach was appropriate.

Units of Analysis

The unit of analysis for the study was be the RNs, primary care providers, LPNs, and social works of a VA hospital, and four Community-Based Outpatient Centers (CBOCs). The population of this study includes American healthcare workers employed

by the Department of Veteran Affairs (VA). According to the organization's website, the VA operates 1,400 healthcare sites across all 50 states, the District of Columbia, and U.S. Territories (U.S. Department of Veterans Affairs, 2014). VA-operated facilities include "153 medical centers, 909 ambulatory and community-based outpatient clinics, 135 nursing homes, 232 Veterans centers, 47 readjustment counseling centers, and 108 comprehensive home-care programs" (para. 1). The VA (para. 2) employs approximately 250,000 full- time workers and 90,000 healthcare trainees.

Sample Size

In quantitative research, maximization of the sample size is typically the goal (Carlsen & Glenton, 2011). Increases in quantitative sample size result in a decrease in error; however, the same is not true for qualitative research. In qualitative research, the goal is to obtain saturation (Chenail, 2011; Hanson, Balmer & Giardino, 2011; Lietz & Zayas, 2010). Saturation is achieved when the addition of participants' experiences does not provide additional perspectives (Hanson et al., 2011).

However, the new perspectives are not limited only to new themes, but also include the interrelationships among the themes (Corbin & Strauss, 2008). Each emergent theme should be examined in-depth on multiple levels to assess for saturation. Glaser and Strauss (1967) discussed the concept of saturation. Saturation can be said to be achieved when the themes found show variation and depth (Corbin & Strauss, 2008). New findings may be unveiled at any point in the process, and new insights may replace old.

I determined that saturation was achieved by examining the emergent themes from the interview data. This iterative process entailed comparing the themes identified from each interview to the themes identified from the preceding interviews. I made note of any new insights, topics, or previously unarticulated perspectives. I considered the data to have reached saturation when no new themes emerge from the data.

Sample size may often be influenced by time, resources, and study objectives (Patton, 2002). Corbin and Strauss (2008) cited that when researchers indicate they have achieved saturation, they often mean they are saturated with the data collection process and have exhausted their time, resources, or energy. Qualitative sample sizes should provide experiences that highlight most or all perceptions related to the phenomenon of interest (Lietz & Zayas, 2010). Researchers have offered different recommendations for choosing a sample size for qualitative studies. Morse (1994) argued that a minimum of six participants is necessary to achieve saturation. Guest, Bunce, and Johnson (2006) offered 12 as a sufficient sample size in interview-based qualitative studies.

Coenen, Stamm, Stucki, and Cieza (2012) provided further evidence for this suggestion, obtaining saturation within 12 individual interviews. Based upon these recommendations, I believed that 12 participants would be sufficient to achieve saturation in this study. Since saturation was not achieved following the completion of the 12th interview, I recruited and interviewed additional participants until saturation was reached at 18 interviews (Lietz & Zayas, 2010).

Role of the Researcher

I outlined and followed systematic procedures for data collection and analysis. Data was collected from 18 participants to obtain multiple perspectives and present an accurate depiction of the experiences. The procedures that followed included designing the study, collecting data, analyzing the data, and composing. The interviews were face-to-face and allowed for open-ended responses.

I encouraged the participants to speak openly and to elaborate on the responses they provided when necessary. Participants were also encouraged to provide honest answers to each interview question. It was important to create an environment in which the interviewees feel comfortable and were more likely to respond honestly. Interviews were recorded and transcribed.

The transcribed responses were then examined to be certain the experiences were accurately transcribed. I sent the transcribed responses to each of the participants for member checking. Data analysis did not begin until all participants confirmed their responses. I examined and analyzed the data for commonalities among the responses presented. I maintained an open mind and did not allow biases to enter the data analysis. The goal of the research was to interpret multiple experiences and unexpected occurrences objectively.

Data collection involved me conducting open-ended, face-to-face interviews, which may be sensitive and demanding. The data collection procedures included: establishing an environment that the participants are comfortable with; engaging the

participants in the conversation; actively listening to participants' responses; and critical observation.

Data Collection Methods

The use of open-ended interview questions helped ensure credibility, facilitated data analysis, and reduced researcher bias (Patton, 2002). Open-ended questions free participants from the experiences of the interviewer (Creswell & Creswell, 2018). Patton (2002) also stated that the appeal and advantages of the unstructured interview outweigh the challenges. The raw data was naturalistic, indicating that I did not code, categorize, or process the data at the time of collection (Willig, 2013).

The study involved the use of interviews to collect data. The interviews were conducted face-to-face and were spoken verbally. The data collected was recorded using an audio recording device and later transposed for textural analysis. Member checking also take place to validate the raw data presented.

The study examined the responses from individuals who were employed for at least one year. The following demographic data was gathered: generation, gender, and the length of employment at the VA, length of stay in working in the model, years of experience in the professional field, education background, and ethnicity. Participants were encouraged to be open and honest when conversing. Moustakas (1994) indicated that even though research may use specific interview questions, the interview should begin with a social conversation to help foster a relaxed and trusting environment. "The interviewer is responsible for creating a climate in which the research participant will feel comfortable and will respond honestly and comprehensively" (Moustakas, 1994, p. 114).

Types of Data

Data was collected using open- ended interview questions to gather information regarding the interdisciplinary approach as the synthesis and integration of two or more disciplines working toward a common goal. Interviews were conducted in a face-to-face environment. Auditory data were collected and recorded. Upon completion of the interviews, data were transcribed to textural data. Textural data were used for statistical analysis. No other type of data was collected. To ensure the accuracy of the transcribed responses, member checking took place. Member checking involved me sending each participant their transcribed interview so that they may confirm the content presented. Participants could have revised the transcribed interviews and returned them to me or may have indicated no changes were necessary.

Data Preparation

All interviews were conducted face-to-face and were recorded with an audio recording device, and data were transcribed. The transcribed interviews were examined line by line to ensure accuracy. Additionally, textural copies of each interview were sent out for member checking. Revisions were made when appropriate. Once the data were verified participants were de-identified with an assigned pseudonym, such as Participant One. The raw data were stored in two locations, both on a secure server. Data analysis began once participants verified the information contained in each of their interviews and all participants were de-identified.

Data Analysis

The initial step in analyzing the data was to read and reread the transcripts multiple time to become immersed in the words of the participants. Through multiple passes through the data, I began to identify patterns, repeated words, and phrases, as well as any overarching concepts. The data were uploaded into Nvivo to aid in organization and analysis. At this point, I began to code the data. Phrases, sentences, and paragraphs that express an idea were assigned a code that described the data. Once the data were coded, like codes were joined to form categories. After the categories were established, categories that shared common characteristics were merged to create themes. Any category that was robust and did not join with other categories was turned into a theme. After themes were formed, I explored the data to capture relationships between themes, and to note any discrepant cases.

Data Presentation

Results of the data analysis were presented with text and table format. First, descriptive statistics were first be presented to describe the demographic characteristics of the participants. The research question was restated following the descriptive statistics. The presentation of the research question was followed by a summary which identified the themes that were extracted during the data analysis process.

After the outline of the themes, the themes composed the headings of the proceeding sections. Textural data presented support for each of the themes. The textural data were comprised of summary information as well as direct quotes that were

extracted from the interviews. For each theme, tables displayed themes, sub-themes (if applicable), and the frequency of participants who endorsed the experience.

Strengths

In qualitative research, credibility refers to the congruency of the results with the actual experiences of the participants. Credibility can be improved by implementing several processes. Before participation, participants were informed of any risks of participating in the study and were asked if they would like to participate in the study. The participants were each informed that participation in the study was not mandatory and that they may withdraw from the study at any time. Participants were encouraged to provide open, honest, accurate information throughout the course of the interviews. Participants were also encouraged to speak openly about their experiences and to elaborate on their responses, when necessary. Further, they were informed that there are no right or wrong responses.

To further ensure credibility, all interviews were recorded with an audio recording device, and each participant was informed about the use of the device. Upon completion of all interviews, data were transcribed. Once the interviews were transcribed, member checking took place. Changes were made where appropriate.

Chapter Summary

The Chapter 3, a rationale for the selection of a qualitative case study research approach was given as it related to the purpose and goals of this research study. In this chapter, an explanation of the data collection methods followed a description of the sample size and units of analysis. For the purpose of this study, the final sample size was

18 participants and the units of analysis were each individual participant across the VA PACT teams. The data collection methods outlined the use of a semistructured interview to gather in-depth data regarding the phenomenon of interest for this research study. The semistructured interviews were audio recording, transcribed, and sent to individual participants to member check before the data analysis began. Once the member checked interviews were returned, data analysis began by carefully reading and re-reading the interviews. This led to the creation of themes and subthemes that answered the three research questions. The findings of this research study were presented in Chapter 4 and followed in Chapter 5 with an in-depth discussion of the findings.

Chapter 4: Results

Introduction

The purpose of this qualitative descriptive case study was to investigate use of the primary care PACT model on communication and teamwork by an interdisciplinary medical team as well as the perceived processes and results that the interdisciplinary collaborative approach had on patient experiences. Communication breakdowns in the interdisciplinary model have had negative effects on the VA teams' abilities to resolve relationship conflicts, communicate effectively with each other, and foster a team collaboration environment to ensure patient safety. Despite this, an extensive review of the literature illustrated that professional communication, collaboration, and teamwork were not always present in clinical settings. For example, Sutcliffe et al. (2004) showed that organizational, relational, and social structures contributed to failures in communication that negatively influenced health care outcomes and safety.

In this study, I investigated the work of the interdisciplinary team, the perceived processes, and the results of the interdisciplinary collaborative approach. This was done to produce rich data for leadership development in the creation of policies, improved patient care, and perceived methods to affect long-term successful programs that could remedy the problem. Bronstein's (2003) design for interdisciplinary collaboration provided the framework for this study; various researchers cited an interdisciplinary approach as an MIC (Petri, 2010).

Chapter 4 centers around the analysis of data collected from participants on three PACT teams within one hospital setting and one community-based outpatient clinic with

participants from two PACT teams. The focus of this research study was to answer one central research question and the three subquestions that guided this research. The central research question was as follows: How is the primary care PACT model on communication and teamwork used by an interdisciplinary medical team? The three subquestions were as follows:

- Subresearch Question 1: What are the challenges, if any, related to resources in implementing an organizational change for the transformation?
- Subresearch Question 2: What has worked well or been a benefit or advantage, if any, of using the interdisciplinary collaborative approach?
- Subresearch Question 3: What were some organizational factors challenges, if any, for establishing standardized, efficient, and effective teamwork and communication training?

In Chapter 4, I first describe the research setting before I present participant demographics. Following this, I outline the data collection procedures prior to outlining the steps I completed in the data analysis process. I then provide the evidence of trustworthiness prior to presenting the results organized by theme. Finally, I summarize the content of the chapter and provide a transition to Chapter 5.

Setting

The setting provided an environment to minimize risks and protect the participants. I conducted the interviews in a private and secured area, with a closed door that was away from participants assigned work areas. with good lighting and two chairs,

one for the interviewer and one for the interviewee. Each interview lasted approximately one hour on average, with some interviews shorter and others longer.

A total of 18 participants volunteered to participate in the research study. The participants consisted of RNs, LPNs, social workers, clerks, and providers. Prior to the interviews, potential participants were offered the opportunity to read the consent form by themselves or to go over it with me. I invited expanded discussions to address their more personal concerns about their participation. All consented to participate in the study and indicated their approval of the study. I encouraged participants to share whatever they felt was relevant about the research interview experience. The interviews also influenced the behavior of the participants in allowing reflexive engagement in the exchange and the potential for a variety of possible styles of interacting. There was no reluctance in participants' involvement or social pressure demonstrated, in contrast to a public place, where observation can feel artificial to participants and can influence their behavior negatively.

Demographics

I recruited a total of 18 participants for the research study who met the inclusion criteria. I anticipated on recruiting a minimum of 12 participants who met the inclusion criteria; however, after the 12th interview, I recruited six additional participants to ensure data saturation was met. After recruiting the additional six interviews, bringing the total to 18, data saturation was met. Literature supports that the selection of participants should be limited to a number that yields saturation or when additional inquiry ceases to yield additional perspective or insight (Mason, 2010). During the data collection process, I

obtained demographic information on participants' ages, length of time as a VA hospital employee, position or role at the VA hospital, the highest level of education attained, and primary language.

Because I did not collect information regarding the gender of each participant, I referred to the majority participant with the she/her pronouns. Instead of referring to each participant with the singular they/them pronoun, I decided to select the feminine she/her pronouns when referring to participants in the presentation of the results. Every participant's primary language was English. I present the participants' demographic information in Table 1.

Table 1

Participant Demographics

Participant	Age range	Education	Years worked at VA	Role
P1	35-44	Bachelor Degree	2	RN
P2	55-64	Master Degree	5	Social worker
P3	35-44	Master Degree	1	Social worker
P4	45-54	Master Degree	25	Social worker
P5	25-34	High School	10	Clerk
P6	35-44	Associate Degree	5 ½	Clerk
P7	55-64	High School	17	Clerk
P8	25-34	High School	2	Clerk
P9	35-44	Some College	5	Clerk
P10	25-34	Some College	2	Clerk
P11	55-64	Associate Degree	28	LPN
P12	35-44	Bachelor Degree	19	RN
P13	55-64	Master Degree	16	Social worker
P14	45-54	Master Degree	1	Social worker
P15	45-54	Bachelor Degree	24	RN
P16	45-54	Associate Degree	10	RN
P17	55-64	Master Degree	11	Professional
P18	45-54	Master Degree	1 ½	Physician Assistant

Data Collection

Following IRB approval, I began recruiting participants with a potential participant letter. In this letter, I briefly summarized the informed consent form and provided the eligibility criteria for participation along with my contact information so potential participants could reach out to me if they were interested in participating. I obtained a signed letter of cooperation from the organization's research coordinator and signed a confidentiality agreement with the organization regarding the nature of my research. Once I recruited participants, I provided a copy of the informed consent form

via email and in-person prior to conducting the interview. I reviewed the informed consent form with each participant and asked each participant if they had any questions or concerns before beginning the interview.

I conducted 18 interviews over a period of 2 months, approximately two participants each week, in a private room with a closed door at the VA. The reason it took so long was that participants' availabilities created difficulties in scheduling interviews at mutually convenient times. Also, high turnover of team nurses and providers added burdens to the schedule in allowing staff to participate. I audio-recorded each interview with an audio-digital recording device and later stored the data on my computer as an encrypted and password-protected file. I stored all the physical data in a locked filing cabinet that only I had access to. After I completed each interview, I sent each audio recording to a professional transcription company. The professional transcription company provided documentation in a secure zip lock to ensure the confidentiality of the transcript data. The professional transcription company provided a nondisclosure agreement after signing on for their services (see Appendix A).

Data Analysis

Following the transcriptions, I began to familiarize myself with the data by reading and rereading the interview transcripts. During this first step of data analysis, I took notes about prevalent topics and patterns that I noticed. After I was familiar with the data, I uploaded the interview transcripts into a computer-assisted qualitative data analysis software called NVivo 11. I used NVivo 11 as a tool to help me organize and manage the data analysis process due to the functions of the software. Once I uploaded

the data into the computer-assisted qualitative data analysis software, I did a preliminary word frequency search to find the 100 most frequently used words. I set parameters for this search such as (a) the word must be a minimum of four characters long, (b) the word must be in the top 100 words, and (c) the word must be included stemming words to prevent redundancy. I placed the word frequency search in the appendices (see Appendix B).

After I completed the word frequency search, I began the coding process on the interview data. I used the notes I created during the first step of the data analysis process to help me identify words, phrases, and sentences about the phenomenon. Using NVivo 11 software, I highlighted the raw data and applied a label to the content of the highlighted data. I used unique code names that acted as summaries of the content within each code. Table 2 illustrates some example codes and the applicable raw data.

Table 2

Example of Coding Process

Code	Raw data
Lack of clearly defined roles	"I think instead of it being a bridge it's become a wall between the two. It's a fighting against each other, without having a clear outline of this is our position, this is our job, this is what we can do."
Patient driven care creates a partnership	"The veteran ends up being served better because each person brings in different information to contribute to the veterans' needs. The veteran is included to get the veteran's perception of what their needs are also."
Need for training on PACT	"Because there were the pilot teams that went to different seminars and work groups and stuff, and the rest of us basically we never went to any training. We just got the paperwork and what our responsibilities were and that was it. And I feel we should have had more training."

Once the data were completely coded, I began the third step of the data analysis process. During the third step of the data analysis process, I examined the codes to assess the relationships that existed between them. After I assessed these relationships, I began to cluster codes together to form a preliminary category around those relationships. After I clustered all the codes together into preliminary categories, I examined the relationships among the categories and clustered the categories together to create preliminary themes. The process of assessing relationships, reassembling clusters, and reorganizing the data occurred until I could not reassemble or reduce the data any further. Table 3 outlined the resulting thematic structure from the data analysis.

Table 3

Resulting Themes and Subthemes

Themes	Subthemes
PACT Exacerbated Previous Issues	1. No Clearly Defined Roles, but Overwhelming Responsibilities 2. Communication Barriers and Lack of Respect 3. Little to No Benefit to Patients
Collaboration of PACT is a Benefit to Team and Patients	1. Cooperation Between PACT Team 2. Benefit to Patient 3. Increased Communication

After I created the initial themes, I proceeded to the fourth step of data analysis of reviewing the themes against the data. I reviewed the data with the themes in mind to verify the resulting themes and subthemes accurately reflected the data. I reassessed and reassembled any themes not reflected in the data until they accurately reflected the data. I found no incongruities between the data and resulting themes, therefore I kept the themes and subthemes. Once I confirmed the themes and subthemes, I began to define the themes and subthemes to provide a conceptual understanding of the themes and subthemes as they related to the data. This was the last step of the data analysis process prior to reporting the findings.

Evidence of Trustworthiness

Credibility

I established the credibility of the research findings by using strategies triangulation of sources and data saturation. I utilized the triangulation of sources due to the various groups of participants I recruited for the research study, from clerks to registered nurses. I achieved data saturation during the data collection process by

recruiting additional participants for a total of 16 participants. While I was collecting data, I noticed during the tenth interview participants repeated information previously shared; however, I went through six interviews beyond that point to ensure no new information or data emerged from the data collection process.

The use of open-ended interview questions was used to help ensure credibility, facilitate data analysis, and reduce researcher bias (Patton, 2002). Open-ended questions free participants from the experiences of the interviewer (Creswell & Creswell, 2018). Patton (2002) also stated that the appeal and advantages of the unstructured interview outweigh the challenges. The raw data was naturalistic, which indicated I did not code, categorize, or process the data at the time of collection (Willig, 2013). To further ensure credibility, all interviews were recorded securely with an audio recording device, and each participant was informed about the use of the device. Upon completion of all interviews, data were transcribed into a Word document using a professional transcription company.

Transferability

I gathered in-depth interview data from each participant to provide rich and thick descriptions of participants' feelings and thoughts regarding the phenomenon under investigation. While I wrote the findings, I utilized this contextual data to further describe the situations and examples participants provided during their interviews. I also used that information to add a layer of interpretation regarding why they may have felt how they reported they did during their interview.

Dependability and Confirmability

To establish dependability and confirmability in the research study's findings, I utilized triangulation of sources. Using multiple perspectives regarding the phenomenon, I demonstrated the findings could be repeated with a similar setting and sample. In addition, I utilized reflexivity by separating myself from the research phenomenon and setting aside any potential biases and misconceptions to prevent those for influencing the data analysis process. Only I, my chair, and the professional transcription company had access to the raw data.

Results

I organized the results based on theme, because each theme and subtheme addressed more than one research question. To organize the results by research question would create a redundant presentation of the results. There were two overarching themes from the data analysis, each with three subthemes under the respective overarching theme.

PACT Exacerbated Previous Issues

The theme PACT exacerbated previous issues reflected participants' response about how the PACT model did not create an efficient system of care for patients. Instead, participants felt the PACT model strained patient care in three ways. These three ways formed the basis for the three subthemes, (a) no clearly defined roles, but overwhelming responsibilities; (b) communication barriers and lack of respect; and (c) little to no benefit to patients. Figure 1 outlines the relationship among the three subthemes to the theme.

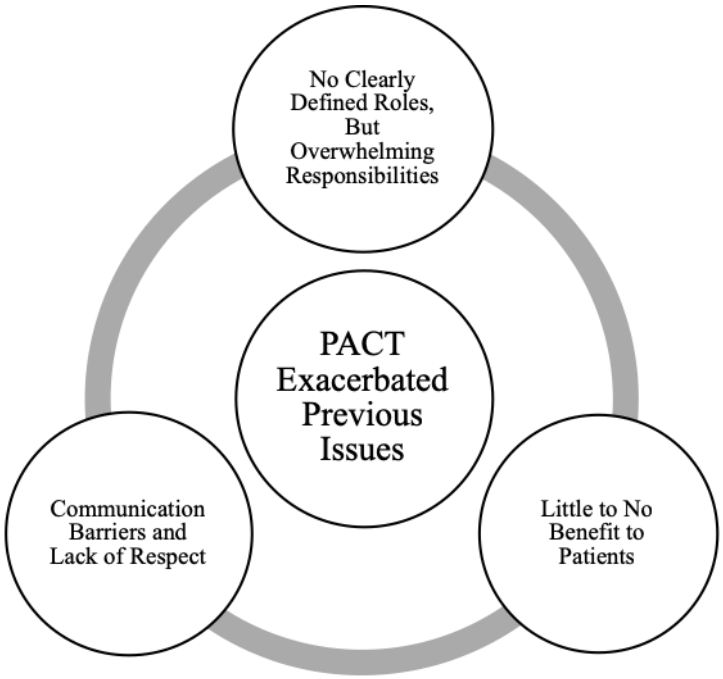

Figure 1. Connection between theme and subthemes.

No clearly defined roles, but overwhelming responsibilities. Several participants talked about the struggles they faced because of the PACT model implementation. For many, the PACT model did not create clearly defined roles and duties for team members, which created discord in treating patients. During her interview, P8 talked about how when PACT was first introduced it was supposed to act as "a bridge" between people in different departments to provide comprehensive care to the patient. In her opinion, PACT created "a wall" instead because each member of the team did not have a clear outline of "this is our position, this is our job, this is what we are allowed to do'" (P8). This breakdown made it difficult for PACT team members to understand what their exact duties were in the team. P15 expressed similar sentiments regarding the lack of clearly defined roles as being a barrier to working efficiently

together as a team. She would like to see "some of the roles a little bit more defined" to cut down on the current confusion "many of the RNs" had about whether they "should be doing this particular job" or "if it should fall on the provider" to do it (P15). P15 mentioned her manager also had "the same concerns as we do, where she's not really sure" about the extent of respective duties between RNs and providers.

In addition to the lack of clearly defined roles, participants noted there were additional responsibilities and expectations placed on PACT team members. For P17, these additional responsibilities came in the form of training clerks and LPNs as a part of her PACT team. She explained how "it took a while to get all of the staff on-board" with the new model, leaving "my nurse and I [to do] all the work" (P17). For P17, the PACT model was supposed to represent working together as a team; however, she believed "it worked better [before PACT] because everybody helped each other, and it's not that way anymore." Without clearly defined roles for each PACT team member, "everybody has what they think is their own job instead of working as a team" towards improved patient care (P17). One participant spoke about how the lack of formal training undercut the PACT team's ability to "know how to meet" these new expectations (P16). As a result, she felt the lack of training "gave us not a very good start when we did go into the model" because PACT team members did not have a foundation of understanding (P16). Despite the lack of training, the biggest concerns were over the overwhelming responsibilities that PACT team members had since the transition to the PACT model. Two participants noted people were "burned out and overburdened" because of the changed responsibilities (P13). P15 elaborated on this sentiment and shared,

> Unfortunately, I think one of the biggest disadvantages that I've seen, though, it seems like we're doing too many things, so it's hard to stay focused on one thing, and we're doing things we initially weren't ... that weren't included in the PACT team model so we pretty much tend to do many things versus just what's on the model. And I think for nurses, we tend to do more of what the providers role was. It seems like we're doing a lot more of that now. Such as sorting through the mail, ordering medications, ordering [inaudible 00:04:25], some of that, that was pretty much their responsibility, that shifted off so that the nurses are doing more of that. And we still do things such as calling the patients, which was more of the clerk's role, we still do a lot of that as well in addition to our own duties. So, I think it's become a little overwhelming for many of us.

This perception was expressed by other participants who claimed the additional responsibilities have changed the hospital environment from order to disorder. P4 noted managers were not looking at how the additional responsibilities "disrupts the flow of everyday clinic," which influences the feeling of disorder within the hospital environment. P13 shared the source of additional responsibilities were the upper management of the VA hospital. She stated an upper-level manager went onto a local news show and said, "any veteran coming into this clinic would be seen" without "any forethought" about how it would influence how the clinic operated on a day-to-day basis (P13). Because of this upper management individual, the hospital clinic became overwhelmed with walk-in patients and the PACT model was no longer "a priority anymore" since the local news show aired. P13 explained,

> We went from trying to case manage them in the home to prevent them from coming in, I shouldn't say prevent, to reduce the number of visits. That was the whole pact model. Do you really need to be here? We're going to call you ahead of time and see what's going on. We might need to eliminate this appointment. It was I think a way to regulate work flow because it's just gotten busier and busier, especially for us. I'm guessing a lot of VAs. That totally went out the window when [upper management] said no just come on in. We'll see you. So, we have providers that are over panel that are getting 10-10s, that are seeing two or three walk-ins a day because they walk in and they get to be seen because that's what [upper management] said, and there's no pact model operating. It's flying by the seat of your pants.

She continued talked about how frustrating it was to see the providers and RNs become overburdened by the number of patients and not be able to do anything to advocate against the upper management's statements. P13 talked about having a good provider leave the VA because he could not work "under these expectations and demands" from the administration. P16 provided some additional insight into how the influx of walk ins disrupts her schedule daily. She spends "more time seeing these patients coming up from urgent care" instead of accomplishing the other tasks she needs to do such as addressing alerts, making "phone calls," and sorting mail (P16).

Communication barriers and lack of respect. Several participants talked about how the additional responsibilities negatively affect communication among PACT team members. As a result, when providers and RNs can talk to their other PACT team

members, they may come across as snippy. This response further exacerbates a breakdown in communication among the PACT team and creates a hostile environment because of stress. P10 talked about how "the nurses don't seem to think of us as teammates" in the PACT team. She explained her perception about how the workplace hostility came about because "they treat us like the nurses and the providers are on one side and the clerks are on another side, and that it's us versus them" (P10). P10 provided an example of an encounter she had with a nurse and a provider in terms of advocating for a patient who needs a prescription ordered. The patient needed a refill of their prescription and waited the day they needed the new prescription, which led to a conflict between the provider and the clerk. P10 stated,

> She's (the provider) like, "It's not your job to decide how we do things. Just because a patient comes in and wants a medication doesn't mean we have to fill it." I said, "No, you don't, but if he's here and he qualifies, why wouldn't you? It doesn't make sense to make him wait or not fill it because you're mad at me." . . . . This is one of the providers, I've never even spoken to her before. This is my first time ever encountering her and this is what she did.

To her, this created an unnecessary confrontation between the provider and herself that only further supported the 'them' versus 'us' mentality in the hospital clinic. A few participants expressed a similar sentiment regarding the division between the PACT team members. P1 acknowledged the PACT team "seems kind of like a hostile environment most of the time" because the division "pits people against each other." P11 elaborated on P1's statement and stated, "Trying to work with people who don't want to work with

you" fostered "a lot of negativity in the PACT team" because people did not communicate or respect across the division between clerical and medical staff members.

P6 believed there was a disconnect between the medical and clerical staff "because each other doesn't understand the regulations and rules" with each respective position. P9 provided an example and said,

> For instance, the clerks up front could get an email from our supervisor stating different changes that might be going on, but the nurses and providers don't get the same thing so if they come out to us and ask us to do something, and we'll advise them that we are no longer able to do it a certain way, that this is what we've been told, they get very upset with us and then say, 'Well that's never been explained to us.'

Another participant expressed a similar sentiment when she shared "not everyone is given information equally" among the PACT team, which "creates this even bigger communication breakdown" between the clerk and medical staff (P6). Many of the PACT team members had different management groups, which meant there could be a breakdown in terms of what each group expected from other groups. This would create discord between the two groups, with one group feeling as if another group was not doing their respective job. P8 explained how the block in communication between these groups would lead to a misunderstanding of "what is expected of them as to what's expected of us," which prevented each group from working together.

One participant felt there were several communication barriers between the clerical staff and the medical staff because of an inability to gain contact with a person.

P6 mentioned clerks do not have a way to get in direct contact with the providers because they "do not have extensions" to either their office phone or their personal work phone. Thus, clerks "rely on instant messaging," which can create problems if a provider logs on to multiple computers as they do their rounds and may not see the instant messages as they move from computer to computer (P6). This can create a delay in getting in touch with providers if a patient has a question about medication, which may be moved onto the nurses to address the patient's concern as the final option. P6 believed communication was, and still is, "the most critical aspect of the PACT model," which is why she thought there were breakdowns at times "because we don't have it setup" in a way that fostered communication between PACT team members.

Little to no benefit to patients. Because of the issues that arose from the PACT model, several participants did not feel as if PACT was a benefit to patients. Lack of prompt communication between team members would lead to patients waiting to get answers or prescriptions, overwhelming responsibilities would lead to overworked and overburdened staff members, and the lack of clearly defined roles would lead to confusion about duties and responsibilities. P17 shared that she did not "see a whole lot of benefits" with moving to the PACT model. One participant provided an example of the PACT model negatively affects the patients either by receiving "timely care or answers to their questions" (P10). P10 elaborated,

> We had a patient once, and he was in California for the winter and he needed his insulin, he's diabetic. He waited, I think it was 18 days before his provider finally got around to signing the order for him to get his insulin sent to him. I think that's

> the hardest part. Being the clerk you're on the front line and the patients are getting upset with you but you can only do so much, you have to wait for the provider.

She admitted the nurses and providers "can't do everything all at once, right away" because they had so many responsibilities and duties to do at the hospital clinic (P10). P10 shared the nurses and providers complained to her and other clerks about how "they're overwhelmed" with all the walk-ins and additional responsibilities on top of their regular duties. She understood their feelings but acknowledged her position as clerk was to "be the go between for the provider and the patient" (P10).

One participant felt if the PACT team members could work together, it would be advantageous for the team. If it was a "true PACT team" then "you would be working together, you would get your work done, you wouldn't be as tired," and people would succeed in their position (P11). To P11, the reality was "there's not really [any] benefits" to the PACT model because "you're tired all the time because the LPNs are doing" all the work without the support from providers and RNs. Another participant talked about how one of the clinics she runs, there is not an RN for her to reach out to when there is a walk in or a patient has a question about their medication. She explained this "challenge getting the nurse to talk to a patient on the phone" often leads to the patient traveling to the clinic to get answers (P5). As a result, the patient will be angry and "demanding to speak to somebody right now" about the medication (P5). P5 understood the frustration these patients go through to try and get the answers they need, "especially if it's a heart medication that they've just got put on" and do not have any experience with.

One participant stated she did not think "the PACT model is followed at all" in the hospital clinic (P8). She felt this way because the goal of the PACT model was to create "specific groups" to serve patients in a holistic way, but "if somebody's short on the other side, they will pull you from your own provider" to fill in the gap (P8). To her, that was the lead's role to "step in and fill that gap" instead of moving another person to do that (P8). Since she would move to other groups to fill in the gap, she would not work with familiar individuals and patients. This could create problems for patients used to specific people in their group due to the presence of a new person. Since the PACT model was not followed, there could be problems for the patients she used to see in her original group as well.

Collaboration of PACT is a Benefit to Team and Patients

The theme collaboration of PACT is a benefit to team and patients reflect participants' perceptions about PACT improving patient care. Participants talked about three specific ways that teams and patients benefitted from the PACT model. These three ways were basis for the three subthemes under the theme, (a) Cooperation Between PACT Team, (b) Benefit to Patient, and (c) Increased Communication. Figure 2 illustrates the connection between the subthemes and the theme.

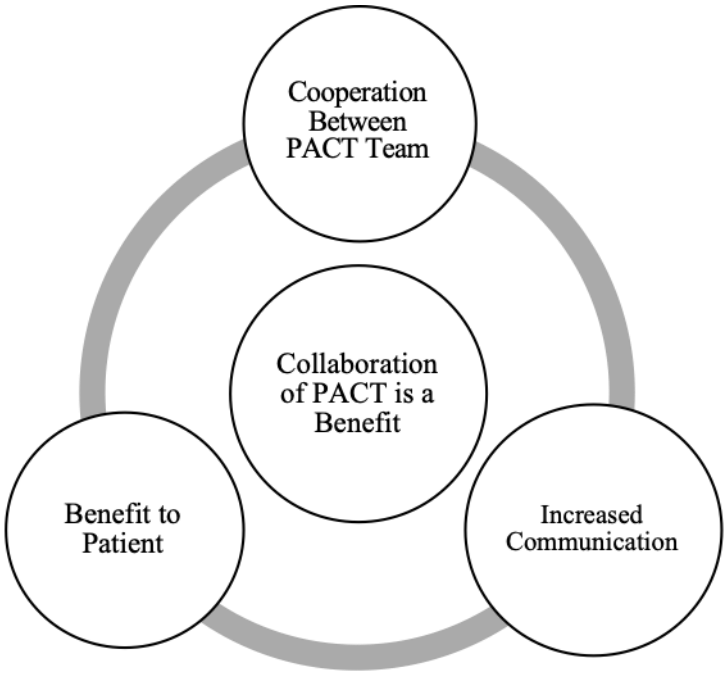

Figure 2. Connection between theme and subthemes.

Cooperation between PACT team. Several participants talked about how collaboration and cooperation between team members improved the care patients received. One participant shared her thoughts that with cooperation between team members "things flow better" and "can get accomplished much faster" because everyone worked together towards the task on hand (P2). She felt this was the case because "we're all connected daily" instead of intermittently (P2). P2 provided an example of how well things work because of the collaboration and said,

> For instance, if there was something identified that I needed to assist with the veteran, they would call me at the moment that the veteran is there at the clinic and then we would talk about what the need is and, if needed, the veteran would come into my office after they were done with the doctor and we would work on

> the need right there at that time rather than just putting in a consult for it to be followed up on later.

For P2, it was valuable to both other PACT team members and the patient to be able to address concerns all in one visit compared to having separate appointments with doctors across multiple days. It saved the number of trips patients needed to make to the VA and streamlined the service between the services so every PACT team member was involved in the care of the patient, including the patient themselves. P5 talked about this during her interview, however if she has a patient that is at the hospital that also needs to see the social worker, she will "try to get them in the same day" to see the social worker on top of the regular provider and nurses the patient needed to see. P2 elaborated how providers would not dictate what they believed need to happen, instead they "had discussions with the veteran and sometimes identified what weaknesses or resources" the veteran needed. At that point, the PACT team would get together and "talk about what each of us could do to try to facilitate whatever needed to be able to happen" so the veteran received the care they needed (P2). This interdisciplinary approach to patient care was a major benefit to participants.

P7 provided some additional insight into how unique this model was because "we're not only focusing on just one team, we're focusing on all teams." She explained how everyone was on "a team within a team within a team" because each PACT team member is a part of their own team, such as "nurses are all a team" but they work alongside other disciplines to provide comprehensive care to the patient (P7). P7 shared she wished she "had this on the outside" in terms of going to a doctor and being able to

see multiple people across multiple specialties instead of making separate appointments. To her, being able to have access to so many different disciplines and specialties in one location was a benefit for the PACT model because everyone could work together to deliver patient care and treatment more effectively.

P13 expressed a similar sentiment when she shared how much she liked this model and approach to patient care. She stated how she enjoys working inpatient clinics because she was "able to work interdisciplinary in terms of PT, nursing, occupational therapy, all that different kind of stuff" because it made her more aware of the different facets of a patient's needs (P13). P13 elaborated and said one of the main benefits to the interdisciplinary approach was that "we don't see the patient in one aspect" because "there are many different sides and parts" having "other people's opinions based on their discipline about what exactly the needs are and what would be best" can make a difference for a patient. P13 continued and shared that "when you have a consistent group of people that you're working with" it can make it faster and easier to find solutions to a patient's needs. P14 shared her agreement about how "it's a huge advantage just with everybody working together" because it makes for a "seamless" interaction for the patient. Another participant agreed with the sentiments expressed regarding how beneficial it was to have "all those disciplines coming together and overseeing the veteran's care" (P3).

One participant talked about how she tries to help her nurses and providers when there is a patient who needs to be seen by "giving [them] a head up on issues" (P8). While she recognized she cannot "triage patients when they come up" often the patient

will walk up to the clerk and provide the information to them willingly (P8). P8 elaborated,

> If they come up to your desk and explain, I have this wound here, I think it's infected, and they're showing you because we see things a lot, they offer it right up. And they show it, and a common-sense thing, you can call your nurse and say hey, patient presented to the desk, they have this wound, it looks red, they say it's hot to the touch, they feel it's infected, and you can be that middle person to relay, to let them know kind of the urgency of the situation. And it could eliminate them sitting out there for an additional 20 minutes.

By doing so, P8 could be an asset to her nurses and providers in letting them have a brief run-down on what the patient is experiencing instead of speaking time waiting for the urgent care to send or update the patient file with a note.

Benefit to patient. Several participants talked about how the PACT model has been advantageous for patients because it makes them feel more comfortable in the hospital clinic environment. One participant stated it was valuable for patients because "they pretty much get familiar with the members of the team" (P15). As a result, patients "know who to call or who to contact if they need something," which was something patients "voiced that works really well for them" and prevents an unnecessary trip to the hospital clinic (P15). Overall patients have "greater access to us" when they need their PACT team to answer their questions or explain something about a medication to them (P15).

P7 expressed a similar sentiment during her interview about how "the patients seem to be much happier" with the implementation of the PACT model. She explained how long-term patients tell her "the changes that they have seen over the years are for the so much better" in their opinion (P7). One participant explained how previously patients would not know who they would see until the day of the appointment because there was no official provider or nurse assigned to them. She explained how before PACT, "we [used to] get a lot of complaints" when "they get a new doctor" or nurse (P5). Because of the PACT model, P5 shared how more comfortable patients are because "they don't have to worry about who they're going to see" since "they already know that 'this is who I'm going to see.'" P5 elaborated on how the new model really influenced patient experiences at the VA:

> They'll know their nurse by name and their doctor and their clerk by name; so, they feel more comfortable to tell you things when they come in. There's a lot of patients that call and they'll ask to speak to their specific clerk because they know them, or their specific nurse. We'll get transfer calls from the call center, because they'll rather just talk directly to their team, instead of somebody who don't know them at all. I think it benefits a lot. They like talking to the people that they're familiar with. I think it has a lot of advantages.

For those patients, the understanding that their team would not change made them "feel a lot more comfortable" at the VA (P5). They can expect to see their nurse if they have a nursing appointment or to see their provider when they have a doctor's appointment. This was because if "I've seen them last week, I'm going to see them this week" for the

follow up appointment (P5). Another participant talked about how valuable it was to patients to know the people in their team. P13 shared,

> They know that if I say a certain nurse's name, leadership is going to be calling you to follow up, they know who that person is so I think for the patients it's nice because whoever their provider is, the people that help the provider are consistent. They're all the same people. You kind of get the runaround when it comes to the VA so it's nice to know the names and the group that you're working with.

With that consistency also came a level of expectation if another department admitted a patient. P9 talked about how beneficial it was in these situations where they can look to the providers, nurses, clerks, and other PACT team members for the patient to get a better understanding of "what's going on with the patient." For her, she would be able to reach out to the clerk and "say 'hey can you get ahold of your nurse and let him know that this is going on' or what not if you can't get ahold of the nurse yourself" (P9). It cut down on the amount of time it could take to track down a knowledgeable party because the teams were known to other departments based on patient profile.

Another benefit to patients was an "integrated mental health" system that previously was not there for veterans (P18). With the introduction of social workers as an important aspect of the PACT team, patients had "mental health resources at your fingertips" along with a social worker who could "help guide and answers a lot of questions for the family and patients" regarding the nonphysical health related areas of health (P18). P18 expressed her gratitude to all members of her teams, especially her

social worker, who helped her work "with the veteran and providing the care" the veteran needed.

One participant talked about how the PACT model could prevent patients from falling through the cracks and not receiving care. P10 explained this was because "you know it's your team, your provider's patients, and you are responsible for that team." By creating a sense of responsibility for patient retention and maintenance, each PACT team member makes a point to reach out to each patient and check in with them. It also helps patients who may forget to schedule an appointment with their nurse or provider to receive a follow up call to check in and see how they are doing.

Another participant talked about how the PACT model is focused on patient-driven care, which involves preventative aspects into the model compared to disease-driven care that focuses on addressing the symptoms. P3 felt this involved the patient more so into the decision-making aspects regarding the preventative measures instead of approaching it as "this is what we need to do and giving them directions." To her, it seemed as if the PACT model encouraged patients "to take some ownership in their care and working as a team" instead of dictating what patients needed to do (P3). Because of this transition in approach, P3 believed the PACT model made "their care more of a partnership" with their team instead of being told what they needed to do without their wishes or needs being taken into consideration.

Increased communication. The final benefit that emerged from the data analysis was how the PACT model increased communication between previously separated departments. Every participant agreed communication was an important aspect for the

success of the PACT model in the hospital; however, there were several participants who mentioned an increase in communication because of the PACT model. For these participants, it was a necessary component for the PACT model to function. One participant explained how connected communication and the PACT model were to one another:

> You have to be able to communicate and discuss care, discuss treatment modalities, discuss how the day is going to go, what's scheduled on the appointment sheets, be able to discuss veterans ahead of times and look at some things that may be need to be gotten like labs or some doctor records so that communication from the team is very vital for veterans at an appointment. Almost like a pre-planning or pre-preparation to the Veterans appointment so you've got to communicate.

Several participants discussed how vital it was to get together with the entire PACT team before the start of the day to plan and prepare for the upcoming day. It was a time for nurses and providers to talk to their clerks and social workers about what they need from them for the day and create a 'game plan' for the day. For one participant, having the opportunity to get together in the morning helps illuminate the plan of action for patient care especially across all PACT team members when the patient has a variety of needs. For P4, it was valuable time to relay information about a patient who she may need to see to get a trajectory for the day so she can schedule time to get together with the patient. P2 elaborated on this and stated,

> Well there's the morning they have huddles where they get together as a team and review the veterans that they're going to be seeing that day and try to look ahead and see if there is anything they know they're going to have to address. Then at the time of the appointment, being all together in the same clinic in that we're able to communicate while the veteran is there and kind of all get on the same page and each of us has our role to play in fulfilling what the need is.

P15 shared how ideally "we should be meeting" with the entire PACT team in the morning before patients arrive, but how there are times when they cannot get together in the morning because of how busy other team members are. She stated when that happens "we try to do it throughout the day," which can lead to the same problem since "unfortunately sometimes our clerk is really busy" because "as soon as they pretty much step in the door, patients are present at the desk" (P15). When that happens, she stated her team will take the time to try and have a conversation during free time for the clerk throughout the day so they can individually connect with the clerk about their needs. P15 explained why she felt it was important to routinely communicate with one another:

> So that way you know exactly what the other person is doing, and who's gonna [*sic*] do what. And then we pretty much know what's going on with the patients, and what to expect and we know what plan of care that patient will need before they get there."

Communicating each team member's needs helped create an atmosphere where all team members were on the same page. P4 reiterated this sentiment when she said how she will go to her PACT team members and let them know what to prepare or expect when a

patient arrives. She gave an example of giving a dementia patient the opportunity to go to an adult daycare so "the family caregiver [can have] a break during the day" while they are at the hospital (P4). She also let her clerks know about scheduled tests or x-rays a patient needed to accomplish so the clerk could make sure the family caretaker or the patient completed the paperwork before getting into the examination room. P4 was cognizant of the length of time it took for her patients to get to the VA and would advocate for them to get everything accomplished in one visit versus scheduling additional visits. She stated,

> I communicate, we have to make sure it gets done today, they're coming from 60, 70 miles. Number one, is it costly for them, number two, the veteran's already here, let's get it done while he's here. And it keeps the caregiver from having to bring him completely over here again, which oftentimes if you've got a caregiver that's not a driver, they have to still arrange for another driver. There's multiple factors that go into making sure a veteran gets here and gets here safely, particularly with an older population.

For her, it was important to have ensure other PACT team members understood how critical it was for each patient to accomplish as much as they could during their visit. A couple of participants talked about how valuable it was to have other individuals to "help bounce ideas off each other [especially] if somebody's really struggling" with finding a solution (P1). P2 stated for her, it is "the norm now to work together, to communicate with each other, and kind of brainstorm if there's a problem" where "there isn't an obvious solution."

Summary

In Chapter 4 I presented the research setting and participant demographics before I outlined the data collection and data analysis procedures. I provided the evidence of trustworthiness before I outlined the results by theme. There were two overarching themes that emerged from the data analysis process: (a) PACT Exacerbated Previous Issues and (b) Collaboration of PACT is a Benefit to Team and Patients. The first theme of PACT Exacerbated Previous Issues had three subthemes: (a) No Clearly Defined Roles, but Overwhelming Responsibilities; (b) Communication Barriers and Lack of Respect; and (c) Little to No Benefit to Patients. The second theme, Collaboration of PACT is a Benefit to Team and Patients, had three subthemes: (a) Cooperation Between PACT Team, (b) Benefit to Patient, and (c) Increased Communication. Each theme and subtheme provided answers to the research questions:

1. Applicable Themes to Answer Research Question 1
    a. PACT Exacerbated Previous Issues
        i. No Clearly Defined Roles, but Overwhelming Responsibilities
        ii. Communication Barriers and a Lack of Respect
        iii. Little to No Benefit to Patients
2. Applicable Themes to Answer Research Question 2
    a. Collaboration of PACT is a Benefit to Team and Patients
        i. Cooperation Between PACT Team
        ii. Benefit to Patient
        iii. Increased Communication

3. Applicable Themes to Answer Research Question 3
    a. Communication Barriers and a Lack of Respect
    b. Increased Communication

For the first research question, there were several resource-based challenges participants identified during their interviews. For many participants, there were no clearly defined roles in the PACT team, which lead to confusion regarding responsibilities and duties among team members. Additionally, there were overwhelming responsibilities for PACT team members to see walk-in patients based on the comments an upper management individual made on a local news station. There were barriers to communication through the form of lack of actual communication during the workday because PACT team members would not have information about how to contact the individual outside of certain avenues. There were also breakdowns in communication between management and staff members, where information given to certain PACT members and not to other members. There seemed to be a divide between the clerical and medical staff, something that fostered a hostile work environment for a couple of participants. These worked together and created further challenges that did not provide a benefit to patients.

For the second research question, there were several participants who believed there were benefits of the PACT model for patients and the PACT team. These benefits were the cooperative and comprehensive approach the PACT team provided to patients. PACT team members worked together to identify the needs of patients and collaborate to find solutions to the needs. Patients were also asked about their wishes, which created a

partnership between the hospital staff and the patient. Because of this cooperation, there was an increase in communication between PACT team members to find solutions and work together. They implemented morning-huddles or routine conversations throughout the day to touch base and keep up to date about who was coming in next and what to expect. These were incredible benefits to patients because patients felt supported by their team, who they built a connection with.

For the third research question, there were two different perspectives regarding how the PACT model contributed to effective communication and teamwork within the interdisciplinary medical team. For several participants, they did not feel the PACT model made a positive contribution to effective communication and teamwork within the PACT team. Instead they felt as if the PACT model increased division and separation between the two teams, which negatively affected the PACT team. Whereas other participants felt the PACT model did positively contribute to effective communication and teamwork within the PACT team. This dichotomy in responses should be further investigated to understand if certain perceptions relate to certain positions or roles versus other perceptions.

In Chapter 5, I discuss the findings as they relate to the literature and framework. I also provide the recommendations for future researchers and outline the limitations of the research study. Additionally, I review the implications of the findings for both future researchers and practitioners in the field.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of the qualitative, descriptive case study was to investigate use of the primary care PACT model on communication and teamwork by an interdisciplinary medical team, as well as the perceived processes and results that the interdisciplinary collaborative approach had on patient experiences. In this chapter, I summarize the findings, conclusions, and recommendations based on the data analyzed in Chapter 4.

Communication breakdowns in the healthcare interdisciplinary model presented challenges to the team's abilities to resolve relationship conflicts, communicate effectively with each other, and foster a team collaboration environment to ensure patient safety. In addition, an extensive review of the literature revealed that professional communication, collaboration, and teamwork were not always present in clinical settings. For example, Sutcliffe et al. (2004) showed that organizational, relational, and social structures contributed to failures in communication that negatively influenced health care outcomes and safety.

Chapters 1 to 4 included a review of the background of the problem, a literature review, the methodology of the study, and the results as it relates to the VA use of the PACT team model. Chapter 5 includes the results of the research in relation to the problem, purpose, and literature review as well as the following subtopics of the study: (a) interpretation of the findings, (b) summary of findings, (c) recommendations, and (d) implications and suggestions for future research. The intent of Chapter 5 is to relate results of the research to the existing literature and identify implications for future research on the topic.

The central research question was as follows: How is the primary care PACT model on communication and teamwork used by an interdisciplinary medical team? The three subresearch questions were as follows:

- Subresearch Question 1: What are the challenges, if any, related to resources in implementing an organizational change for the transformation?
- Subresearch Question 2: What has worked well or been a benefit or advantage, if any, of using the interdisciplinary collaborative approach?
- Subresearch Question 3: What were some organizational factors challenges, if any, for establishing standardized, efficient, and effective teamwork and communication training?

Interpretation of the Findings

Bronstein's design for interdisciplinary collaboration was used as the conceptual framework for this study. Various researchers cited an interdisciplinary approach as a MIC (Bronstein, 2003; Petri, 2010). Bronstein's model fundamentally represents a successful collaboration of a team (Bronstein, 2002, 2003). The design for the study consisted of the following four components: (a) team collaboration, (b) newly designed professional activities, (c) shared responsibility, and (d) reflection on the process of collaboration.

The research process included an investigation of one centralized question and three subresearch questions, including demographic and interview questions. The data collection was specific to the PACT teams at two different sites that resulted in several insights into barriers and successes encountered by the PACT teams involving

communication, team collaboration, and the different strategies used to be effective.

There were two overarching themes that emerged from the results of the data analysis:

1. PACT exacerbated previous issues and
2. Collaboration of PACT is a benefit to team and patients

The theme PACT exacerbated previous issues was comprised of three subthemes: (a) no clearly defined roles but overwhelming responsibilities, (b) communication barriers and lack of respect, and (c) little to no benefit to patients. The theme collaboration of PACT is a benefit to team and patients was comprised of three subthemes: (a) cooperation between PACT teams, (b) benefit to patient, and (c) increased communication.

The theme PACT exacerbated previous issues had three subthemes: (a) no clearly defined roles but overwhelming responsibilities, (b) communication barriers and lack of respect, and (c) little to no benefit to patients. No clearly defined roles but overwhelming responsibilities: Several participants talked about the struggles they faced because of the PACT model implementation. For many, the PACT model did not create clearly defined roles and duties for team members, which created discord in treating patients. In addition to the lack of clearly defined roles, participants noted there were additional responsibilities and expectations placed on PACT team members.

Communication barriers and lack of respect: Several participants noted how the additional responsibilities negatively affected communication among PACT team members. As a result, when providers and RNs can talk to their other PACT team

members, they may come across as “snippy.” This response further exacerbates a breakdown in communication among the PACT team and creates a hostile environment because of stress. Because of the issues that arose from the PACT model, several participants did not feel as if PACT was a benefit to patients.

The lack of prompt communication between team members leads to patients waiting to get answers or prescriptions, overwhelming responsibilities lead to overworked and overburdened staff members, and the lack of clearly defined roles leads to confusion about duties and responsibilities. The theme collaboration of PACT is a benefit to team and patients consisted of three subthemes: (a) cooperation between PACT team, (b) benefit to patient, and (c) increased communication. In regard to cooperation between PACT team, several participants talked about how collaboration and cooperation between team members improved the care patients received. This interdisciplinary approach to patient care was a major benefit to participants.

Additionally, when discussing the benefit to patient, several participants talked about how the PACT model has been advantageous for patients because it makes them feel more comfortable in the hospital clinic environment. One participant talked about how the PACT model could prevent patients from falling through the cracks and not receiving care. With regards to increased communication, the final benefit that emerged from the data analysis was how the PACT model increased communication between previously separated departments. Every participant agreed communication was an important aspect for the success of the PACT model in the hospital; however, there were several participants who mentioned an increase in communication because of the PACT

model. For these participants, it was a necessary component for the PACT model to function.

Subresearch Question 1

What are the challenges, if any, related to resources in implementing an organizational change for the transformation?

For the first subresearch question, participants viewed PACT positively as a model and reported improved team relationships and communication. The participants described multiple resource-based challenges to achieving functioning teams and unintended consequences including

1. No clearly defined roles-- There is a need for clear roles and expectations for all team members, including leadership;
2. Staffing ratio and resources-- Ideally, the PACT model is perceived as a good system, but due to high turn-over, unfilled positions, and incomplete teams from unfilled positions, the implementation of the model was challenging and unrealistic;
3. Space has been the most negative aspect in implementing the model; the environment is not set up to accommodate teams working in the same places causing a perception of an increase in "silos;"
4. Not enough equipment such as faxes and printers available for patient information;
5. Scheduling-- Overwhelming responsibilities for PACT team to see walk-in patients and scheduled patients;

6. All teams are not fully staffed with LPNs because of turn-over;
7. No back-up teams to cover unexpected absences and planned time off; and
8. Trainings- Only two RNs, two social workers, and three providers had received the original national trainings; the rest of the staff were given little to no formal training in the PACT model for communication and team collaboration.

There were barriers to communication because of the lack of actual communication during the workday such as "team huddles." This lack of communication led to the PACT team members not having alternative contact information of other PACT team members. There were also breakdowns in communication between management and staff members, where information was given to certain PACT members and not to others. Finally, there seemed to be a divide between the clerical and medical staff, which fostered a hostile work environment for a couple of participants. These factors contributed to further challenges that did not provide a benefit to patients.

Subresearch Question 2

What has worked well or been a benefit or advantage, if any, of using the interdisciplinary collaborative approach?

For the second subresearch question, there were several participants who believed there were benefits of the PACT model for patients and the PACT team. These benefits were the cooperative and comprehensive approach the PACT team provided to patients. PACT team members worked together to identify the needs of patients and collaborate to find solutions to the needs. Patients were also asked about their wishes, which created a partnership between the hospital staff and the patient.

Because of this cooperation, there was an increase in communication between PACT team members to find solutions and work together. They implemented morning-huddles or routine conversations throughout the day to touch base and keep up-to-date about who was coming in next and what to expect. These were benefits to patients because patients felt supported by their team, with whom they had built a connection.

Subresearch Question 3

What were some organizational factors or challenges, if any, for establishing standardized, efficient, and effective teamwork and communication training?

For the third subresearch question, there were two different perspectives regarding how the PACT model contributed to effective communication and teamwork within the interdisciplinary medical team. For several participants, they did not feel the PACT model made a positive contribution to effective communication and teamwork within the PACT team. Instead, they felt as if the PACT model increased division and separation between the two teams, which negatively affected the PACT team whereas other participants felt the PACT model did positively contribute to effective communication and teamwork within the PACT team. This dichotomy in responses should be further investigated to understand if certain perceptions relate to certain positions or roles versus other perceptions.

Summary of Findings

There were two overarching themes from the data analysis, each with three subthemes under the respective overarching theme. Through the emergent themes and sub-themes, the results support the argument that there are many barriers to effective

multidisciplinary team development and function. Among these barriers are (a) professional unresolved relationship conflicts and mistrust, (b) diverse disciplines, (c) creation of teams with staff turnovers, (d) the silo approach to healthcare, (e) professional hierarchies' cultures that affect quality patient care (Canadian Patient Safety Institute, 2011).

Also, the two overarching themes and three subthemes that emerged, appear relevant considering health care regarding reliability, it is critical that the organization understand and harness tools that enhance teamwork and communication for safe patient care (O'Daniel & Rosenstein, 2008).

The study sought to investigate each discipline, the work of the interdisciplinary team, the perceived processes, and results of the interdisciplinary collaborative approach to produce rich data for leadership development in the creation of policies, improved patient care, and perceived methods to affect long-term successful programs could remedy the problem. The study included qualitative research questions. Sixteen participants consisted of the following: Registered Nurses, Licensed Practical Nurse, Social Workers, Clerks, and Providers who met the inclusion criteria.

The investigation revealed demographic information regarding participants' gender, range of age, length of time as a VA hospital employee, their position or role at the VA hospital, the highest level of education attained, and primary language as English. There was one central research question that guided this research study and three sub-questions. The central research question was: *How is the Primary Care PACT Model on communication and teamwork used by an interdisciplinary medical team?* The three sub-

questions were:

Subresearch Question 1. What are the challenges, if any, related to resources in implementing an organizational change for the transformation?

For many participants, there were no clearly defined roles in the PACT team, which lead to confusion regarding responsibilities and duties among team members. Additionally, there were overwhelming responsibilities for PACT team members to see walk-in patients based on the comments an upper management individual made on a local news station. There were barriers to communication through the form of lack of actual communication during the workday because PACT team members would not have information about how to contact the individual outside of certain avenues.

There were also breakdowns in communication between management and staff members, where information given to certain PACT members and not to other members. There seemed to be a divide between the clerical and medical staff, something that fostered a hostile work environment for a couple of participants. These worked together and created further challenges that did not provide a benefit to patients. Petri (2010) supports the argument that despite support to implement interdisciplinary collaboration as a model of health care practice, he asserted some key findings to include: (a) the lack of unified understanding of the concept, (b) varied perceptions of interdisciplinary characteristics, (c) divergent experiences among differing health care disciplines, and (c) sparse information supporting a theoretical framework of interdisciplinary collaboration impedes application.

Another contributing barrier to effective interdisciplinary health teams is the

failure of providers to understand the role of and contribution of each member (Bronstein, 2003; Orchard et al., 2008; Petri, 2010). McCarthy and Klein (2011) reported that effective communication and teamwork are essential components for achieving high performance and creating an organizational culture of zero percentage patient harm. Ambiguity in team structure may lead to disagreement within teams particularly on task allocation, authority, roles and responsibilities (Hannaford et al., 2013).

Subresearch Question 2. What has worked well or been a benefit or advantage, if any, of using the interdisciplinary collaborative approach?

There were several participants who believed there were benefits of the PACT model for patients and the PACT team. These benefits were the cooperative and comprehensive approach the PACT team provided to patients. PACT team members worked together to identify the needs of patients and collaborate to find solutions to the needs. Patients were also asked about their wishes, which created a partnership between the hospital staff and the patient. Because of this cooperation, there was an increase in communication between PACT team members to find solutions and work together.

They implemented morning-huddles or routine conversations throughout the day to touch base and keep up to date about who was coming in next and what to expect. These were incredible benefits to patients because patients felt supported by their team, who they built a connection with. Considering health care regarding reliability, it is critical that the organization understand and harness tools that enhance teamwork and communication for safe patient care (O'Daniel & Rosenstein, 2008).

Subresearch Question 3. What were some organizational factors challenges, if any, for establishing standardized, efficient, and effective teamwork and communication training?

There were two different perspectives regarding how the PACT model contributed to effective communication and teamwork within the interdisciplinary medical team. For several participants, they did not feel the PACT model made a positive contribution to effective communication and teamwork within the PACT team. This may have been because of the lack of daily huddles and constant communication with the PACT team. Instead, they felt as if the PACT model increased division and separation and supported "silos" between the two teams, which negatively affected the PACT teams. Also, other participants felt the PACT model did positively contribute to effective communication and teamwork within the PACT team if they are fully staffed. This dichotomy in responses should be further investigated to understand if certain perceptions relate to certain positions or roles versus other perceptions.

Choi and Pak (2006) summarized that multidisciplinary teams work parallel, whereas, interdisciplinary teams tend to address a widespread problem, and work together to find a solution. Samuelson et al. (2012) asserted that, unlike multidisciplinary, interdisciplinary collaboration is the integration of each health care provider's perspectives toward a common patient-centered goal.

Limitations of the Study

Although honesty was assumed in participant responses, it is plausible that response bias occurred because of the personal nature of the interview that participants

often shared experiences beyond those being investigated. Some of the nurses may have been reluctant to share operational details of the PACT team. Participants were assured of the confidentiality of their responses and the instruments contained carefully worded questions to appear nonthreatening, to reduce possible response bias.

The generalizability of the research findings was limited to nurses, clerks, social workers and providers in two PACT teams. The study did not include patients within the PACT model nor leadership. The study was not specifically designed to examine a traditional model of health care delivery, but rather an innovative model of care. The credibility of the research study's findings used the strategies triangulation of sources and data saturation.

The triangulation of sources was utilized due to various groups of participants recruited for the research study, from clerks to registered nurses, social workers and providers. The data saturation was achieved during the data collection process by recruiting four additional participants for a total of 16 participants. While collecting data, the tenth interview participants repeated information previously shared by others; however, six interviews beyond that point were used to ensure no new information or data emerged from the data collection process.

According to Yin (2014), triangulation represents a validation strategy in which a qualitative researcher uses diverse types of data and data collection strategies to provide stronger evidence for the research results. Triangulation affects internal validity by providing a more objective view of data due to the consideration of different perspectives. The current study included between-method triangulation to gain a greater

understanding of the data and to validate the study conclusions further. Combining qualitative and quantitative methods into one research design helps reduce the biases that might result from viewing a problem from a single perspective (Yin, 2014).

Transferability

The in-depth interview data from each participant provided rich and thick descriptions of participants' feelings and thoughts regarding the phenomenon under investigation. In the findings, the contextual data were used to further describe the situations and examples participants provided during their interviews. Also, the information added a layer of interpretation regarding why they may have felt how they reported during their interview.

Dependability and Confirmability

The triangulation of sources was used to establish dependability and confirmability in the research study's findings. Using multiple perspectives regarding the phenomenon, the findings could be repeated with a similar setting and sample. Also, an audit trail provided the rationale for the decisions to be made during the data analysis process. In addition, reflexivity was utilized to separate myself from the research phenomenon; and setting aside any potential biases and misconceptions to prevent those for influencing the data analysis process.

Results

The results were organized based on themes because each theme and subtheme answers more than one research question. To organize the results by research question would create a redundant presentation of the results. There were two overarching themes

from the data analysis, each with three subthemes under the respective overarching theme.

Recommendations for Future Research

Recommendations for future research would improve the study design by overcoming noted study limitations, such as changing wording in the interview questions, and using a different approach allowing the participants to openly express their thoughts that may give more insight to both the interviewee and the interviewer.

Further quantitative and qualitative studies should be done to examine: (a) the benefits, challenges, and characteristics of patient-centered communication and shared decision making; (b) approaches and tools to facilitate patient-centered communication and shared decision making; (c) advance care planning, and timeliness of coordination and integration of care for walk-ins into day to day operation; (d) staff development through virtual assimilations; and (e) the dichotomy in responses should be further investigated to understand if certain perceptions relate to certain roles versus other perceptions. Also, research is needed to effectively deal with miscommunication and communication barriers in pressing situations; establishing a cause and effect relationship between human factors and clinical results (O'Daniel & Rosenstein, 2008).

Recommendations for Research

Further quantitative and qualitative studies should be done to examine a number of aspects related to the phenomenon. For example, future studies should explore the benefits, challenges, and characteristics of patient-centered communication and shared decision making. Coupled with this, future studies should examine the approaches and

tools used to facilitate patient-centered communication and shared decision-making. It may be helpful for future researchers to study advance care planning, timeliness of coordination, and integration of care for walk-ins into day-to-day operation. The results of these future studies may contribute to staff development through virtual assimilations. These types of future research may also reveal the dichotomy in responses to understand if certain perceptions relate to certain roles versus other perceptions.

Recommendations for Leadership

Leaders in the PACT model are aware that the VHA system and priorities of the healthcare are creating different imperatives; therefore, there is a diverse interest in having a different platform for interdisciplinary teamwork. With these imperatives effective communication and teamwork requires supportive structures and multiple change in services (Grumbach, 2009). One of the first critical steps is organizational commitment and willingness to address the issues. Commitment needs to come from top down and bottom up making a statement to the employees of how the organization operates. Secondly, the organization recognition and awareness in assessing employees' satisfaction results, turnovers rates, patient satisfaction and others.

Clinical handover is fundamental in providing safe patient care. Communication between the different disciplines of the health care team can directly affects patient outcomes and the quality of care. Also, leaders may create conditions by fostering communication and be open-minded and listen to the employees when creating guidelines, policies, common purpose and values. Current guidelines with role clarity should be enforced as outlined in the PACT team model for all disciplines to prevent

failure of communication. Failure of effective communication has been identified as contributing to delayed treatments, medication errors and morbidity as stated by Joint Commission (2011). The key objective is to improve communication and team work, and consequently, patient safety by designing, implementing, and evaluating standardized tools for clinical handover within the organization for the PACT Teams.

Further recommendations include some ethical considerations. Among them are: a) leaders taking some immediate steps to show employees that they are honest and determined to do their best for the organization, and b) implement staff development PACT trainings for new employees and subsequent trainings annually.

Implications

There is potential for knowledge that would be helpful to program developers, health care providers, leaders, and other researchers who are searching to identify improved patient outcomes in different primary care settings. In addition, identifying approaches will ensure the future sustainability of the PACT model and ensure future nontechnical training for health care providers (Stremikis et al., 2011). Furthermore, the results of this study may be useful to VA hospital board members, stakeholders, and administrators as the results may lead to improved patient care, improved processes to affect successful long-term programs, and the implementation of future PCMH models.

Summary

The information in Chapter 5 presents a discussion of the centralized question and three subthemes research questions and a discussion of the results in relation to the problem, purpose, and literature review. Chapter 5 also includes a discussion of the

following subtopics of the study: (a) interpretation of the findings, b) summary of findings, (c) recommendations, and (d) suggestions for future research. The intent of chapter 5 is to relate findings to the existing literature and identify implications.

The purpose of this qualitative case study was to investigate use of the Primary Care PACT model on communication and teamwork by an interdisciplinary medical team, as well as the perceived processes and results that the interdisciplinary collaborative approach had on patient experiences. In addition, the study was to deepen understanding of the perceived methods and potential barriers to interdisciplinary collaboration in patient-centered medical homes (Bronstein, 2002, 2003). Interdisciplinary collaboration is supported and promoted as a model of patient-centered, health care delivery; however, barriers, influences, and antecedents to the successful implementation of interdisciplinary collaboration remain elusive (Petri, 2010).

The driving force for enhancement of interdisciplinary collaboration requires supportive structure from the VA healthcare system. However, methodologies for implementation and outcomes related to interdisciplinary and collaborative care remain abstract within fast-paced health care environments (Grumbach, 2009). The results were organized based on theme, because each theme and subtheme answered more than one research question. The theme PACT exacerbated previous issues reflected participants' response about how the PACT model did not create an efficient system of care for patients. Instead, participants felt the PACT model strained patient care in three ways. These three ways formed the basis for the three subthemes, (a) no clearly defined roles,

but overwhelming responsibilities; (b) communication barriers and lack of respect; and (c) little to no benefit to patients.

Conclusion

Over 70% of safety accidents from 1995 to 2003 were a result of communication failures (Joint Commission, 2011). The importance of collaborative efforts and communication have been recognized as ways in which to address issues about patient safety incidents in health care. As such, this study sought to deepen the understanding of the perceived methods and potential barriers to interdisciplinary collaboration in patient-centered medical homes. The results of this study identified specific gaps in technical knowledge and skills as they relate to communication and teamwork in an interdisciplinary model. The current study also resulted in important contributions to understanding the PACT team as it relates to communication and teamwork. These findings will contribute to the knowledge base that can be used to improve communication and reduce patient issues. Moreover, the findings are also important to contributing to the creation of interventions that can be used to address issues related to role clarity, communication strategies, and teamwork, which will improve patient care as well as their experiences.

References

Abramson, J. S., & Mizrahi, T. (1996). When social workers and physicians collaborate: Positive and negative interdisciplinary experiences. *Social Work, 41*(3), 270-281. Retrieved from http://www.jstor.org/stable/23718170

Abreu, B. C., Zhang, L., Seales, G., Primeau, L., & Jones, J. S. (2002). Interdisciplinary meetings: Investigating the collaboration between persons with brain injury and treatment teams. *Brain Injury, 16*(8), 691-704. doi: 10.1080/02699050210128942.

Agich, G. J. (Ed.). (1982). *Responsibility in health care.* Hingham, MA: D. Reidel Publishing Company.

American Association of Critical Care Nurse. (2010). *The synergy model in practice.* Retrieved from https://www.aacn.org/nursing-excellence/aacn-standards/synergy-model

Annis, T. D. (2002). The synergy model in practice: The interdisciplinary team across the continuum of care. *Critical Care Nurse, 22*(5), 76-78. Retrieved from http://ccn.aacnjournals.org/

Avolio, B. J. & Yammarino, F. J. (Eds.). (2008). *Monographs in leadership and management: Vol. 2. Transformational and charismatic leadership: The road ahead*. Bingley, England: JAI Press.

Axelsson, S. B., & Axelsson, R. (2009). From territorialism to altruism in interprofessional collaboration and leadership. *Journal of Interprofessional Care, 23*(4), 320-330. doi:10.1080/13561820902921811.

Baggs, J. G., Ryan, S. A., Phelps, C. E., Richeson, J. F., & Johnson, J. E. (1992). The association between interdisciplinary collaboration and patient outcomes in a medical intensive care unit. *Heart and Lung, 21*(1), 18-24. Retrieved from https://www.journals.elsevier.com/heart-and-lung

Bass, B. M. (2008). *The Bass handbook of leadership: Theory, research & managerial applications*. New York, NY: Free Press.

Batorowicz, B., & Shepherd, T. A. (2008). Measuring the quality of transdisciplinary teams. *Journal of Interprofessional Care*, *22*(6), 612-620. doi:10.1080/13561820802303664.

Baxter, P., & Markle-Reid, M. (2009). An interprofessional team approach to fall prevention for older home care clients at risk of falling: Health care providers share their experiences. *International Journal of Integrated Care*, *9*, 1-12. Retrieved from http://www.ijic.org

Bennis, W. (2007). The challenges of leadership in the modern world. *American Psychologist, 62*(1), 2-5. doi:10.1037/003-066X.62.1.2

Bodenheimer, T., & Yoshio Laing, B. (2007). The teamlet model of primary care. *Annals of Family Medicine, 5*(5), 457 – 461. doi: 10.1370/afm.731

Bokhour, B. G. (2006). Communication in interdisciplinary team meetings: What are we talking about? *Journal of Interprofessional Care*, *20*(4), 349-363. doi: 10.1080/13561820600727205

Boswell, C., Cannon, S., Aung, K., Hammack, B., Ienatsch, G. P., & Prado, M. (2002). Interdisciplinary collaboration: A study in progress. *Public Health Nursing, 19*(4), 235-237. Retrieved from https://onlinelibrary.wiley.com/journal/15251446

Bourgeault, I. L. &. Mulvane, G. (2006). Collaborative health care teams in Canada and the USA: Confronting the structural embeddedness of medical dominance. *Health Sociology Review, 15*(5), 481-495. doi: 10.5172. hers.2006.15.5.481

Bronstein, L. R. (2002). Index of interdisciplinary collaboration. *Social Work Research, 26*, 113–126. Retrieved from http://www.jstor.org/stable/42659491

Bronstein, L. R. (2003). A model of interdisciplinary collaboration. *Social Work, 48*(3), 297-306. Retrieved from http://www.naswpress.org/publications/journals/sw.html

Bronstein, L. R., & Wright, K. (2006). The impact of prison hospice: Collaboration among social workers and other professionals in a criminal justice setting that promotes care for the dying. *The Prison Journal, 87*(4), 391-407. doi: 10.1177/0032885507306163

Brown, T. M. (1982). An historical view of health care teams. In G. J. Agich (Ed). *Responsibility in health care* (pp. 3-21). Hingham, MA: D. Reidel Publishing Company.

Canadian Nurses Association. (2005). *Position statement interprofessional collaboration.* Retrieved from www.cna-aiic.ca

Canadian Patient Safety Institute. (2011). *Canadian framework for teamwork and communication: Literature review, needs assessment, evaluation of training tools and expert consultation.* Retrieved from www.patientsafetyinstitute.ca

Carlsen, B. & Glenton, C. (2011). What about N? A methodological study of sample-size reporting in focus group studies. *BMC Medical Research Methodology, 11,* 26-35. doi: 10.1186/1471-2288-11-26

Centers for Medicare and Medicaid Services. (2007). *Medicare learning network.* Retrieved from http://www.cms.gov/mlnmattersarticles/downloads/MM5013.pdf

Chenail, R. J. (2011). Interviewing the investigator: Strategies for addressing instrumentation and researcher bias concerns in qualitative research. *The Qualitative Report, 16*(1), 255-262. Retrieved from http://nsuworks.nova.edu/tqr/

Choi, B. C. K., & Pak, A. W. P. (2006). Multidisciplinarity, interdisciplinarity and transdisciplinarity in health research, services, education and policy: 1. Definitions, objectives, and evidence of effectiveness. *Clinical Investigative Medicine, 29*(6), 351-564. Retrieved from https://cimonline.ca/index.php/cim

Christina, O., & Konstantinos, N. (2009). An exploratory study of the relationships between interprofessional working, clinical leadership, stress and job satisfaction in Greek registered mental health and assistant nurses. *Health Science Journal, 3*(3), 175-186. Retrieved from http://www.hsj.gr/

Coenen, M., Stamm, T. A., Stucki, G., & Cieza, A. (2012). Individual interviews and focus groups in patients with rheumatoid arthritis: A comparison of two qualitative methods. *Quality of Life Research, 21*(2), 359-370. doi:10.1007/s11136-011-9943-2

Cone, J. D., & Foster, S. L. (2006). *Dissertations and theses from start to finish* (2nd ed.). Washington, D.C: American Psychological Association.

Corbin, J., & Strauss, A. (2008) *Basics of qualitative research* (3rd ed.). Thousand Oaks, CA: Sage Publications.

Craven M., Bland R. (2013). Depression in primary care: Current and future challenges. Canadian Journal of Psychiatry, 58, 442–448.

Crawford, G. B., & Price, S. D. (2003). Team working: Palliative care as a model of interdisciplinary practice. *Medical Journal of Australia, 179*(6 Suppl), S32-S34. Retrieved from https://www.mja.com.au

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th Ed.). Thousand Oaks, CA: Sage Publications.

Deber, R. B., & Baumann, A. O. (2005). *Barriers and facilitators to enhancing interdisciplinary collaboration in primary health care.* Enhancing Interdisciplinary Collaboration in Primary Health Care.

Delva, D., Jamieson, M., & Lemieux, M. (2008). Team effectiveness in academic primary health care teams. *Journal of Interprofessional Care, 22*(6), 598-611. doi: 10.1080/13561820802201819.

Drinka, T. J. K. (1994). Interdisciplinary geriatric teams: Approaches to conflict as indicators of potential to model teamwork. *Educational Gerontology, 20*(1), 87-102. Retrieved from https://www.tandfonline.com/loi/uedg20

Enhancing Collaboration in Primary Health Care (EICP) Steering Committee of Canada (2006). *The principles and framework for interdisciplinary collaboration in primary health care.* Retrieved from http://www.caslpa.ca/PDF/EICP_Principles_and_Framework_final.pdf.

Farrell, K., Paynes, C., & Heye, M. (2015). Integration interprofessional collaboration skills into the advanced practice registered nurse socialization process. *Journal of Professional Nursing, 31*(1), 5-10. doi: 10.1016/j.profnurs.2014.05.006

Farrell, M. P., Schmitt, M. H., Heinemann, G. D. (2001). Informal roles and stages of interdisciplinary team development. *Journal of Interprofessional Care, 15*(3), 281-295. doi: 10.1080/13561820120068980.

Flyvbjerg, B. (2006) *Five misunderstanding about case-study research.* Thousand Oaks, CA: Sage Publications.

Fried, T. R., McGraw, S., Agostini, J. V., & Tinetti, M. E. (2008). Views of older persons with multiple comorbidities on competing outcomes and clinical decisions making. *Journal of the American Geriatrics Society, 56*(10), 1839-1844. doi: 10.1111/j.1532-5415.2008. 01923.x

Gadolin, C., & Wikstrom, E. (2016). Organising healthcare with multi-professional teams: Activity coordination as a logistical flow. *Scandinavian Journal of Public Administration, 20*(4), 53-72. Retrieved from http://ojs.ub.gu.se/ojs/index.php/sjpa

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research.* Piscataway, NJ: Transaction.

Given, B., & Simmons, S. (1977). The interdisciplinary health care team: Fact or fiction. *Nursing Forum, 16*(2), 165-184. doi: 10.1111/j.1744-6198.1977. tb00632x.

Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods, 18*(1), 59-82. doi: 10.1177/1525822X05279903

Grant R.W., Finocchio, L.J., (1995), and the California Primary Care Consortium Subcommittee on Interdisciplinary Collaboration. Interdisciplinary Collaborative Teams in Primary Care: A Model Curriculum and Resource Guide. San Francisco, CA: Pew Health Professions Commission.

Greiner, A. C., & Knebel, E. (Eds.). (2003). *Health professions education: A bridge to quality*. Washington, D. C: National Academies Press.

Grumbach, K. (2009, Aug). The outcomes of implementing patient-centered medical home interventions: A Review of the evidence on quality, access and costs from recent prospective evaluation studies. *Washington, D.C.: Patient-Centered Primary Care Collaborative.*

Hannaford, N., Mandel, C., Crock, C., Buckley, K., Magrabi, F., Ong, M., ... & Schultz, T. (2013). Learning from incident reports in the Australian medical imaging setting: handover and communication errors. *The British Journal of Radiology, 86*(1022), 20120336-201220347. doi: 10.1259/bjr.20120336

Hanson, J. L., Balmer, D. F., & Giardino, A. P. (2011). Qualitative research methods for medical educators. *Academic Pediatrics, 11*(5), 375-386. doi: 10.1016/j.acap.2011.05.001

Harr, C., Openshaw, L., & Moore, B. (2010). Interdisciplinary relationships between chaplains and social workers in health care settings. *Journal of Health Care Chaplaincy, 16*(1-2), 13-23. doi: 10.1080/08854720903451048.

Herbert, C. P. (2005). Changing the culture: Interprofessional education for collaborative patient-centered practice in Canada. *Journal of Interprofessional Care, 19*(1), 1-4. doi: 10.1080/13561820500081539

Institute of Medicine. (1999). *To err is human: Building a safer health system, Executive summary*. Retrieved from http://www.nap.edu/books/0309068371/html/.

Institute of Medicine. (2001). *Crossing the quality chasm: A new health system for the 21st century, executive summary*. Retrieved from http://books.nap.edu/openbook.php?record_id=10027&page=1.

Institute of Medicine. (2003). *The health professions education: A bridge to quality.* Retrieved from http://www.nap.edu/openbook.php?isbn=0309087236.

James, J. (2013), Anew, evidence-based estimate of patient harms associated with hospital care. *Journal of Patient Safety, 9*(3), doi: 10.1097/PTS.0b013e3182948a69.

Jansen, L. (2008). Collaborative and interdisciplinary health care teams: Ready or not? *Journal of Professional Nursing, 24*(4), 218-227. doi: 10.1016/j.profnurs.2007.06.013

Joint Commission. (2010). *Joint commission publishes new guide for advancing patient-centered care*. Retrieved from http://www.jointcommission.org

Joint Commission. (2011). *Improving America's hospitals: The joint commission's annual report on quality and safety.* Retrieved from www.jointcommission.org

Klein, S. (2011). The Veterans Health Administration: Implementing patient-centered medical homes in the nation's largest integrated delivery system. *The Commonwealth Fund.* Retrieved from http://www.commonwealthfund.org

Korner, M. (2010). Interprofessional teamwork in medical rehabilitation: A comparison of multidisciplinary and interdisciplinary team approach. *Clinical Rehabilitation, 24*(8), 745-755. doi: 10.1177/0269215510367538.

Kramer, B. J., & Berg-Klug, M. (2004). Social work research in end-of-life care. In J. Berzoff & P. Silverman (Eds.), *Living with dying: A handbook in end-of-life care for practitioners* (pp. 628-664). New York, NY: Columbia University Press.

Lee, B. Y. (2017). Facilitating reading habits and creating peer culture in shared book reading: An exploratory case study in a toddler classroom. *Early Childhood Education Journal. 45*(4), 521-527. doi: 10.1007/s10643-016-0782-1

Leedy, P. D., & Omrod, J. E. (2010). *Practical research: Planning and design* (9th ed.). Upper Saddle River, NJ: Pearson Education.

Legare, F., Stacey, D., Graham, I. D., Elwyn, G., Pluye, P., Gagnon, M. P., Desroches, S. (2008). Advancing theories, models and measurements for an interprofessional approach to shared decision making in primary care: A study protocol. *BMC Health Services Research, 8*(2), 1-8. doi: 10.1186/1472-6963/8/2.

Leggat, S. G. (2007). Effective healthcare teams require effective team members: Defining teamwork competencies. *BioMed Central Health Services Research, 7,* 17-27. doi: 10.1186/1472-6963.7.17.

Leipzig, R. M., Hyer, K., Ek, K., Wallenstein, S., Vezina, M. L., Fairchild, S., Howe, J. L. (2002). Attitudes toward working on interdisciplinary healthcare teams: A comparison by discipline. *Journal of the American Geriatric Society, 50*(6), 1141-1148.

Lietz, C. A., & Zayas, L. E. (2010). Evaluating qualitative research for social work practitioners. *Advances in Social Work, 11*(2), 188-202. Retrieved from https://journals.iupui.edu/index.php/advancesinsocialwork/index.

Luptak, M. (2004). Social work and end-of-life care for older people: A historical perspective. *Health & Social Work, 29*(1), 7–15. http://dx.doi.org/10.1093/hsw/29.1.7.

Luszki, M. B. (1958). *Interdisciplinary team research: Methods and problems.* Washington, D.C: New York University Press.

Lutfiyya, M. N., Brandt, B. F., & Cerra, F. (2016) Reflections from the intersection of health professions education and clinical practice: The state of the science of interprofessional education and collaborative practice. *Academic Medicine, 91*(6), 766-771. doi: 10.1097/ACM.0000000000001139

Makary, M. A., & Daniel, M. (2016). Medical error—the third leading cause of death in the US. *British Medical Journal, 353,* i2139-i2144. doi: 10.1136/bmj.i2139.

Martin, J. S., Ummenhofer, W., Manser, T., & Spirig, R. (2010). Interprofessional collaboration among nurses and physicians: Making a difference in patient outcome. *Swiss Medical Weekly, 1,* 1-12. doi: 10.4414/smw.2010.13062.

Mason, M. (2010). Sample size and saturation in PhD studies using qualitative interviews. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research, 11*(3), Art. 8. Retrieved from www.qualitative-research.ne

Matthews, B., & Daigle, J. (2018). Connecting the dots between caregiver expectations and perceptions during the hospice car continuum: Lessons for interdisciplinary teams. *International Journal of Healthcare Management.* doi: 10.1080/20479700.2018.1453575

McCarthy, D., & Klein, S. (2011). Sentara healthcare: Making patient safety an enduring organizational value. *The Commonwealth Fund.* Retrieved from http://www.commonwealthfund.org

Moustakas, C. (1994). *Phenomenological research methods*. Thousand Oaks, CA: Sage Publications.

Mujumdar, S., & Santos, D. (2014). Teamwork and communication: An effective approach to patient safety. *World Hospitals and Health Services, 50*(1), 19-22. Retrieved from www.ihf-fih.org

Morse, J. M. (1994). Designing funded qualitative research. In Norman K. Denzin & Yvonna S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 220-235). Thousand Oaks, CA: Sage.

Mumuni, E., Kaliannan, M., & O'Reilly, P. (2016). Approaches for scientific collaborations and interactions in complex research projects under disciplinary influence. *The Journal of Developing Areas, 50*(5), 383-391. doi: 10.1353/jda.2016.0064

Nelson, J. E., Mulkerin, C. M., Adams, L. L., & Pronovost, P. J. (2006). Improving comfort and communication in the ICU: A practical new tool for palliative care performance measurement and feedback. *Quality and Safety in Health Care, 15*(4), 264-271. doi: 10.1136/qsch.2005.017707.

Northouse, P. G. (2007). *Leadership theory and practice* (4th ed.). Thousand Oaks, CA: Sage.

O'Connor, M., Fisher, C., & Guilfoyle, A. (2006). Interdisciplinary teams in palliative care: A critical reflection. *International Journal of Palliative Nursing, 12*(3), 132-137. Retrieved from https://www.magonlinelibrary.com/toc/ijpn/current

O'Daniel, M., & Rosenstein, A. H. (2008). Professional communication and team collaboration. In R. G. Hughes RG (Ed.), *Patient safety and quality: An evidence-based handbook for nurses* (pp. 801-814). Rockville, MD: Agency for Healthcare Research and Quality.

Oliver, D. P., Wittenberg-Lyles, E. M., & Day, M. (2007). Measuring interdisciplinary collaboration in hospice teams. *American Journal of Hospice and Palliative Medicine, 24*(1), 49-53. doi: 10.1177/1049909106295283

Orchard, C. A., Curran, V., & Kabene, S. (2005). Creating a culture for interdisciplinary collaborative professional practice. *Medical Education Online, 10,* 1-13.

Retrieved from http://med-ed-online.net/index.php/meo/article/viewFile/4387/4569.

Ozcelik, H., Fadiloglu, C., Karabulut, B., & Uyar, M. (2014). Examining the effects of the case management model on patient results in the palliative care of patients with cancer. *American Journal of Hospice and Palliative Medicine, 31*(6), 655-664. doi: 10.1177/1049909113506980

National Academies of Sciences. (2016). Assessing progress on the Institute of Medicine Report. In S. H. Altman, A. S. Butler, & L. Shern, *The future of nursing: Leading change, advancing health* (pp. 135-160). Washington, DC: The National Academies Press.

Pagano, A. M., & Arnold, T. W. (2010). Estimating detection probabilities of waterfowl broods from ground-based surveys. *The Journal of Wildlife Management, 73*(5), 686-694. doi: 10.2193/2007-524

Patton, M. Q. (2002). *Qualitative research & evaluation methods* (3rd edition). Thousand Oaks, CA: Sage Publications.

Petri, L. (2010). Concept analysis of interdisciplinary collaboration. *Nursing Forum, 45*(2), 73-82. Retrieved from https://onlinelibrary.wiley.com/journal/17446198

Pratt, K. J., Lamson, A. L., Collier, D. N., Crawford, Y. S., Harris, N., Gross, K., Saporito, M. (2009). Collaboration in action: Camp golden treasures: A multidisciplinary weight-loss and a healthy lifestyle camp for adolescent girls. *Families, Systems, & Health, 27*(1), 116-124. doi: 10.1037/a0014912.

Reese, D. J., & Raymer, M. (2004). Relationships between social work involvement and hospice outcomes: Results of the National Hospice Social Work Survey. *Social Work, 49*(3), 415-422. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/15281696

Reeves, S., McMillan, S. E., Kachan, N., Paradis, E., Leslie, M., & Kitto, S. (2015). Interprofessional collaboration and family member involvement in intensive care units: Emerging themes from a multi-sited ethnography. *Journal of Interprofessional Care, 29*(3), 230-237. doi: 10.3109/13561820.2014.955914

Rubenstein, L. V., Stockdale, S. E., Sapir, N., Altman, L., Dresselhaus, T., Salem-Schatz, S., ... & Yano, E. M. (2014). A patient-centered primary care practice approach using evidence-based quality improvement: rationale, methods, and early assessment of implementation. *Journal of general internal medicine*, *29*(2), 589-597. Retrieved from http://www.ebscohost.com

Samuelson, M., Tedeschi, P., Aarendonk, D., de la Cuesta, C., & Groenewegen, P. (2012). Improving interprofessional collaboration in primary care: Position paper of the European Forum for Primary Care. *Quality in Primary Care, 20*(4), 303-312. Retrieved from http://primarycare.imedpub.com/

Sargeant, J., Loney, E., & Murphy, G. (2008). Effective interprofessional teams: Contact is not enough to build a team. *Journal of Continuing Education in the Health Professions, 28*(4), 228-234. doi: 10.1002/chp.189.

Schmitt, M. H. (2001). Collaboration improves the quality of care: Methodological challenges and evidence from US health care research. *Journal of Interprofessional Care, 15*(1), 47-66. doi: 10.1080/13561820020022873.

Schofield, R. F., & Amodeo, M. (1999). Interdisciplinary teams in health care and human service settings: Are they effective? *Health and Social Work, 24*(3), 210-220. Retrieved from https://academic.oup.com/hsw

Scholz, R. W., & Tietje, O. (2002). *Embedded case study methods: Integrating quantitative and qualitative knowledge.* Thousand Oaks, CA: Sage.

Sommers, L. S., Marton, K. I., Barbaccia, J. C., & Randolph, J. (2000). Physician, nurse and social worker collaboration in primary care for chronically ill seniors. *Archives of Internal Medicine, 160*, 1825–1833. doi: 10.1001/archinte.160.12.1825

Stremikis, K., Schoen, C., & Fryer, A. (2011). A call for change: The 2011 commonwealth fund survey of public view of the U.S. health system. *The Commonwealth Fund, 1492*(6), 1-14. Retrieved from www.commonwealthfund.org

Sutcliffe, K. M., Lewton, E., & Rosenthal, M. M. (2004). Communication failures: An insidious contributor to medical mishaps. *Academic Medicine, 79*, 186–194. doi: 10.1097/00001888-200402000-00019.

Thylefors, I., Persson, O., & Hellstrom, D. (2005). Team types, perceived efficiency and team climate in Swedish cross-professional teamwork. *Journal of Interprofessional Care, 19*(2), 102-114. doi: 10.1080/13561820400024159

Tovian, S. M. (2006). Interdisciplinary Collaboration in outpatient practice. *Professional Psychology: Research and Practice, 17*(3), 268-272. doi: 10.1037/0735-7028.37.3.268.

Trochim, W. M. (2006). *The research knowledge base: Ethics in research.* Retrieved from http://www.socialresearchmethods.net/kb/ethics.php.

U.S. Department of Veterans Affairs. (2014). *VA Careers*. Retrieved from http://www.vacareers.va.gov/about-va/index.asp

Van Maanen, J. (1988). *Tales of the field: On writing ethnography*. Chicago, IL: University of Chicago Press.

Watson, D., & Wong, S. (2005). *Canadian Policy Context Interdisciplinary Collaboration in Primary Health Care.* Enhancing Interdisciplinary Collaboration in Primary Health Care.

Wells, N., Johnson, R., & Salyer, S. (1998). Interdisciplinary collaboration. *Clinical Nurse Specialist, 12*(4), 161-168. Retrieved from https://journals.lww.com/cns-journal/pages/default.aspx

Willig, C. (2013). *Introducing qualitative research in psychology* (3rd ed.) Berkshire, UK: Open University Press.

Winston, B. (2003). *Extending Patterson's servant leadership model: Coming full circle.* Retrieved from http://www.regent.edu/acad/cls/2003ServantLeadershipRoundtable.

Wittenberg-Lyles, E. M., & Oliver, D. P. (2007). The power of interdisciplinary collaboration in hospice. *Progress in Palliative Care, 15*(1), 6-12. doi: 10.1179/096992607X177764.

Wittenberg-Lyles, E. M., Oliver, D. P., Demiris, G., Baldwin, P., & Regehr, K. (2008). Communication dynamics in hospice teams: Understanding the role of the chaplain in interdisciplinary collaboration. *Journal of Palliative Medicine, 11*(10), 1330-1335. doi: 10.1089/jpm.2008.0165.

Wittenberg-Lyles, E. M., Oliver, D. P., Demiris, G., & Regehr, K. (2009). Exploring interpersonal communication in hospice interdisciplinary team meetings. *Journal of Gerontological Nursing, 35*(7), 38-45. doi: 10.3928/00989134-20090527-04.

World Health Organization. (2008). *The world health report 2008: Primary health care.* Retrieved from http://www.who.int/whr/2008/whr08_en.pdf.

Yazan, B. (2015). Three approaches to case study methods in education: Yin, Merriam, and Stake. *The Qualitative Report, 20*(2), 134-152. Retrieved from https://nsuworks.nova.edu

Yeager, S. (2005). Interdisciplinary collaboration: The heart and soul of healthcare. *Critical Care Nursing Clinics of North America, 17*(2), 143-148. doi: 10.1016/j.ccell.2005.01.003.

Yin, R. K. (2014). *Case study research: Design and Methods* (5th ed.). Thousand Oaks, CA: Sage Publications.

Yukl, G. (2006). *Leadership in organizations* (6th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Appendix A: Client Nondisclosure Agreement

This CLIENT NONDISCLOSURE AGREEMENT, effective as of the date last set forth below (this "Agreement"), between the undersigned actual or potential client ("Client") and Rev.com, Inc. ("Rev.com") is made to confirm the understanding and agreement of the parties hereto with respect to certain proprietary information being provided to Rev.com for the purpose of performing translation, transcription and other document related services (the "Rev.com Services"). In consideration for the mutual agreements contained herein and the other provisions of this Agreement, the parties hereto agree as follows:

1. Scope of Confidential Information 1.1. "Confidential Information" means, subject to the exceptions set forth in Section 1.2 hereof, any documents, video files or other related media or text supplied by Client to Rev.com for the purpose of performing the Rev.com Services.

1.2. Confidential Information does not include information that: (i) was available to Rev.com prior to disclosure of such information by Client and free of any confidentiality obligation in favor of Client known to Rev.com at the time of disclosure; (ii) is made available to Rev.com from a third party not known by Rev.com at the time of such availability to be subject to a confidentiality obligation in favor of Client; (iii) is made available to third parties by Client without restriction on the disclosure of such information; (iv) is or becomes available to the public other than as a result of disclosure by Rev.com prohibited by this Agreement; or (v) is developed independently by Rev.com or Rev.com's directors, officers, members, partners, employees, consultants, contractors, agents, representatives or affiliated entities (collectively, "Associated Persons").

2. Use and Disclosure of Confidential Information

2.1. Rev.com will keep secret and will not disclose to anyone any of the Confidential Information, other than furnishing the Confidential Information to Associated Persons; provided that such Associated Persons are bound by agreements respecting confidential information. Rev.com will not use any of the Confidential Information for any purpose other than performing the Rev.com Services on Client's behalf. Rev.com will use reasonable care and adequate measures to protect the security of the Confidential Information and to attempt to prevent any Confidential Information from being disclosed or otherwise made available to unauthorized persons or used in violation of the foregoing.

2.2. Notwithstanding anything to the contrary herein, Rev.com is free to make, and this Agreement does not restrict, disclosure of any Confidential Information in a judicial, legislative

or administrative investigation or proceeding or to a government or other regulatory agency; provided that, if permitted by law, Rev.com provides to Client prior notice of the intended disclosure and permits Client to intervene therein to protect its interests in the Confidential Information, and cooperate and assist Client in seeking to obtain such protection.

3. Certain Rights and Limitations

3.1. All Confidential Information will remain the property of Client.

3.2. This Agreement imposes no obligations on either party to purchase, sell, license, transfer or otherwise transact in any products, services or technology.

4. Termination 4.1. Upon Client's written request, Rev.com agrees to use good faith efforts to return promptly to Client any Confidential Information that is in writing and in the possession of Rev.com and to certify the return or destruction of all Confidential Information; provided that Rev.com may retain a summary description of Confidential Information for archival purposes.

4.2. The rights and obligations of the parties hereto contained in Sections 2 (Use and Disclosure of Confidential Information) (subject to Section 2.1), 3 (Certain Rights and Limitations), 4 (Termination), and 5 (Miscellaneous) will survive the return of any tangible embodiments of Confidential Information and any termination of this Agreement.

5. Miscellaneous

5.1. Client and Rev.com are independent contractors and will so represent themselves in all regards. Nothing in this Agreement will be construed to make either party the agent or legal representative of the other or to make the parties partners or joint venturers, and neither party may bind the other in any way. This Agreement will be governed by and construed in accordance with the laws of the State of California governing such agreements, without regard to conflicts-of-law principles. The sole and exclusive jurisdiction and venue for any litigation arising out of this Agreement shall be an appropriate federal or state court located in the State of California, and the parties agree not to raise, and waive, any objections or defenses based upon venue or forum non conveniens. This Agreement (together with any agreement for the Rev.com Services) contains the complete and exclusive agreement of the parties with respect to the subject matter hereof and supersedes all prior agreements and understandings with respect thereto, whether written or oral, express or implied. If any provision of this Agreement is held invalid, illegal or unenforceable by a court of competent jurisdiction, such will not affect any other provision of this Agreement, which will remain in full force and effect. No amendment or alteration of the terms of this

Agreement will be effective unless made in writing and executed by both parties hereto. A failure or delay in exercising any right in respect to this Agreement will not be presumed to operate as a waiver, and a single or partial exercise of any right will not be presumed to preclude any subsequent or further exercise of that right or the exercise of any other right. Any modification or waiver of any provision of this Agreement will not be effective unless made in writing. Any such waiver will be effective only in the specific instance and for the purpose given.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed below by their duly authorized signatories.

CLIENT	REV.COM, INC.
Print Name:	
By:	By:
Name:	Name: Cheryl Brown
Title:	Title: Account Manager
Date:	Date: August 8, 2016

Address for notices to Client:	Address for notices to Rev.com, Inc.:
	251 Kearny St. FL 8 San Francisco, CA 94108

Appendix: Word Frequency Search Results

Word	Length	Count	Weighted percentage (%)	Similar words
teams	5	702	2.43	team, teams
communication	13	476	1.65	communicate, communicated, communicates, communicating, communication, communications, community
pact	4	459	1.59	pact
knows	5	405	1.40	know, knowing, knows
think	5	398	1.38	think, thinking
patient	7	375	1.30	patient, patients, patients'
just	4	372	1.29	just
works	5	321	1.11	work, worked, working, workings, works
like	4	306	1.06	like, likely
nurse	5	287	0.99	nurse, nurses, nurses', nursing
things	6	271	0.94	thing, things
times	5	246	0.85	time, timely, times, timing
questions	9	245	0.85	question, questions
coming	6	242	0.84	come, comes, coming
model	5	235	0.81	model
need	4	233	0.81	need, needed, needs
providers	9	191	0.66	provide, provided, provider, providers, providers', provides, providing
well	4	189	0.65	well
okay	4	180	0.62	okay
really	6	176	0.61	really
interviewer	11	167	0.58	interview, interviewer, interviewing
care	4	161	0.56	care, cares, caring
going	5	160	0.55	going
want	4	153	0.53	want, wanted, wanting, wants

challenges	10	151	0.52	challenge, challenges, challenging
clerk	5	151	0.52	clerk, clerks
role	4	147	0.51	role, roles
veteran	7	144	0.50	veteran, veterans, veterans'
people	6	142	0.49	people
managers	8	138	0.48	manage, manageable, managed, management, manager, managers, managing
clinic	6	133	0.46	clinic, clinical, clinically, clinics
participant	11	128	0.44	participant, participants, participate, participating
differently	11	124	0.43	difference, different, differently
help	4	123	0.43	help, helped, helpful, helping, helps
training	8	122	0.42	train, trained, training, trainings
something	9	120	0.42	something
feel	4	119	0.41	feel, feeling, feelings, feels
talk	4	118	0.41	talk, talked, talking, talks
back	4	116	0.40	back
else	4	114	0.39	else
kind	4	112	0.39	kind
look	4	111	0.38	look, looked, looking, looks
bertha	6	110	0.38	bertha
make	4	110	0.38	make, makes, making
anything	8	109	0.38	anything
benefits	8	106	0.37	benefit, benefits
call	4	104	0.36	call, called, calling, calls
within	6	103	0.36	within
right	5	102	0.35	right, rights
able	4	102	0.35	able
good	4	101	0.35	good, 'good, goodness
medical	7	95	0.33	medical, medically, medication, medications
barriers	8	93	0.32	barrier, barriers

processes	9	90	0.31	process, processes
social	6	85	0.29	social
little	6	83	0.29	little
face	4	82	0.28	face
much	4	82	0.28	much
research	8	81	0.28	research, researcher, researching
resource	8	79	0.27	resource, resourceful, resources
relates	7	78	0.27	relate, related, relates, relatively
tell	4	78	0.27	tell, telling, tells
give	4	77	0.27	give, gives, giving
getting	7	76	0.26	'get, gets, getting
huddle	6	75	0.26	huddle, huddled, huddles, huddling
together	8	75	0.26	together
walk	4	75	0.26	walk, walking, walks
interdisciplinary	17	73	0.25	interdisciplinary
taking	6	73	0.25	take, takes, taking
doctor	6	72	0.25	doctor, doctorate, doctors
parts	5	71	0.25	part, parts
improvements	12	70	0.24	improve, improved, improvement, improvements, improving
number	6	70	0.24	number, numbers
person	6	70	0.24	person, personal, personalities, personality, personally
yeah	4	69	0.24	yeah
done	4	68	0.24	done
even	4	68	0.24	even, evening
primary	7	68	0.24	primary
supposedly	10	66	0.23	suppose, supposed, supposedly
problem	7	65	0.22	problem, problems
sure	4	65	0.22	sure
implemented	11	64	0.22	implement, implementation, implemented, implementing

informed	8	63	0.22	inform, informal, information, informed, informing
collaborative	13	62	0.21	collaborate, collaboration, collaborative, collaboratives
actually	8	62	0.21	actual, actually
first	5	62	0.21	first
following	9	61	0.21	follow, followed, following, follows
sometimes	9	61	0.21	sometime, sometimes
meetings	8	60	0.21	meet, meeting, meetings
worker	6	60	0.21	worker, workers
trying	6	59	0.20	tried, tries, trying
always	6	58	0.20	always
using	5	58	0.20	used, useful, uses, using
years	5	58	0.20	year, years
approach	8	57	0.20	approach, approachable, approaching
came	4	57	0.20	came
schedule	8	56	0.19	schedule, scheduled, schedulers, schedules, scheduling
type	4	56	0.19	type, types
functioning	11	56	0.19	function, functioned, functioning, functions
advantages	10	55	0.19	advantage, advantages