Theses and Dissertations

2013

Patient Understanding of Coordinated Medical Treatment Success within the Minnesota Medical Home Model: An Exploratory Qualitative Inquiry

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PATIENT UNDERSTANDING OF COORDINATED MEDICAL TREATMENT

SUCCESS WITHIN THE MINNESOTA MEDICAL HOME MODEL:

AN EXPLORATORY QUALITATIVE INQUIRY

by

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A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

Capella University

September 2013

Abstract

The US health care system is often described as a complex, fragmented system where patients experience less access, coordinated, and comprehensive care that is ultimately more costly (Rosenberg, 2009). The problem addressed in this study was to understand coordinated medical treatment in the medical home model from the patient perspective. This study provides the opportunity to increase the understanding of the factors affecting coordinated medical treatment success. The study was guided by Gharajedaghi's (2011) systems theory understanding of a whole system; where one recognizes the relationships between the components of the system in relation to the entirety of the system. The research question asked, "How do patients understand coordinated medical treatment success in the Minnesota medical home model?" The study incorporated an exploratory qualitative inquiry approach which gained access to the perspectives of 15 patients. Inductive analysis identified themes and patterns across the data. Overall, the findings were similar to the literature reviewed for this study. Results strongly indicated patients confused with the term Health Care Home and perceive a lack of coordination and collaboration with different parts of the health care system. The findings add to the current literature concerning which features patients understand and correlate with treatment success. The results reinforce the expressed need to explore transformative change in health care in how the system must communicate, collaborate, and coordinate patient care leveraging many parts of the system to deliver high quality care. Furthermore, it strengthens the argument for medical homes to be a centralized model of care synonymous with providing quality care.

Dedication

First and foremost, this dissertation is dedicated to my wife, Gloria, who has supported and encouraged me during my collegiate career. The sacrifices Gloria made required just as much dedication to my school work, so there is a sense of accomplishment on both parts. Thank you for your never ending encouragement that has been a lifelong dream of mine.

Secondly, I want to thank my son, Nathan, who has waited patiently since he was born for my schooling to finally be completed. Nathan has been my inspiration throughout my collegiate career and gave me the boost of energy whenever I took a break to play with him. I hope I am as much of an inspiration to him as he was for me.

Table of Contents

List of Tables

List of Figures

CHAPTER 1. INTRODUCTION

The U.S. health care system provides highly specialized, disorganized, and fragmented care that does not meet most clinical quality measures (Institute of Medicine, 2001). Americans receive approximately half the recommended care to treat common acute and chronic conditions and vital preventive services (Kerr, McGlynn, Adams, Keesey, & Asch, 2004; McGlynn et al., 2003). The Institute of Medicine (IOM) reported that care does not meet most clinical standards and there are missed opportunities in overall quality of care, disease prevention, hospitalizations and mortality (IOM, 2001).

Challenges in today's health care system include inadequate access, fragmented and uncoordinated care, variations in quality of care, increasing patient dissatisfaction, and limited efficiency gains as compared to other industries (Paulus, Davis, & Steele, 2008). The IOM recommends significant transformative changes to improve quality of care (IOM, 2001). Literature supports a healthy primary care system is a core component of an efficient and high quality health care system (Starfield, Shi, & Macinko, 2005). However, the primary care sector faces uncertainty in the United States (Barr, 2008).

The Institute of Medicine's *Crossing the Quality Chasm* report clearly calls for fundamental reform of the health care system. The medical home model has gained significant traction in recent years based on preliminary studies that show promising results of enhancing access and providing coordinated, comprehensive care across the health care continuum. Health Care Reform recommends the medical home model as the centerpiece of providing primary care (Backer, 2007).

The medical home model is as more than just a place, but as a partnership between a patient and their provider. The care provided in the medical home is

accessible, coordinated, comprehensive, continuous, and compassionate (American

Academy of Pediatrics, 2002). Care that is centered on the patient establishes

collaboration in shared medical decision making process according to the patient's needs,

wants, and preferences. Patients are engaged in their own care while receiving various

medical treatment options to choose from (AAP, 2002). The IOM suggests patient

centered care as one of the six cornerstones of health care quality that practices

"compassion, empathy, and responsiveness to the needs, values, and expressed

preferences of the patient" (IOM, 2001). The original medical home model definition

described a place and a single source for all medical information for patients, which has

evolved into a collaborative effort approach among primary care providers and patients

(Sia, Tonniges, Osterhus, & Taba, 2004).

The medical home model is designed with seven core features, including quality

and safety, having a personal provider, provider directed team of health care

professionals, enhanced access, coordinated care, whole person orientation, and reformed

reimbursement. However, it is unknown if the medical home model has achieved some

of these features (Barr, 2008). In Minnesota, the legislature has developed a medical

home model referred to as health care home. A health care home is a variation of the

medical home model where both terms define the coordination of care (Grant & Greene,

2012), however the term "health care home" is exclusive to Minnesota.

The Minnesota medical home model enrolls only patients who have been

diagnosed with a chronic condition, such as hypertension, diabetes, or chronic kidney

disease (CKD). A medical home establishes a patient-provider partnership between to

access comprehensive, coordinated care through a systematic approach facilitated by a

care coordinator or team of care coordinators (Prahalad & Krishnan, 2006; Gharajedaghi, 2011; Scharmer 2009). It is not a model of medical care as it does not treat patients; the main focus is coordination in the delivery of care. The study described seeks to understand patient understanding of coordinated medical treatment in the Minnesota medical home model. Improved understanding will inform key stakeholders as they continue to weigh the value of the medical home.

Background of the Study

The *Crossing the Quality Chasm* report published by the Institute of Medicine (IOM) spotlights the complex and chaotic U.S. health care system that primarily focuses on acute episodic care in the midst of a growing aging and chronic population and physician shortages (IOM, 2001). Providing acute care to patients with chronic illnesses is not effective to manage the patient's health or condition(s) (Peikes et al., 2012). The Centers for Disease Control and Prevention (CDC) estimated 52% of working adults have a chronic condition (Gulley, Rasch, & Chan, 2011) and 70% of all deaths are related to chronic diseases (Gregg et al., 2003). Due to the severe or multiple health conditions, chronic patients are more likely to utilize more services and be more vulnerable to fragmented care (Maizes, Rakel, & Niemiec, 2009). The report recommends patient centered care with whole person orientation that informs the patient in self-management and medical decision making while involving the patient in the coordination and integration of medical services. The IOM outlines reconnecting chronic patients with various parts of the health care system to prevent fragmentation of care and addresses the broad range of patient health care needs (IOM, 2001; Sia et al., 2004).

The medical home model has been promoted to the deliver care that is patient centered, yet accessible, comprehensive, and coordinated within a complex health care system (Peikes et al., 2012). Patient centered care has been found to enhance patient satisfaction (Barrett et al., 2003; Grol, 2001), adherence to treatment regimes (Hughes, 2008), improve outcomes (Lind-Albrecht, 2006; Powers & Bendall, 2003), improve health status, and reduce utilization of care (Mauksch et al., 2008; Stewart et al., 1999; Williams, Baker, Parker, & Nurss, 1998).

The medical home model aims to produce better health outcomes by placing patients to be the steward of their care and the care coordinator in the medical home to facilitate the patient's care in coordination with other parts of a health care system (Rittenhouse et al., 2008). Chronic patients require improved access and care that is comprehensive and coordinated to overcome functional limitations, maintain independence, and prevent fragmented care that does not meet patient needs (Rich et al., 2012). Collectively providing the fundamental medical home model characteristics of quality care may improve the outcomes of chronic patients (Peikes et al., 2012).

Statement of the Problem

Approximately 133 million Americans have at least one chronic condition (Bodenheimer, Chen, & Bennett, 2009) and by 2020, the numbers are predicted to increase to 157 million (Wu and Green, 2000). In 2005, there are as many as 63 million Americans with multiple chronic conditions and expected to surpass 81 million by 2020 (Wu and Green, 2000). Chronic conditions account for 70% of all deaths in the United States and almost 1.7 million Americans die each year from complications of a chronic

condition. The Centers for Disease Control (CDC) estimate that chronic conditions significantly impact the activity of 25 million Americans (CDC, 2009).

The economic burden chronic conditions account for 75% of the United States' $2 trillion annual health care expenditures (CDC, 2009). Approximately 60% of the increase in health care spending is a result of increases in chronic conditions. Therefore, improved management of chronic conditions has posed one of the most significant challenges to the health care system (Partnership Solution, 2004).

A paradigm shift is required to establish medical homes based on chronic conditions. The majority of chronic care is delivered in the primary care setting on an acute, episodic basis (Bodenheimer & Grumbach, 2007; Thrall, 2005). Approximately 40% of primary care practices are solo practices and are not structured to support a coordinated approach to chronic care (Thrall, 2005). Successful management of chronic conditions requires a sustained patient-provider partnership who can monitor and coordinate care (Beal, Doty, Hernandez, Shea & Davis, 2007). Therefore, professional physician practices, insurance companies, and employers have sponsored the medical home model to transform the health care system to improve quality of live for patients living with chronic conditions (Sia et al., 2004).

The medical home model establishes enhanced attributes of primary care, particularly access and care coordination. Coordination of care is considered the hallmark of the medical home model (Reid et al., 2009). Exploring the patient's coordinated medical care success within the medical home model may provide indications of the value in the design of medical home model, which in turn may enhance the delivery of health care in the holistic health care system (Gharajedaghi, 2011).

5

Purpose of the Study

The purpose of this study is to grasp chronically diagnosed patient's understanding of the coordinated medical care to assess the Minnesota medical home model. Policy makers must consider whether the medical home model provides enough evidence to adopt this health care delivery model (Peikes et al., 2012). The study develops a deeper understanding of the care coordination components of medical care success within a medical home model addressed from the chronic patient's care.

Rationale

This study explores patient understanding of coordinated medical treatment in the medical home model from the perspective of the patient. The exploratory qualitative inquiry may add to the current literature with significance to coordinated medical treatment in the medical home model. The literature published on medical home models indicates a clear gap in research creating an opportunity for findings to increase understanding of patient understanding coordinated medical treatment (Landry & DeSalvo, 2007; O'Malley & Cunningham, 2009).

Given the abundance of changes in health care and the focus on the medical home model, it is critical to inquire about patient understanding of coordinated medical treatment and how best to utilize the information to assist in future developments. The future of the medical home model is dependent on the research that indicates value to the patient and the overall quality of care provided.

Research Question

The study was guided by the following research question:

How do patients understand coordinated medical treatment success within the

Minnesota medical home model?

The research question was developed through the research problem and was

directly related the patient understanding and experiences of the medical home model.

Significance of the Study

A paradigm shift is necessary in a health care system that is facing quality issues,

escalating costs, increasing human longevity, and the growing trend of chronic conditions

(Thrall, 2005). The medical home model is sought to address most of these challenges.

The study is significant to the field of organization and management by contributing data

on the coordination of care systems. The study affects both efficiency and effectiveness

in receiving care from a medical home, particularly as it relates to chronically diagnosed

population, and may support the development of the medical home model.

The qualitative study may support the quantitative studies that have shown

medical homes to be associated with higher quality of care (Schoen, Osborn, Doty,

Bishop, Peugh, & Murukutla, 2007), which further strengthens the value of research on

the medical home model. Some empirical evidence indicates value in the medical home

model, but few examine the value from the patient perspective (Bethell, Read, and

Brockwood, 2004). A critical gap in literature is the assessment of coordinated medical

care from chronically diagnosed patients' understanding (Landry & DeSalvo, 2007;

O'Malley & Cunningham, 2009). Focusing on the new understanding in care

coordination within the medical home model can provide insight to current stakeholders and decision makers.

Definition of Terms

Accessibility to Care: Ability to locate and receive health care that is affordable, located nearby, and sensitive to the patient's treatment success (Swingle, Wilmoth, & Aquilino, 2008).

Advocacy/Participatory Worldview: Participatory action is recursive or dialectic and if focused on bringing about change in health care. At the end of this study, the researcher advances an action agenda for change that recognizes patient's understanding of coordinated medical treatment success (Creswell, 2007).

Blind Spot: Area that one cannot clearly see before the future emerges (Scharmer, 2009).

Chronic Condition: A medical condition that requires long term monitoring and/or management to control signs and symptoms of the condition (Kristjanson, 1993).

Compassionate Care: Providing support and sincere interest in the patient's health care concern to be whole in the treatment success continuum (Swingle, Wilmoth, & Aquilino, 2008).

Continuous Care: Defines the care spectrum of treatment success, not limited to patients with only chronic conditions (Swingle, Wilmoth, & Aquilino, 2008).

Coordinated Medical Treatment Success: Patient reported outcomes that may identify the results of coordinated medical treatment in terms of success (Kristjanson, 1993).

Crystallizing: Viewing what the future may bring as it emerges (Scharmer, 2009).

Family Centered Care: Providing support for the patient and the family within the family's set of values and attitudes to achieve medical treatment success (Swingle, Wilmoth, & Aquilino, 2008).

Medical Home Model: A model of a comprehensive health care delivery system that is placed in primary care to reach medical treatment success (Rittenhouse et al., 2008). Understanding coordinated medical treatment through the patient's response may enlarge the patient's worldview of health care to include more than one component or one visit (Gharajedaghi, 2011; Scharmer, 2009).

Purposeful: The holistic approach to the concept/model of coordinated care to serve a purpose to the treatment success in a multi-minded society (Gharajedaghi, 2011; Scharmer, 2009).

Transformative Change: Replacing old realities with new ones by "letting go" of the past without return. Organizations must learn from the future as it emerges (Scharmer, 2009).

Assumptions and Limitations

The basic philosophical assumption underlying exploratory qualitative inquiry is that we can attempt to understand phenomena through the meanings that participants assign to them (Creswell, 2007). Inquiries cannot engage in the science of facts because they are not absolute facts; one only can establish knowledge of essences. The essence is different lived experiences shared by chronic patients to give meaning to medical

treatment satisfaction (Creswell, 2007). The study consists of 15 patients that presumably can best inform the research about the phenomenon under examination.

The focus of an exploratory qualitative inquiry lies in the descriptions patient's experience. The goal is to identify the chronic patients' shared experiences and all the variations in each experience. Therefore, the researcher must uncover a new perspective from the patients' description of their understanding by seeing through the eyes of the patient (Crotty, 1998). The researcher is able to put aside all biases and interpret the data fairly and without prejudice (Creswell, 2007). A researcher's preconceptions are not the same as having a bias unless the researcher fails to mention them. Finally, the most important assumption of the exploratory qualitative inquiry is external validity or transferability of the findings can be used as a guide to understand what might occur in other health care facilities (Creswell, 2007; Miles & Huberman, 1994; Swanson & Holton, 2005).

Theoretical/Conceptual Framework

The study attempts to understand complexity in an environment of chaos through the theoretical framework guided by Gharajedaghi's systems thinking theory. Systems theory defines the only way to fully understand why a problem occurs is to understand the parts of the system in relation to the entirety of the system. Systems theory addresses the whole system, components of the system, and the interactions between the components (Gharajedaghi, 2011). When the interactions of the components are purposeful, the system is capable of continuity and expansion (Senge, Scharmer, Jaworski, & Flowers, 2004).

The term organizational system is used to describe a broader holistic perspective that includes the integration of a collection of parts to create a whole. Organizational systems are designed to interdependently achieve a common goal through coordination. The significant complexity of organizational systems lies within the interrelatedness of the parts of the system. Changing a part of the system can create significant changes across an entire system that may not be predicted or controlled (Gharajedaghi, 2011). Approaching this study from an organizational systems level, specifically systems theory, offers an opportunity to identify themes and patterns that can be influenced to create transformational change in the way the entire system operates. This particular perspective is useful in the case of a complex environment such as health care (Senge, 1990).

The theory attempts to see through the chaos of patients attempting to coordinate their own care through the complexities of the current health care system, which is suited well to develop an understanding of the value of the medical home model for chronic patients. Learning is such a system may discover gaps between what patients expect and what they experience (Gharajedaghi, 2011). Understanding the interdependent parts of the health care system may identify the gaps and lack of quality of care contributed to the experiences of chronic patients. At the same time, failing to see the interdependencies of each part of the system leaves out the ability to see the whole (Gharajedaghi, 2011). The medical home model aims to reduce the fragmented care that is being provided in today's health care (Peikes et al., 2012).

Coordination of care deliberately integrates key individuals, information, and other resources to perform health services for patients and is the responsibility of any

11

system of care. Care coordination is focused on providing appropriate and efficient delivery of health care services within and across the system (Barr, 2008).

The exploratory qualitative inquiry searches for the meaning of the experience rather than explanations or measurements. In the past, most medical home research has been conducted using the quantitative methodology. However, using the qualitative analysis of descriptions can produce insights that may contribute to the enhancement of medical treatment success (Creswell, 2003). The exploratory qualitative inquiry elicits candid responses rather than opinions and generalizations regarding the phenomenon (Creswell, 2003). The exploratory qualitative inquiry is appropriate to examine a central phenomenon while other designs such as case studies, ethnography, or grounded theory do not (Creswell, 2003; Kline, 2008).

The study is significant to the organization and management field by exploring coordinated medical treatment success within medical homes from the patient's perspective. The study's investigation may stimulate the medical home movement to improve the efficiency and effectiveness of care and may validate that patients place more value in receiving their care from a medical home than a typical office visit. Preliminary quantitative studies have shown that medical homes to be correlated with improved patient experience and higher quality of care, which are promising results (Schoen et al., 2007). By exploring the medical home model may further the current literature in a new qualitative perspective that may provide powerful insights to current stakeholders and decision makers.
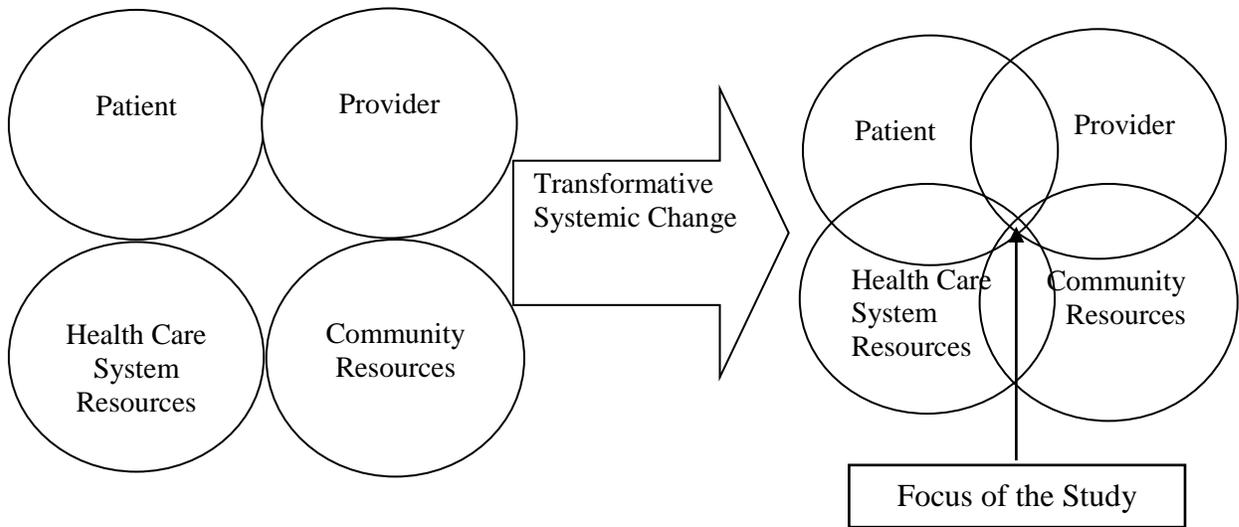
Figure 1. Conceptual Framework

Organization of the Remainder of the Study

The study is outlined as follows: Chapter 2 explored the past and current literature related to Scharmer's (2011) theory U, Gharajedaghi's (2011) systems theory and medical home models as they relate to patient's understanding of coordinated medical treatment. Chapter 3 explains the rationale for using exploratory qualitative inquiry in this study, the proposed methodology for conducting the research, and the ethical considerations when engaging in health care research. Chapter 4 reviews the results and findings and Chapter 5 concludes with a discussion of the implications and opportunities for future research.

CHAPTER 2. LITERATURE REVIEW

The researcher conducted an extensive literature review to support the exploratory qualitative inquiry. The rationale of the study is to explore patient understanding of coordinated medical treatment success in the medical home model. Various databases were searched to locate literature relevant to coordinated medical treatment in the medical home model. A gap in literature indicated an opportunity to explore patient understanding of coordinated medical treatment in the medical home model. These findings support the need for this study to add to the limited body of knowledge.

This chapter is guided by the theoretical frameworks of Scharmer's (2009) theory U, which outlines transformative change is critical to prevent gaps in new learning and institutional knowledge by leading from the future as it emerges, and Gharajedaghi's (2011) systems theory, which outlines the process to learn, unlearn, and re-learn through a holistic based approach to understand the interactions that occur within a system.

Transformative Change

The transformation of health care requires identification of coordinated systems and fragmented operations. "In the United States, there is a nationwide push to transform general primary care practices into patient centered, team based 'learning' organizations" (Chesluk & Holmboe, 2010, p. 874). Transforming health care is not an easy task and incorporates "first contact care, continuity over time, comprehensiveness, and coordination with other parts of the health system" (Margolius & Bodenheimer, 2010, p. 779).

The approach to health care is to predict the future of the environment and prepare for it when it arrives. Unfortunately, the rapidly growing chronically ill population

14

occurred much quicker than expected (Gharajedahi, 2011). When the 21st century moves into the future that is profoundly different than the past, an organization can no longer learn from the past. Organizations must learn from the future as it emerges is an intuitive approach to embracing ambiguity, uncertainty, and the impossible (Scharmer, 2009).

Transformational change implies the "target of change must unlearn something as well as learning something new" (Scharmer, 2009). Theory U is a transformational process individuals experience as mental metamorphosis (Scharmer, 2009). The process beings with the individual "letting go of the past", particularly thoughts, behaviors, and knowledge, to allow holistic learning through the emergent reality. Along the continuum of activities, individuals begin to see reality in a new perspective, called *suspending* (Scharmer, 2009).

The most challenging habits to change are those with a successful past history but are no longer relevant in the 21st century (Gharajedahi, 2011). Theory U posits transformational change allows individuals to meet existing challenges such as coordinated medical treatment in the medical home model (Scharmer, 2009). Systems theory assumes the future is created by what we do between now and then (Gharajedahi, 2011). Therefore, the process of learning from the future as it emerges is known as *presencing* (Scharmer, 2009).

Presencing is the transformational change in the continuum of activities. The state of presencing is realized when the whole organization is perceived as acting as one whole system. Individuals must align themselves with the purposes and objectives of the organization. The success of the individuals and the organization relies on the alignment (Scharmer, 2009). "Relationships and collaboration among diverse organizations and

among the consultants and researchers working with them; creating settings for collective reflection that enable people from diverse organizations to see themselves in one other; and leveraging progress in individual organizations through cross-institutional links so as to sustain transformative changes that otherwise would die out" (Senge & Scharmer, 2001, p. 238).

Understanding the blind spot holds the future for health care and being aware of the blind spot provides the ability to learn from the future as it emerges (Scharmer, 2009). Health care organizations need a shift in paradigm through a process of learning and unlearning. The process may be challenging to unlearn what is already part of daily routines and acceptable practices.

Health care has turned to many approaches to redesign how care is delivered, but only recently has change been mandated by the government under the Tax Relief and Health Care Act of 2006. The medical home model was promoted to improve care, value, and transform health care practices across the United States (IOM, 2001). The sense of urgency must clearly be established for transformation to occur. Gharajedahi posits that organizations must think differently to effectively respond to environmental demands (Gharajedahi, 2011).

Systems theory provides a modern way to conceptualize systems. The theory seeks to investigate phenomenon that deal with "wholeness" and interactions that are not described by the investigation of the elements that make up the system (Gharajedaghi, 2011, p. 9). In health care, multiple systems are involved which requires multiple perspectives to understand the situation. Systems theory provides the mechanism and the critical thinking for understanding complexities within health care organizations.

Systems theory is not simply a theory, but a practice that can assist decision makers to think about problems differently and utilize a new thought process to achieve new and desirable outcomes (Gharajedaghi, 2011, p. 12).

Systems theory is a change in thinking about how systems are examined and that implies a reorientation in scientific thinking (Gharajedaghi, 2011, p. 14). When examining the history of social sciences, it is understandable why systems theory has taken several decades to influence the way we think. Organizations were seen as a mechanistic system and were the prevalent way to understand human behavior. Organizations are now being viewed in a different light with systems theory as the only way to meaningfully study an organization is to study it as a system (Gharajedaghi, 2011, p. 15).

Health care organizations are organized in a way that it is challenging to develop a meaning and embrace systems thinking. Employees, departments, and disciplines are separated physically and operate under different leadership, policies, and structures. In health care, it is uncommon for multiple groups (techs, RN's, physicians) to come together to resolve an issue (O'Malley & Cunningham, 2008, p. 170). The hierarchical relationship is troubled by perceived power and educational imbalance that generates demarcation and constrains systems thinking. The health care system that comprises an integrative model of care, the system is notably ever considered as a whole (Gharajedaghi, 2011, p. 246).

One of the strengths of systems thinking is the aptitude to examine across an organizational system to identify similarities and differences. The movement is transformation from considering the whole and considering only the parts that make up

the whole to understand the entire system (Gharajedaghi, 2011, p. 134). The

transformation highlights the need to integrate systems theory in health care. The

dynamics of health care created from demarcation, differing values and beliefs, and

department silos cultivates a culture and environment of disintegration among the

members and subsystems of the organization. The parts lead to a deficiency of

understanding of the whole and the capacity to embrace systems theory. Leadership may

begin to realize the benefits of transformation with systems thinking to create new

knowledge, processes, and systems for better outcomes and organizational efficiency and

effectiveness (Gharajedaghi, 2011, p. 276). Scharmer (2007) and Gharajedahi (2011)

agreed that organizations are a system that is constantly evolving and paradigm shifts are

necessary to meet the current demands of the environment and the needs of the

organization.

Systems theory posits an understanding of experiences through the interactions

between parts of a system and recognizes the interactions as interconnected and circular,

rather than individualistic and linear (Becvar & Becvar, 2003). Each person's behavior

provides meaning to all other behaviors when an interaction occurs in a relational

context. Therefore, actions and perceptions can be explained by taking into account the

factors that influence these interactions (Gehart-Brooks & Lyle, 1999).

Senge (1990) introduced the idea of developing a learning organization through

systems thinking. "Systems thinking is a conceptual framework, a body of knowledge

and tools that has been developed over the past fifty years, to make full patterns clearer,

and to help us see how to change them effectively" (Senge, 1990, p. 7). Systems theory

not only examines the parts that make up the whole, but the interrelationships between

the parts are more critical to explore. Given the complexity in health care organizations, systems theory provides an in-depth view into the subsystems that emerge into a more complex exploration (Gharajedaghi, 2011, p. 135).

Senge (1990) points out that seeing wholes we learn how to foster health. The absence of integration of health in health care organizations may be directly correlated to the inability to view the system as a whole. Systems theory offers a way to reconstruct thinking in a way to identify opportunities for cultivating change and health (Gharajedaghi, 2011, p. 14).

Wheatley (1999) adds another layer to systems thinking that focuses on a system as defined by a set of processes that are visible in temporary structures. Systems are recognizable when meaning, explanation, and language are attached to them to understand the dynamics of each part. Processes can change and evolve as the environment changes, which means the system continues to develop to "let go" of the past and find new structures when needed (Wheatley, 1999, p. 23; Scharmer, 2009).

Wheatley (1999) further explains that systems theory is described through a quantum world, which relies on a system's reliance on wholeness, relationship, and potential. Therefore, health care organizations must learn to abandon mechanistic models and learn from living systems behaviors (Scharmer, 2009). The foundational process is important to understanding health care organizations and this practice is the center of systems theory (Wheatley, 1999, p. 139). Systems theory attempts to understand the intricacies and drivers of the organizational elements to design a system that will improve outcomes (Senge, 1990, p. 68). As health care organizations are transforming into a new

paradigm of team based care, the shift requires a reorientation to the way in which parts of the system interact with one another (Block, 2008).

Current State of U.S. Health Care System

The U.S. health care system provides health outcomes that lag behind other developed and even less developed countries regardless of the financial backing the U.S. places behind its health care system (Mirror, 2007; Ohlemacher, 2012). The poor health outcomes in the system is attributed to allowing portions of the population, specifically patients with chronic illnesses, to receive care that is not accessible, continuous, coordinated, comprehensive, or patient centered (Mirror, 2007). Without a sustainable system of care, the most vulnerable person in the equation requires the patient to continue to navigate through a complex, fragmented health care system.

The current model of care produces fragmentation that specializes in acute care with an emphasis on specialty care over care coordination and health management (Berenson & Rich, 2010; Bodenheimer & Pham, 2010; Dentzer, 2010; Rittenhouse & Shortell, 2009; Howell, 2010). The delivery of care is complex and complicated with systems that are characterized as inefficient or inadequate (Block, 2008). The combination of issues is considered the underlying cause for most of the shortcomings in today's health care (Stange, 2009; Shih et al., 2008). Fragmentation has shown to cause inadequate communications, deteriorate relationships, and degrade the quality of care significantly (Cebul, Rebitzer, Taylor, & Votruba, 2008).

Navigating through a complicated health care system poses serious challenges to patients. Chronically ill patients require extensive and comprehensive treatment but the system lacks the necessary components to deliver quality care over time (Lubkin &

Larsen, 2006; Anderson & Knickman, 2001). Some researchers assert that navigation challenges are unrealized and vastly underestimated (Sofaer, 2009; Rosenthal, 2008).

Acute care represents management of a condition through a single or series of treatment visits while coordinated care is viewed from a systemic process to treat acute and chronic conditions long term. Patients with chronic illnesses should not be treated through an episodic means but oriented towards continuous and coordinated care that maintains good health and improves outcomes (Babbott et al., 2007). Chronically ill patients must seek care from multiple providers across the health care system with minimal collaboration, communication, or coordination (Wegner, Antonelli, & Turchi, 2009). The episodic care model continues to lag behind the trend of increasing chronic illnesses (Lubkin & Larsen, 2006; Anderson & Knickman, 2001; Wagner, Austin, & Von Korff, 1996).

Studies have shown that the majority of acute care if often inadequate to treat chronic illnesses, including high blood pressure (Chobanian et al., 2003), diabetes (Steinbrook 2006; Saydah, Fradkin, & Cowie, 2004), congestive heart failure (Masoudi, Havranek, & Krumholz, 2002; Ni, Nauman, & Hershberger, 1998), atrial fibrillation (Matchar, Samsa, Cohen, & Oddone , 2000; Samsa et al., 2000), asthma (Patel, Welsh, & Foggs, 2004; Adams, Fuhlbrigge, Guilbert, Lozano, & Martinez, 2002; Legotteta, Liu, Zaher, & Jatulis, 2000), and depression (Kessler et al., 2005; Young, Klap, Sherbourne, & Wells, 2001; Simon et al., 1995).

The Institute of Medicine addresses that effective chronic care should not be addressed through means of episodic care, but a patient-provider collaborative process. The process would include optimal communication to address a decision support system

21

and self-management techniques. Collectively, the interactions would produce continuous and coordinated care to meet treatment outcomes (IOM, 2001). The current health care system is not designed to allow additional layers of complexity to deliver key components of quality care (IOM, 2001; Von Korff, Gruman, Schaefer, Curry, & Wagner, 1997). The existing structure is unsustainable (Bodenheimer & Grumbach, 2007).

It is well documented that to improve chronic care treatment, the health care system needs to be overhauled (Bodenheimer, Wagner, & Grumbach, 2002; IOM, 2001; Wagner, 1998). *Crossing the Quality Chasm* calls for fundamental reforms that change systems in the health care industry (IOM, 2001). "The current care systems cannot do the job. Trying harder will not work. Changing systems of care will" (IOM, 2001).

Health care reform conceptualized reengineering the health care system to deliver the triple aim of quality care, including enhanced access, reduced cost, and improved patient satisfaction (Rittenhouse & Shortell, 2009). Since the IOM report was released, the medical home model has gained significant traction in delivering each of these components and evolved to provide comprehensive, coordinated, and continuous care that is patient centered (Fiscella & Epstein, 2008; Rosenthal, 2008).

Medical Home Model

The medical home model was initially coined in 1967 as the primary location of medical information for children (American Academy of Pediatrics, Council on Pediatric Practice, 1967). Over time, the medical home model was redesigned to incorporate critical elements of care that is accessible, comprehensive, coordinated, continuous, and patient centered (Donaldson, Yordy, Lohr, & Vanselow, 1996). The assertion made in

the definition is the patient is engaged in his/her care, makes informed decisions based on recommendations by their primary care provider, and inquires about alternative treatment methods (Hibbard & Weeks, 1987). Today, most Americans desire a medical home (Bodenheimer & Grumbach, 2007; Grumbach & Bodenheimer, 2002).

The medical home model was created to coordinate the patient's care through a multi-disciplinary team of health care professionals led by a primary care provider (Grumbach & Bodenheimer, 2002). A team may include a physician, non-physician practitioner, nurse, care coordinator, case managers, social workers, and members of the patient's family (Rosenthal, 2008; Barr, 2006).

Components of Medical Home Model

The American Academy of Pediatrics initially outlined key components of the medical home model in 2002, which were later refined by the American Academy of Family Physicians (AAFP), American College of Physicians (ACP), and the American Osteopathic Association (AOA) in 2007 (AAFP, 2007).

Personal Provider: The medical home model proposed to establish a long-term patient-provider relationship, regardless if the provider is a physician or a non-physician practitioner. The patient's first point of contact is the provider who provides continuous, comprehensive care (Barr, 2006).

Provider Directed Team: Multi-disciplinary teams are effective in treating chronically ill patients. The approach captures the expertise of other clinicians to effectively develop a treatment plan that is critical to the success of the care delivered (Norris et al., 2002; McAlister, Lawson, Teo, & Armstrong, 2001).

Whole Person Orientation: The concept to whole person orientation represents the continuum of care from the preventive, acute, chronic and end of life stages (Rosenthal, 2008).

Coordinated Care: The *Crossing the Quality Chasm* report highlighted coordinated care as the most critical feature of the medical home model. Chronically ill patients require the medical home model to function as a connected part of the system to access the expertise across the health care continuum (Rosenthal, 2008).

Quality and Safety: The medical home model strives to provide high quality care that is safe for the patient. The components of the medical home posits the model in providing high quality care (Rosenthal, 2008).

Enhanced Access: The Crossing the Quality Chasm report indicated timeliness of care is a critical area for improvement (IOM, 2001). Research indicates that open scheduling or same day access can improve access to care in the medical home model (Harkinson & Bluenfrucht, 2006; Schall et al., 2004; Murray, Bodenheimer, Rittenhouse, & Grumbach, 2003).

Cornerstones of the Medical Home Model

The four cornerstones highlighted within the medical home model include primary care, patient centered care, payment reform, and new model practice (Rittenhouse & Shortell, 2009). Each cornerstone is necessary for the success of the medical home model.

Primary Care

Primary care is defined as "the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal

health care needs, developing a sustained partnership with patients and practicing in the context of family and community" (Donaldson, Yordy, Lohr, & Vanselow, 1996, p. 32). The medical home is a central figure in primary care and seen as a "first contact, continuous, comprehensive, and coordinated care to provide populations undifferentiated by sex, disease, or organ systems" (Starfield, 1992). The medical home model is consistent with both definitions (Rittenhouse & Shortell, 2009).

The majority of chronic care is delivered through primary care, which confirms the importance to start improvement initiatives in primary care (Anderson-Rothman & Wagner, 2003). Secondly, research documents well the crisis primary care is facing (Goodman & Fisher, 2008; Bodenheimer & Grumbach, 2007; Moore & Showstack, 2003). The medical home model may provide relief to primary care through advocacy as a sign of confidence and coordination that is lacking in today's health care (Bodenheimer & Grumbach, 2007).

Research suggests alternatives to managing chronic patients in primary care should be considered (Anderson-Rothman & Wagner, 2003). Shifting chronic care to specialty care allows the specialist to manage the given condition considering they are the expert in that specialty, adhere to diagnostic and treatment protocols (Smetana et al., 2007; Harold, Field, & Gurwitz, 1999), and adjust to new developments or changes in treatment protocols (Anderson-Rothman & Wagner, 2003). On the other hand, shifting chronic care away from primary care may result in less preventive care (Lafata, Martin, Morlock, Divine, & Xi, 2001; MacLean et al., 2000; Rosenblatt, Hart, Baldwin, Chan, & Schneewiess, 1998), decreased efficiency, increased cost, and neglect of other comorbid conditions (Anderson-Rothman & Wagner, 2003).

Patient Centered Care

The *Crossing the Quality Chasm* report recommends patient centered care for chronically ill patients to establish a partnership with providers to form a long-term relationship and continuous care in the management of their condition. Chronic patients are able to participate in their own care, decide their own care and receive care according to their needs, wants, and preferences. The IOM establishes patient centered care incorporates "qualities of compassion, empathy, and responsiveness to the needs, values, and expressed preferences of the patient" (IOM, 2001).

Care that is centered on the patient requires the patient to be actively engaged in their own care. The partnership between the patient and provider encourages open communication and shared decision making (Rittenhouse & Shortell, 2009). The patient centered element shifts the focus directly on the patient by viewing the patient as an active member of the care team (Rittenhouse & Shortell, 2009).

Payment Reform

The medical home model of reimbursement may appeal to primary care providers and may resolve provider shortages (Pugno, Schmittling, Fetter, & Kahn, 2005), improve adoption of electronic medical record technology (Berenson et al., 2008), enhanced access to care (Bodenheimer & Grumbach, 2007), and improve compensation for provide quality chronic care (Goroll, Berenson, Schoenbaum, & Gardner, 2007). The medical home model may also result improve undertreatment and overtreatment of the chronically ill population (Berenson et al., 2008; Goroll et al., 2007).

New Model Practice

The medical home model concept is much different than the current methods used in today's health care environment and is rooted within the IOM report (IOM, 2001). The traditional concepts of first point of contact, continuity of care over time, comprehensive care, and care coordination can be implemented into primary care (Bodenheimer & Grumbach, 2007). The medical home model incorporates these traditions as well as removing access barriers and focuses on quality of care and patient safety (Future of Family Medicine, 2004).

The lack of infrastructure in the U.S. is the major barrier to medical home implementation (Rittenhouse et al., 2008). Research suggests larger practices have more capacity to implement the model when compared to smaller practices (Friedberg, Safran, Coltin, Dresser, & Schneider, 2009). Secondly, multi-disciplinary teams are a new structure that requires collaboration across the health care continuum, unlike we have ever seen before. A number of studies support the efficacy of the team approach in managing patients with chronic conditions (Anderson-Rothman & Wagner, 2003).

Eliminating access barriers is a critical area for improvement and the health care system has failed to improve this area (IOM, 2001; Strunk & Cunningham, 2002). Almost half of all emergency room visits are for non-emergent purposes, a critical observation of the inability to access primary care in a timely manner (Cunningham, Clancy, Cohen, & Wilets, 1995).

Evidence Supporting Medical Home Model

As the medical home model evolved and gained notoriety, each stakeholder has voiced specific outcomes the model must deliver. For patients and providers, the desired

27

outcome is patient satisfaction (Dubard, 2009). However, the medical home model is designed to obtain a much wider set of goals including enhancing access to care, expanding coordination of care, and covering the entire life span of the patient (Dubard, 2009).

The evidence substantiating the medical home model is limited given most models are in their formative stages. However, early indications provide positive results, including increases in preventive care, chronic disease management, patient satisfaction, and reductions in health care costs and hospital and emergency department visits (Cooley, McAllister, Sherrieb, & Clark, 2003; Reid et al., 2009; Cooley, 2004).

Health care reform has focused on the value of care, which describes the level of quality in relationship to cost of care. Preliminary findings have found the medical home model increases the value of care through enhancing the quality of care while reducing the cost of care simultaneously. Chronically ill patients may benefit the most from the model since they use the majority of the resources (Nelson et al., 1998).

The medical home model is found to be associated with better chronic care management. A study examined patients in a medical home model as compared to the standard care found that patients in a medical home preferred a provider directed team (Reid et al., 2009). The medical home model is linked to reducing the rate of hospitalizations (Hurd, 2008), readmissions (Cooley et al., 2003), and emergency room visits (Nutting et al., 2009).

The data on the medical home model is relatively new, but early indications reveal the model has been tested extensively and may hold the key to resolving the crisis

28

of the health care system. Below is a summary of key literature for each element of the medical home model.

Usual Source of Care and Outcomes

Usual source of care is defined as a physician's office, clinic, or other facility where a patient regularly visits for treatment (AHRQ, 2010). Literature supports usual source of care improves access to timely care, quality care, and results in significant improvements in health outcomes (Blewette, Johnson, Lee, & Scal, 2008; Starfield & Shi, 2004; Xu, 2002). On the other hand, the lack of usual source of care leads to gaps in care continuity and creates a barrier for timely access to care (Xu, 2002).

Multiple studies have proven that patients who access a usual source of care utilize fewer services, particularly hospital and emergency room visits (Gill, Mainous, & Nsereko, 2000; Ryan, Riley, Kang, & Starfield, 2001; Falik et al., 2001; DeVoe & Bedroussion, 2007) and increased preventive services (Blewette et al., 2008). Evidence also suggests that having a regular provider is more important than having a usual site of care (Xu, 2002). As you can see, there is strong evidence supporting usual source of care and continuity of care.

Enhanced Access and Outcomes

Patients who do not have a usual source of care experience barriers when they require medical attention (Hendryx, Ahern, Lovrich, & McCurdy, 2002). Patients have who a usual source of care are more likely to receive preventive, acute, and chronic care services (DeVoe, Fryer, Phillips, & Green, 2003). Patients who have chosen a single personal provider as their primary source of care is strongly correlated to having overall

satisfaction and improved health outcomes (Schmittdiel, Selby, Grumbach, & Quesenberry, 1997; Saultz & Albedaiwi, 2004).

Patients value a primary source of care who can assist with developing a plan of care and course of action (Mullan, 2002). Access through the medical home is enhanced through means of expanded hours, open scheduling, and new communication options. Evidence supports open scheduling to improve continuity of care, patient satisfaction, timely care and health outcomes (Murray, Bodenheimer, Rittenhouse, & Grumbach, 2003; O'Hare & Corlett, 2004). Access may be provided via phone or email and to provide attention to acute issues. Moreover, enhanced access is facilitated by providing care when it is needed and directing the patient to the appropriate care. Patients who are referred for procedures by their primary care provider have better outcomes than those who directly visited the specialist (Roos, 1979).

Continuity of Care and Outcomes

The IOM definition of continuity of care relates to the sustained partnership between a provider and a patient over time (Donaldson, Yordy, Lohr, & Vanselow, 1996). Continuity may also be characterized by the trust and responsibility of the provider and patient in the partnership (Saultz, 2003). Continuity of care is a core element to quality care that is an essential component to the medical home model (Saultz & Albedaiwi, 2004; Donaldson, Yordy, Lohr, & Vanselow, 1996). Despite extensive literature on the continuity of care, researchers indicate continuity is a difficult variable to measure and connect with the outcome of care (Saultz & Lochner, 2005).

Evidence suggests patients prefer and value a primary source of care, but they experience a number of health care professionals who do not know them and their roles

30

in patient care are unclear. Studies have reported 75% of patients want to see their primary care provider when requiring medical attention and only 16% preferred appointment convenience over continuity. Health care organizations who changed their scheduling to accommodate continuity experienced significant improvements to patient satisfaction and health outcomes (Showstack, Rothman, & Hassmiller, 2004).

However, there is extensive literature assessing the impact of continuity of care. The majority of the evidence suggests that sustaining a long-term relationship with a provider results in significant beneficial outcomes. There is a positive correlation between continuity and outcomes, including active preventive care (Blewette et al., 2008; Xu, 2002; DeVoe & Bedroussion, 2007; Starfield, 1994), lower medical cost, improved medication and appointment compliance (Garrity, Haynes, Mattson, & Engebretson, 1998), reduced hospitalizations and emergency room visits (Saultz & Lochner, 2005; Guthrie & Wyke, 2000; Forrest & Starfield, 1994) and patient satisfaction (Overland, Yue, & Mira, 2001; Gallagher, Geling, & Comite, 2001; Saultz & Lochner, 2005).

On the other hand, chronic patients who require a greater degree of continuity care were found to have lower rates (DeVoe, 2008). However, Nutting and colleagues found patients with multiple chronic conditions value continuity of care higher (Nutting et al., 2003). The medical home model endorses usual source of care and continuity of care and is expected to result in similar improvements to preventive care, trust, medication compliance, and patient satisfaction.

Other studies reported patients with continuous care with a usual provider over a period of time improved health outcomes and lower total cost of care (Starfield, Shi, & Macinko, 2005; Starfield & Shi, 2004; Shi et al., 2008). A review of forty studies

31

researching continuity of care and health outcomes found that two out of three health

outcomes significantly improved (Saultz & Lochner, 2005). The value of continuous

care between patients and providers is positively correlated to the quality of care the

patient will receive (Flocke, Stange, & Zyzanski, 1997). The provider must allow their

practice to develop relationships with the patient over time through continuity of care

(Henbest & Stewart, 1990).

Care Coordination and Outcomes

Starfield (1994) defined care coordination as the ease of information use about

prior problems and services as it relates to current care. The definition places the medical

home model as the focal place that monitors all the care received by a patient. The

fragmentation of the health care system increases the importance of care coordination,

especially for chronic patients who utilize the most medical services (Partnership for

Solution, 2002). Patients with multiple chronic conditions face an even more complex

system to navigate to obtain necessary treatment (Anderson & Knickman, 2001). The

medical home establishes coordination of care while ensuring an ongoing relationship

between the patient and the provider.

The predominant literature of assessing improved care coordination between

primary care physicians and specialists comes from chart reviews and physician surveys

(Forrest et al., 2000). Approximately 93% of Americans prefer a single place or doctor to

provide primary care with care coordination, but only half experience this model of care

(Schoen et al., 2007; Stremikis, Schoen, & Fryer, 2011). The Center for Studying Health

System Change found that less than a third of primary care providers actively practice

32

care coordination with chronically diagnosed patients (Carrier, Gourevitch, & Shah, 2009).

Research suggests improved care coordination results in improved quality care, reduced costs and unnecessary medical treatment (Barry, Davis, Meara, & Halvorson, 2002; Walsh, Osber, Nason, Porell, & Asciutto, 2002; Liptak, Burns, Davidson, & McAnarney, 1998). A number of studies supported reduced hospitalizations and emergency room visits (Liptak et al., 1998; Gordon et al., 2007) and improved health outcomes through better coordination (Forrest et al., 2000). The medical home model posits the primary care provider as the key figure in coordinating the patient's care and result in multiple beneficial outcomes.

Effective care coordination could improve the chronic patient population outcomes, which currently experiences the highest fragmentation of care among patients. Chronic patients typically visit up to seven different physicians from four different practices in a given year and patients with multiple chronic conditions experience even higher fragmentation of care (Pham, Schrag, O'Malley, Wu, & Bach, 2007). A physician coordinating care for a chronic patient could face challenges to effectively communicate with other physicians on a regular basis (Pham et al., 2007).

Comprehensive Care and Outcomes

The medical home model is designed to develop a relationship between the patient and a team of health care professionals. Some of the members of the team may be outside of the primary care clinic, but will share their expertise to maintain a focus on the current needs of the patient. When the patient accesses care through their medical home, the team may access care across the health care continuum to provide comprehensive

33

care to the patient. The health care continuum may include a number of differing facilities, including hospitals, nursing homes, community resources, and home health agencies. More importantly, the medical home model provides comprehensive care in terms of prevention, acute, chronic, and end of life care. The cycle of care is often portrayed as whole person oriented care. Flexibility in care as it changes to the patient's needs is necessary to fully meet the needs of the patient (Lynn & Adamson, 2003).

Communication and Outcomes

Communication is a complex phenomenon that is defined as "the means by which information is imparted between a source and one or more receivers; a process of sharing meanings and using a set of common rules" (Berry, 2007, p. 1). The core requirement for quality medical care and establishment of a partnership between the patient and the provider is open and clear communication (Golin, DiMatteo, Duan, & Leake, 2002; Makoul, 2003).

Patient-provider communication serves three purposes, including (1) exchange of information, (2) establishing a good interpersonal relationship, and (3) decision making as it relates to treatment. The exchange of information is primary to establishing a relationship, beginning with the patient sharing their signs, symptoms, and medical history and the provider discussing management of the problem (Brown, Stewart, & Ryan, 2003). The patient must understand the provider's instructions clearly to be able to manage the condition. A multi-disciplinary team is viewed as an increase in exchange of information, one that is highly sought after by the patient (Ong, de Haes, Hoos, & Lammes, 1995).

Communication is instrumental at forming a partnership with the provider and is considered a prerequisite for quality care. The medical home providers open dialogue between the patient and their care team until common ground is achieved (Ong et al., 1995). Evidence supports that achieving a common ground enhances the patient's adherence to the treatment regime (Heisler, Cole, Weir, Kerr, & Hayward, 2007), patient satisfaction (Clever, Jin, Levinson, & Meltzer, 2008), and increase efficiency in delivering care (Stewart et al., 1999). Literature suggests how providers communicate with their patients can improve patient behavior and outcomes (Heisler et al., 2007; Finney-Rutten, Auguston, & Wanke, 2006; Ashton et al., 2003; Stewart et al., 1999).

Research supports that chronic patients who have collaborated with their provider and shared in the medical decision making process received improve quality of care, including reduced recovery time and blood pressure and improved functional health (Smith et al., 2006; Stewart et al., 1999; Stewart, 1995). Communication from the physician is an important element to patient satisfaction (Weiss & Lonnquist, 2006) and a contributor to health care disparities (IOM, 2003; Clemens-Cope & Kenney, 2007).

Open communication is being advocated in the medical home because informed patients are more likely to participate in their care, understand their treatment options, make informed decisions, and adhere to the treatment plan (Epstein, Alsper, & Quill, 2004). Optimal communication in the medical home will results in improvements to quality of care, patient satisfaction, and treatment outcomes.

Shared Decision Making and Outcomes

The medical home model incorporates shared decision making to assist in the clinical decision making for the patient with the patient determining their own care

35

(Whitney, 2003). Patients have preferences and deciding how or which treatment method to proceed with encourages the patient to participate in their own care (Epstein, Alsper, & Quill, 2004; Braddock, Fihn, Levinson, Jonsen, & Pearlman, 1997). More importantly, shared decision making has been shown to improve health outcomes (Greenfield et al., 1988; Greenfield, Kaplan, & Ware, 1985).

Patients with chronic conditions may benefit from this method even more since there are multiple treatment options to choose from (Golin et al., 2002, Frewer, Salter, & Lambert, 2001), teaches the patient self-management (Barry et al., 2002; Frewer et al., 2001), and results in improved health outcomes (Greenfield, Kaplan, Ware, Yano, & Frank, 1988). The patient-provider decision making method is a tool used to engage patients in their own care (DeVoe & Bedroussion, 2007).

Patient-Centered Care and Outcomes

The medical home model offers a patient centered perspective that focuses on the patient above all else. There is a strong emphasis on the dyad model of patient-physician to support goals such as quality care (Parchman & Burge, 2004; Meredith, Orlando, Humphrey, Camp, & Sherbourne, 2001) and efficient use of services (Weiss & Blustein, 1996; Mainous & Gill, 1998). More importantly, patient involvement is a critical aspect to chronic patients to learn how best to manage and organize their own care that is aligned with their unique needs, values, and preferences (Peikes et al., 2012).

The patient centered approach allows the provider to assess the patient's concern and to resolve it efficiently and effectively. The patient ideally feels their concern has been resolved. Patient centered care has been found to meet the needs of the patient

(Culpepper & Gilbert, 1999). Patients who do not experience patient centered care are less satisfied, less enabled, and poorer health outcomes (Little et al., 2001).

Chronically ill patients utilize medical care more frequently than healthy patients, but when care is fragmented by receiving care on an acute basis, gaps in care is created. A chronic patient brings the provider a unique understanding of their condition while the provider brings expert knowledge of the condition. The medical home creates a partnership between patients and their providers to create a mutual understanding of the condition, care, and plan of care for the future (White, 2005).

Patients who tolerate poor service or inconveniences are willing to make sacrifices to sustain a relationship with their doctor (Family, 2003). The IOM described the perspective of patient centered as a "continuous healing relationship" to bridge the gap between the acute episodes of care for chronically ill patients (Inkelas, Schuster, Olson, Park, & Halfon, 2004). In summary, the extensive literature supports the positive outcomes that can result from the medical home model for the care of chronically ill patients.

<div align="center">**Conclusion**</div>

This chapter reviewed literature related to transformative change as guided by the frameworks of Scharmer's (2009) Theory U and Gharajedaghi's (2011) system theory. The theories set the stage for transformative changes in the 21st century that will look entirely different from the past (Scharmer, 2009). The sense of urgency is clearly established within the literature for transformation in health care to occur. Identifying the crisis that is taking place in health care increases the sense of urgency and implies that health care cannot continue on the same path as it did for decades (Scharmer, 2009).

Stakeholders must recognize and challenges these issues with fundamental and intuitive

solutions to adapt to an emerging new reality (Scharmer, 2009; Gharajedaghi, 2011).

CHAPTER 3. METHODOLOGY

The goal of this study is to discover and understand the organizational systems, team, and individual characteristics from the chronic patient's understanding needed to create care coordination across health care systems. The outcome of this research will be used to foster awareness of the conditions in an effort to shift toward aligning organizations in a way that supports care coordination through the medical home model.

The exploratory qualitative inquiry provides an advantage to improve the understanding of chronic patients and coordinated medical treatment through the medical home model. Qualitative research develops an understanding of a meaning and perspective patients connect with a phenomenon they experience (Caelli, Ray, & Mill, 2003; Creswell, 2007; Creswell, 2009; Denzin & Lincoln, 1998; Taylor & Bogdan, 1998). Researchers utilizing qualitative research methodology may focus on the personal experience of the participant through the meaning of the problem or the experience of the problem (Creswell, 2009). The opportunity for participants to share their experiences and understanding through qualitative research provides a deeper understanding of the phenomenon to uncover categories and themes of meaning (Miles & Huberman, 1994; Taylor & Bogdan, 1998).

Research Design

The research design chosen is exploratory qualitative inquiry to explore patient understanding of coordinated medical treatment success within the Minnesota medical

home model. The exploratory qualitative inquiry approach opened the researcher to the beliefs, attitudes, opinions, and reflections of a participant's description of their experience with a phenomenon (Crotty, 1998; Taylor & Bogdan, 1998). Developing rapport and trust with each participant engages in authentic communication to capture the meaning of the participant's understanding through their lived experience and verbal descriptions of the phenomenon using semi-structured phone interviews (Denzin & Lincoln, 1998; Patton, 2002). The purpose of an exploratory study is to gain a deeper understanding of phenomenon experienced by participants to yield new information on the topic of research (Babbie, 1995; Cooper & Schindler, 2011; Merriam, 1998).

Exploratory qualitative inquiry does not follow any particular methodology to provide flexibility in describing a social phenomenon (Babbie, 1995; Cooper & Schindler, 2011; Merriam, 1998; Sandelowski, 2000). When phenomenon is difficult to measure or quantify, the exploratory qualitative inquiry methodology is appropriate since it is more generic. Other research designs were explored, including phenomenology, grounded theory, case study, and ethnography, but were not suited well to explore patient understanding of coordinated medical treatment within the Minnesota medical home model. When little is known about a topic or is relatively new, the exploratory qualitative inquiry method is appropriate (Babbie, 1995; Calli, Ray, & Mill, 2003; Cooper & Schindler, 2011; Creswell, 2007). Exploratory qualitative inquiry provides limited resources relating to the understanding from the patient's perspective into the coordinated medical treatment through the Minnesota medical home model.

Philosophical Assumptions

The qualitative research undertakes the following philosophical assumptions (1) nature of knowledge and knowing (epistemology), (2) role of values (axiology), (3) nature of reality (ontology), and the language of research (rhetoric) (Creswell, 2007; Swanson & Holton, 2005). The epistemological assumption engages the researcher to acquire a deeper understanding of the lived experience from the participants and applies the social constructivist/interpretivist perspective throughout the process (Babbie, 1995; Creswell, 2007; Creswell, 2009; Denzin & Lincoln, 1998). Constructivism details participation and making sense of the phenomenon from the participant's lived experienced (Crotty, 1998; Denzin & Lincoln, 1998; Tsoukas & Knudsen, 2003). Interpretivism depicts the meaning and understanding of the lived experience (Gephart, 1999; Lincoln & Guba, 1985).

Population

The exploratory qualitative inquiry sought twenty patients to participate in this study. Patients are classified in four tiers based on the number of chronic conditions the patient is diagnosed with and the first five patients from each tier will be selected to participate. The patients were selected from the Internal Medicine department based on the following inclusion criteria: (1) must be enrolled in Health Care Home for at least 6 months, (2) at least 18 years of age, (3) primary language is English, (4) diagnosed with a chronic condition, and (5) not diagnosed with a mental illness.

Sampling Framework

To support the basic processes of the study, a sample frame was established (Miles & Huberman, 1994). The sample frame included patients who are at least 18

41

years of age, primary language is English, diagnosed with a chronic condition, and not diagnosed with a mental illness who is enrolled in the Health Care Home program in the Internal Medicine department at the Minnesota clinic. The Research Operations Officer granted permission to allow the patients to be contacted and interviewed for this study.

Purposive sampling targets a specific group of participants that can enlighten the researcher about the phenomenon experienced when the chosen population is challenging to recruit or locate (Creswell, 2007; Marshall & Rossman, 2006; Swanson & Holton, 2005). The advantage with purposive sampling is the aspect of the rich information that can inform opportunities for program or system improvement (Patton, 1987). The purposive sampling strategy identified 15 patients from the Internal Medicine department who were willing to share their understanding of coordinated medical treatment within the Health Care Home model. Each participant provided consent to allow the interview to be recorded and the data to be published in a dissertation (Cooper & Schindler, 2011; Creswell, 2007; Moustakas, 1994; Patton, 1987; Taylor & Bogdan, 1998).

<div align="center">**Sample**</div>

Populations that are challenging to identify or recruit for research may utilize purposive sampling method to locate the participants. Purposeful sampling may provide the necessary set of participants that can share the lived experience about the phenomenon the researcher is studying (Creswell, 2007). The exploratory qualitative study utilized purposive sampling of 15 patients who (1) must be enrolled in Health Care Home for at least 6 months, (2) at least 18 years of age, (3) primary language is English, (4) diagnosed with a chronic condition, and (5) not diagnosed with a mental illness.

Recruiting

The Research Operations Office granted permission to allow the patients fitting the sampling criteria for purposive sampling to be contacted and interviewed for this study. A letter was mailed to each patient fitting the inclusion criteria. Interested participants were instructed to contact the research via email or phone. The number of interested participants surpassed the sample frame need for the study, thus creating an opportunity to obtain sufficient information that may not otherwise be obtained.

Sample Selections

A participant who is able to reflect, articulate, and is willing to share their experience of the phenomenon is a good candidate to participate in the study (Denzin & Lincoln, 1998). The selection process required the researcher to identify all potential participants through data collection from the Minnesota clinic. Each participant received an introductory letter that outlined the purpose of the study and interested participants were instructed to contact the researcher. Participants enrolled in the Health Care Home program are classified into four tiers based on the number of chronic conditions the participant is diagnosed with. The first five interested participants in each tier classification were contacted by the researcher to setup a date and time to conduct the semi-structured interview. The researcher reviewed with each interested participant the terms of participating in the study including the use of an alias, classification of the data based on the age, gender, ethnicity, months participated in the Health Care Home program, and the tier classification. Interested participants were provided an informed consent form to return to the researcher specifying the agreement terms for participation

in the study and the right to withdraw from the study for any reason (Creswell, 2007;

Swanson & Holton, 2005; Taylor & Bogdan, 1998).

Sample Size

Qualitative research typically involves small samples of participants and tends to

be purposive to study a lived phenomenon (Miles & Huberman, 1994). A purposive

sample does not have guidelines to determine an appropriate size, but the sample should

be large enough to and provide in depth information to inform the research question

(Patton, 1987; Sandelowski, 2000). Qualitative research is designed to collect detailed

information about each participant's lived experience to elicit information about the

phenomenon (Creswell, 2007). Participants in qualitative research have a unique role in

sharing their personal experience and knowledge about a particular phenomenon

(Sandelowski, 2000). The study utilized the purposive sampling strategy to identify 15

patients who (1) must be enrolled in Health Care Home for at least 6 months, (2) at least

18 years of age, (3) primary language is English, (4) diagnosed with a chronic condition,

and (5) not diagnosed with a mental illness. The sample frame produced the desired

sample size to sufficiently inform the research question.

Sample Rationale

The sample size and procedures described are consistent with qualitative research

methodology (Miles & Huberman, 1994). The 15 participants met the criteria of at least

18 years of age, primary language is English, diagnosed with a chronic condition, and not

diagnosed with a mental illness who is enrolled in the Health Care Home program in the

Internal Medicine department at the Minnesota clinic who are willing to share their lived

experience. The configuration and criteria of the sample was carefully and thoughtfully

worked through by the researcher. The rationale to utilize 15 participants was the result

from determining a sufficient sample from each of the four tier classes to appropriately

respond to the research question. The strategy expanded the analytical generalizability,

transferability, and triangulation of the results in the health care sector (Miles &

Huberman, 1994; Patton, 1987; Swanson & Holton, 2005).

<div style="text-align:center">Instrumentation/Measures</div>

The researcher systematically collected data through semi-structured telephone

interviews with 15 participants, indicating the researcher is the essential research

instrument (Creswell, 2007). The semi-structured interviews with 15 participants

required the researcher to demonstrate active listening and patience when the participant

was given the opportunity to describe their experience (Creswell, 2007). As a supervisor

in the health care industry, the researcher's experiences involve handling sensitive

information while keenly checking the skills required to effectively communicate and

handle the interactions. The researcher was attentive to any signs of discomfort for the

participant and thoughtful in providing a safe and confidential interview process. The

participant was given the opportunity to fully articulate the lived experience in the Health

Care Home model while the researcher probed and clarified statements for clearer

understanding of the participant's responses (Creswell, 2007; Miles & Huberman, 1994;

Moustakas, 1994; Taylor & Bogdan, 1998). The interview guide was utilized for the

semi-structured interviews and each interview took up to one hour to complete.

A toll free number was used to conduct the semi-structured phone interviews that

were recorded for transcription. A transcriptionist transcribed the recorded interviews.

The ATLAS.ti software is a qualitative data analysis tool to assist in analyzing in the data

<div style="text-align:center">45</div>

from the transcribed interviews. The software is an organized tool for coding and storing

the qualitative data. The researcher utilized a journal to record information, such as long

pauses, during the phone interviews that were included in the data analysis.

A researcher engaging in a particular subject is never free from bias (Caelli, Ray,

& Mill, 2003). The researcher engaged in bracketing by setting aside previous habits of

thought to develop a thorough understanding through the experiences of the participants

to avoid corrupting the data (Creswell, 2007; Crotty, 1998; Miles & Huberman, 1994;

Moustakas, 1994). The study was designed to perform semi-structured phone interviews

with probing questions to improve the collection of unbiased findings in the study.

Role of the Researcher

The data collection methods used in the study is a semi-structured, phone

interview. As a supervisor in the health care industry for the past 12 years, the researcher

has direct experience with patient complaints. Resolving patient complaints require

phone interaction to discuss sensitive issues with the patient, patient's family, physician,

or administration. Secondly, face-to-face and phone interviews are also required to

understand the past experiences of job applicants. The researcher has experience with

data analysis, interpretation, and application through quality improvement projects lead

by the researcher. Projects include compiling large amounts of data to refine into

summaries, developing a plan of action based on the findings, and implementing the

action to produce a positive outcome.

The nature of the study may provide challenges, such as unexpected behavior,

unclear communication and the sensitivity of the discussion with the participants

(Creswell, 2007). The training and experience of the researcher are critical qualifications

for asking questions and listening to responses of participants during an interview. However, the researcher has no qualitative research experience, but the benefit of being surrounded in the medical field and the philosophy of "do not harm" to the patient instills a higher standard in regards to code of ethics.

Data Collection

The exploratory qualitative inquiry used semi-structured phone interviews as the primary data collection method for participants to share their lived experiences (Cooper & Schindler, 2011; Crotty, 1998; Giorgi, 1985, Miles & Huberman, 1994; Patton, 2002). The participant and the researcher mutually agreed on the date and time for the semi-structured phone interview. The phone interviews were conducted by using a toll free number that was recorded for transcription. The interview guide was utilized for the semi-structured interviews and each interview took up to one hour to complete. At the end of each interview, the participant was asked if he/she would like to comment on anything further before the interview ended. The coding and analysis of the qualitative data was twofold, including the researcher and the Atlas.ti qualitative analysis software. *Interview Guide*: The researcher inquired with each participant questions relating to coordinated medical treatment in the Minnesota medical home model. The interviews took up to one hour to complete. Participants were instructed to call a toll free number at the agreed date and time of the interview to participate. The semi-structured phone interview was recorded for transcription into text using a transcriptionist. The transcribed interviews were loaded into the ATLAS.ti software to assist in analysis of the data. A journal was utilized to document information provided by the participants during the

phone interview. Figure 2 outlines the systemic data collection procedure used for the

exploratory qualitative inquiry.

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┌─────────────────────┐      ┌─────────────────────┐      ┌─────────────────────┐
│ Recruit (3) expert  │      │ Resolve expert panel│      │ -Recruit participants│
│ panel members       │─────▶│ member issues       │─────▶│ -Send introductory   │
│                     │      │                     │      │ letter               │
│                     │      │                     │      │ -Obtain consent forms│
└─────────────────────┘      └─────────────────────┘      └─────────────────────┘
                                                                     │
                                                                     ▼
┌─────────────────────┐      ┌─────────────────────┐      ┌─────────────────────┐
│ Validate transcribed│      │ Transcribe phone    │      │ Conduct semi-        │
│ interviews          │◀─────│ interviews          │◀─────│ structured phone     │
│                     │      │                     │      │ interviews with (15) │
│                     │      │                     │      │ participants         │
└─────────────────────┘      └─────────────────────┘      └─────────────────────┘
         │
         ▼
┌─────────────────────┐      ┌─────────────────────┐      ┌─────────────────────┐
│ Conduct data analysis│     │ Display data        │      │ Draw conclusions and │
│ through assistance   │────▶│                     │─────▶│ report results       │
│ with ATLAS.ti        │      │                     │      │                      │
│ software             │      │                     │      │                      │
└─────────────────────┘      └─────────────────────┘      └─────────────────────┘
```

Figure 2. Data Collection Procedure

Field Testing

A field test is necessary to identify if weaknesses in the instrumentation or design

exist (Cooper & Schindler, 2011). The interview questions were reviewed, checked for

validity, and was found appropriate through a panel of three expert members. The panel

found reliability within the interview questions and also verified that the questions

provided an opportunity for an information rich interview. Lastly, the panel confirmed

that the interview questions are appropriate and aligned well with the research question.

Data Preparation for Analysis

The semi-structured phone interview was prepared in the following manner:

1.   The phone interviews were recorded to be transcribed by a transcriptionist.
        Recordings were verified for sound clarity and indexed for use.

2.   A transcriptionist transcribed the recorded interviews into text, which were reviewed by the researcher for accuracy and completeness.
3.   Each recording and transcript was numerically numbered and all identifiable personal information was eliminated to ensure anonymity.
4.   The transcripts were loaded into the ATLAS.ti software to assist with data analysis. The software is able to store, analyze, and locate qualitative data.
5.   The journal entries were also included in the data analysis.
6.   The data analysis identified meaning units or themes from the participants' responses.

Data Analysis

The exploratory qualitative study utilized inductive analysis for the data analysis process. The inductive analysis relies on repeated patterns and themes found within a set of data (Denzin & Lincoln, 1998; Taylor & Bogdan, 1998; Patton, 1987). Inductive analysis requires the researcher to make sense of the data without bias or previous habits of thoughts (Patton, 1987). The patterns that emerge from inductive analysis come from the participant's responses and the researcher's journal notes. Each participant's data was reviewed individually by the researcher. Each interview was recorded and transcribed for further data analysis through the ATLAS.ti software.

The inductive analysis step-by-step guide was used as follows:

1.   Each participant's data was reviewed by the researcher.
2.   The journal notes and transcribed interviews were highlighted for any meaning related to the research question.
3.   Any information not highlighted was removed and placed into another file for future use.
4.   Highlighted data was coded.
5.   The highlighted data was grouped into similar patterns. Each pattern identified was assigned a summary and a second code for the pattern.
6.   As patterns emerged, the specific patterns related to the research question were placed in clusters.
7.   All patterns were reviewed to identify themes and descriptors were assigned for a third code for the pattern.
8.   Once the data has been analyzed, the themes, clusters, and descriptors provided easy assembly for the final report.
9.   An abstract analysis was assigned for each theme to reflect the substance and scope of the data.

10.   Steps 1-9 were completed for each participant.
11.   A combined analysis of all the participants' responses was formulated with themes, clusters, and descriptors.
12.   The final analysis drew conclusions from the summary of the collective data (Patton, 1987).

Data Presentation

The exploratory qualitative inquiry utilizes an inductive analysis approach to identify themes or patterns from the phone interviews. Qualitative data has been frequently displayed as matrices, supported with graphs and charts, to recognize the themes and patterns (Miles & Huberman, 1994). A matrix allows the data to be arranged in a particular order to illustrate the codes and descriptors to identify the data clusters in the data. The method enables a high level dashboard of information to align to the research question (Miles & Huberman, 1994).

<div align="center">

Validity and Reliability

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The analysis of the qualitative data will be carefully reviewed and analyzed by the researcher to establish a wide application of the results. Appropriately, the findings cannot be extrapolated or directly applied to other organizations. The study interviewed patients who do not reflect society as a whole. There are a number of inclusion criteria in the sample frame, which the researcher relies on the patients identified as meeting the criteria for the study. The inclusion criteria inherently contains bias to those populations excluded (Swanson & Holton, 2005). Throughout the study, the researcher must set aside personal observations and assessments. When other researchers can conduct qualitative research with a similar purpose, method, analysis and results, the study may be deemed as dependable and methodical (Swanson & Holton, 2005; Giorgi & Giorgi, 2003). The

findings from the study may be limited in transferability or generalization (Miles & Huberman, 1994; Swanson & Holton, 2005).

The potential bias was reduced with phone interviews with probing questions to increase the opportunity to gather unbiased data. The participant's experience is central to the phenomenon of interest, which is gathered from statements by the participant in narrative form. The recordings can confirm the credibility and validity of the transcript (Creswell, 2007; Denzin & Lincoln, 1998; Trochim, 2006). The researcher is an employee in the health care organization where the study takes place and understands the medical home model, the potential bias, and the fundamentals of research in this study.

Ethical Considerations

The researcher uses the ethical considerations identified in good research practice and obtains permission from each patient to use their anonymous inputs. Patients are free to withdraw from the study at any point. Due to non-probability sampling method, patients may not have an equal chance of being selected to participate in the study. Patients who are at least 18 years of age, whose primary language is English, has not been diagnosed with a mental health illness, and has been enrolled in the Health Care Home program as a chronic patient for a minimum of 6 months in the Internal Medicine Department at the Minnesota clinic may participate in the study. The justification for the sampling method is due to challenges with conducting research with a non-English patient, such as cost for an interpreter and the interpretation of questions and answers by the interpreter. Secondly, the research is primarily gathering personal experiences regarding medical treatment that may not be valid if told through a parent or adult care

51

taker. Lastly, mental health diagnoses may impact the researcher's ability to conduct an interview or the patient's ability to participate in an interview.

Protecting the patient's privacy is critical to the researcher's efforts to ensure validity of the research and build cooperation with each patient (Miles & Huberman, 1994). A patient has the right to withdraw from the study, with no reason, at any time, which ensures research guidelines are followed when working with human subjects (Swanson & Holton, 2005).

The patient has minimal risk participating in the one time, 1 hour semi-structured phone interview. Patients have no greater a risk in participation than what may be ordinarily encountered in daily activities. The researcher realizes patients may become emotional discussing their condition and interview techniques will be used to minimize the encounter. Additionally, the researcher will properly store the data in a locked file cabinet at his home office and hard copies that are no longer needed will be shredded after the retention period of seven years (Miles & Huberman, 1994). Beneficence obligates the researcher to protect and minimize risks and harm from the patients (Creswell, 2007).

Conclusion

The design of the exploratory qualitative inquiry was to develop a deep understanding of the understanding of coordinated medical treatment in the medical home model from the patient perspective. The research was guided by the philosophical assumptions, theoretical framework and interview questions. The data collection, coding and analysis processes were effective in identifying, obtaining and explaining the themes and patterns of the qualitative data. The responses provided rich data to provide valid

answers to the research questions and a deeper understanding of coordinated medical

treatment in the medical home model. Chapter 4 provides a comprehensive review of the

data and a detailed analysis of the results.

CHAPTER 4. RESULTS

This chapter summarizes the findings and the results collected from the semi-structured phone interviews. The interview guide was aligned with the research question: How do patients understand their coordinated medical treatment within the Minnesota medical home model? The research question was developed to discover emerging trends or themes to a participant's understanding and experience with coordinated medical treatment success.

The chapter begins with the background and interest of the researcher. The proceeding section describes the participant sample, participant description, data collection procedures, Atlas.ti analysis, coding, data analysis, results of the data analysis and findings. The findings may provide the health care industry an increased understanding of the factors affecting the patient's understanding of coordinated medical treatment success. The outcome of this study establishes a sense of urgency in the midst of a growing aging and chronically ill population.

The Researcher

The researcher is actively working in the health care industry as a Coding Supervisor and has worked in the health care field for over 13 years. The interest in the topic of patient understanding of coordinated medical treatment success was driven by his concern for patients truly understanding the value in coordination of care delivered through the medical home model. There appeared to be a lack of understanding among

the patient population that presented an opportunity for investigation. The researcher has developed a set of skills during the course of his career to assist in remaining objective during interactions with patients, employment interviews, and investigations into employee performance and misconduct.

The research has written numerous research papers, a Master's thesis, actively teaches as an adjunct instructor, and is a member of an advisory board for two colleges. These experiences may employ similar skills required in research, but the transferability of these skills is limited. However, the skills required in a dissertation study are not directly related to the employment experiences. The researcher consulted with learners, faculty, and other researchers regarding research design and data collection methods, which required practicing the data collection method in the field test.

The purpose of the study was discussed with the participants regarding their understanding and experiences related to their participation in a medical home. The interview guide was designed using familiar terminology to the patient followed with additional probing questions for clarification to responses. Bracketing allowed the researcher to see through the participant's perspective and uncover a new understanding by setting aside previous thoughts and habits (Creswell, 2007). The researcher is not in direct contact with any of the research participants. Designing the study to conduct interviews via phone minimized the bias and potential conflicts with the participants to ensure the integrity of the research.

Description of the Sample

The Participants

Permission to conduct the study and contact the participants for the purposive sample group was approved by the Research Operations Office of the Minnesota clinic. The introductory letter was mailed to each qualifying participant to invite the individual to participate in the study for patients who are at least 18 years of age, have been participating in health care home for at least 6 months in the Internal Medicine department, has been diagnosed with a chronic condition, has not been diagnosed with a mental health illness, and their primary language is English. The participant must be willing to share their understanding and experiences of coordinated medical treatment in the medical home model through confidential phone interviews. Interested participants in the study contacted the researcher via mail. Potential participants were contacted by the researcher to setup a phone interview and mailed an Informed Consent Form for completion before the interview took place. A toll free number was provided to each participant for each phone interview.

In the case that the required 20 participates was not achieved, the researcher considered using another Internal Medicine clinic in the same geographical area. The initial mailing to 136 participants resulted in 8 responses in a two week time period. Based on the response rate, the scope of the study expanded to the second Internal Medicine clinic where an additional 104 letters were mailed, which resulted in 4 responses. A third mailing to the remaining 228 participants from both clinics resulted in 3 responses for a total of 15 participants. Of the 15 interested participants, 14 participants contacted the researcher via mail and 1 participant contacted the researcher

via email. The researcher received 11 invitations from participants who declined to participate in the study, 1 email from a family member stating the participant had recently passed away, and 1 participant contacted the Research Operations Officer of the Minnesota clinic to discuss the study.

The researcher contacted each willing participant via phone to thank them for their interest in participating in the study, described the Informed Consent Form procedure, and setup a future time for a telephone interview that was mutually agreeable to both parties. If any participant had questions during the process, the researcher could be contacted via phone or email. Upon receipt of the Informed Consent Form, the interviewer guided the semi-structured phone interviews developed for this study. All participants arrived for the phone interview on the specified date and time. The participants were engaged and enthusiastic about participating in the study.

The beginning of each phone interview provided the definition of health care home and the participant guidelines to follow during the interview. The researcher made a clear distinction of the health care home framework to each participant to clarify the potential confusion with home health care. Before the interview began, each participant was provided an opportunity to ask questions about the guidelines or the interview process. There were no questions from each of the 15 participants at that point.

The participant's expressed through verbal descriptions of their understanding and experiences to eight main interview questions with subsequent probing questions related to coordinated medical treatment success in the medical home model. The exploratory qualitative methodology was aligned with the interview guide and the semi-structured interview questions guided by the research question: *How do patients understand*

57

coordinated medical treatment within the Minnesota medical home model? The

responses to the research questions provided rich data results for further analysis.

The interviews were audio recorded using a digital voice recorder. Before the

interview began, the researcher conducted a sound check with each participant to ensure

that the researcher could be clearly understood. As the interviews proceeded, the

researcher recorded noteworthy remarks. Some participants required clarification to

understand certain questions, such as "can I clarify my point for your understanding…"

or "can you explain your question." The repeated statements allowed the participants to

gain a better understanding of the question.

A couple of participants appeared to confuse health care home with home health

care. When the researcher identified the confusion in the interview, the researcher

reviewed the definition as outlined in the interview guide with the participants and

clarified the framework of health care home. The researcher asked the participant if they

understand what health care home was and that it was a different type of service from

home health care. Each participant confirmed that there was confusion, verbally

committed to the understanding of health care home and the interview proceeded.

The researcher was sensitive to the participants' responses and only responded to

their statements with "I see…," "OK," or "I understand…" to allow the participant to

speak openly about their understanding and experiences with health care home. The

participants appeared to be highly engaged throughout the entire interview process and

provided rich responses to each interview question. The level of rapport and trust was

apparent from the beginning of each interview that encouraged participants to be candid

about their experiences in greater detail and clarity.

On average, the interviews lasted between 20-30 minutes among the 15 participants, which indicates the essential research instrument was the researcher (Creswell, 2007). A total of 15 interviews were conducted over a four week period. Figure 3 outlines the recruitment, selection, and interview processes for data collection.

Data Collection: Recruitment, Selection, and Interview Processes
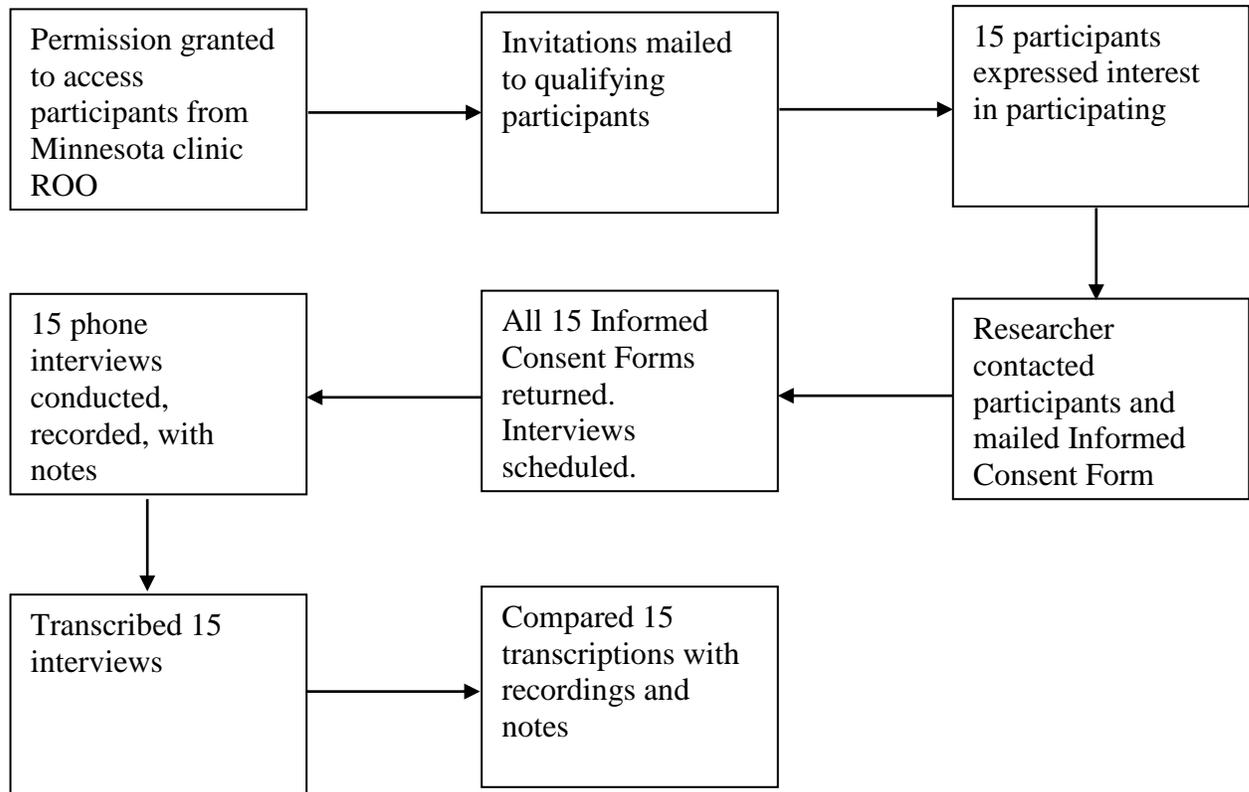
Figure 3. Data Collection

Participants' Demographic Data

All participants in the study identified their ethnicity as Caucasian. None of the participants identified themselves as any other ethnicity, so the diversity of the sample group may not be representative. Eight of the participants or 53% were male and seven participants or 47% were female.

Five participants or 33% were below the age of 65 years and 10 participants or 67% were above the age of 65 years. Two participants or 13% indicated they are full time employees. Eleven participants or 73% have been enrolled in Health Care Home for at least 2 years. The tier classifications were well rounded with four participants in tiers 4, 3, and 2 and three participants in tier one. Table 1 outlines the demographic data for the 15 participants (P) in the study.

Table 1. Sample Size with Demographics

P#	Gender	Ethnicity	Age	Months Enrolled	Tier
P1	F	Caucasian	76	9	3
P2	M	Caucasian	88	13	3
P3	M	Caucasian	83	17	3
P4	M	Caucasian	93	20	4
P5	F	Caucasian	36	9	1
P6	F	Caucasian	79	17	4
P7	M	Caucasian	76	14	2
P8	M	Caucasian	57	18	3
P9	F	Caucasian	64	26	2
P10	F	Caucasian	31	11	1
P11	M	Caucasian	67	22	4
P12	F	Caucasian	74	14	2
P13	M	Caucasian	76	20	4
P14	M	Caucasian	76	21	1
P15	F	Caucasian	54	14	2

Research Methodology Applied to Data Analysis

When a topic is new or evolving, the exploratory qualitative inquiry is appropriate to use for exploration. The experiences, reflections, and perceptions of the patients participating in a medical home are captured through this approach. The particular methodology offered flexibility in describing the phenomena under study as compared to

other methodologies that were no appropriate (Babbie, 1995; Cooper & Schindler, 2011; Merriam, 1998; Sandelowski, 2000).

Inductive Analysis

Inductive analysis identified patterns and themes to find meaning in the collected data (Denzin & Lincoln, 1998; Patton, 1987; Taylor & Bogdan, 1998). The process allows an individual to make sense of the collected data without previous experience, knowledge, and categories. The researcher analyzed all the data collected.

Step-by-step Process

The following steps were completed by the researcher at the conclusion of the 15 interviews:

1. Review each transcript individually to verify for completeness and accuracy. Once the transcripts were reviewed, all the transcripts were uploaded into ATLAS.ti. The software assisted in identifying meaning units or themes from the participants' statements.
2. ATLAS.ti provided an output report that the researcher reviewed by highlighting any sentence(s) or paragraph(s) that had meaning to the research question.
3. The researcher reduced the data by omitting any response that did not directly answer the question.
4. The remaining data was assigned a code to organize the data into segments, such as a tag or a label that represented a pattern or theme for interpretation in the coding process (Creswell, 2009; Miles & Huberman, 1994; Swanson & Holton, 2005).
5. Related data were grouped based on the initial code assigned to establish a second layer of codes. The review of each transcript created new patterns and themes to establish a new set of codes.
6. Several cycles of review the transcripts added new codes to the set until saturation and redundancy appeared (Miles & Huberman, 1994).
7. A review of all the patterns and themes resulted in the data clustered into three major themes relative to the research question: (a) patient understanding, (b) coordinated medical treatment, and (c) treatment success.
8. The supporting codes and frequencies were presented in a theme matrix.

A combination of the data with direct quotes from the participants supported the creation of each pattern and theme. The ATLAS.ti software synthesized the data into summaries for the researcher to draw patterns, themes, and conclusions from the data. Figure 4 outlines the seven step process in a visual format.

Data Reduction, Analysis and Synthesis Process

Transcribe Interviews	Assign Coded Themes and Patterns #1	Organize Results in Coded Matrix
Verify Transcripts		Analyze Results
Upload Transcripts in ATLAS.ti	Assign Coded Themes and Patterns #2	Summarize Results
Review Output	Assign Coded Themes and Patterns #3	Conclusion
Data Reduction	Saturation Achieved	

Figure 4. Data Inductive Analysis

Data Display

The information in the data display represents the frequencies of the code sets and application in the sample group. Coding is used to develop insights of a particular set of data to generate theoretical understandings (Taylor & Bogdan, 1998). Tables 2, 3, and 4 summarize the refinement of the code sets where the researcher assigned codes, reviewed the transcripts, and refined the coding categories. The researcher was cautious when assigning the codes to the data to ensure a proper fit. The matrix was flexible to allow

62

themes to be arranged with supporting codes, patterns, or descriptors for each data

cluster. The matrix provides a useful overview of the data to ensure alignment with the

research question, analysis of the data and findings (Miles & Huberman, 1994).

Table 2. Code Set One Code Frequencies

Codes	Frequencies
Health care professional support	90
Care Coordinator	84
Primary Care	75
Communication	70
Improved Outcomes	70
Feeling valued/recognized	70
Access to care	69
Sharing experience	43
Engagement	37
Relationships	32
Compassionate care	32
Needed change	30
Collaboration	27
Continuous care	27
Comprehensive care	24

Table 3. Code Set Two Code Frequencies

Codes	Frequencies
Health care professional support	84
Care Coordinator	80
Primary Care	71
Improved Outcomes	70
Access to care	68
Communication	60
Feeling valued/recognized	60
Sharing experience	40
Engagement	36
Compassionate care	31
Relationships	30
Needed change	29
Appreciation	28
Collaboration	25
Continuous care	25
Follow-up	23
Comprehensive care	20

Table 4. Code Set Three Code Frequencies

Codes	Frequencies
Health care professional support	79
Care Coordinator	74
Primary Care	69
Improved Outcomes	64
Access to care	63
Communication	58
Feeling valued/recognized	58
Sharing experience	38
Engagement	33
Relationships	29
Needed change	28
Compassionate care	27
Appreciation	26
New learning	25
Collaboration	24
Follow-up	22
Continuous care	22
Emotionally connected	18
Comprehensive care	16
Family centered	9

Themes

The emerging themes were recognized by the researcher by immersing himself in the process of analyzing the data (Swanson & Holton, 2005). The inductive process required the consistent process of comparing data until a pattern or theme was formulated. Table 5 summarizes the code sets of the three major themes: (a) patient understanding of the medical home model, (b) coordinated medical treatment, and (c) treatment outcome.

Table 5. Code Set Three of Code Frequencies in Relationship to Three Themes

Patient Understanding of the Medical Home Model	Coordinated Medical Treatment	Treatment Outcome
Health care professional support {79}	Access to care {63}	Improved Outcomes {64}
Care Coordinator {74}	Communication {58}	Feeling valued/recognized {58}
Primary Care {69}	Engagement {33}	Sharing experience {38}
Needed Change {28}	Relationships {29}	Compassionate care {27}
New Learning {25}	Follow-up {22}	Appreciation {26}
Collaboration {24}	Emotionally connected {18}	Continuous care {22}
		Comprehensive care {16}
		Family centered {9}

The three themes directly correlated to the research question, research area of focus, and the conceptual theorists, as shown in Table 6:

Table 6. Research Question and Research Focus Founded by Themes and Conceptual Theorists

Research Question	Themes	Conceptual Theorist
RQ1. How do patients understand coordinated medical treatment success in the Minnesota Medical Home model?	Patient Understanding of Medical Home Model	Babbott et al., Bujak, Rosenberg, Schoen et al., Tan & Brown
	Coordinated Medical Treatment	Babbott et al., Gharajedaghi, IOM, Rittenhouse et al., Scharmer, Starfield
	Treatment Outcome	Bodenheimer, Wagner, & Grumbach, Fischer & McCabe, Gharajedaghi, Scharmer, Sia et al.

Research Focus	Themes	Conceptual Theorist
1. Reflections of a patient in medical home model	Patient Understanding of Medical Home Model	Babbott et al., Bujak, Rosenberg, Schoen et al., Tan & Brown
	Coordinated Medical Treatment	Babbott et al., Gharajedaghi, IOM, Rittenhouse et al., Scharmer, Starfield
	Treatment Outcome	Bodenheimer, Wagner, & Grumbach, Fischer & McCabe, Gharajedaghi, Scharmer, Sia et al.
2. Experience and understanding of medical home model	Patient Understanding of Medical Home Model	Babbott et al., Bujak, Rosenberg, Schoen et al., Tan & Brown
3. Coordination of Care	Coordinated Medical Treatment	Babbott et al., Gharajedaghi, IOM, Rittenhouse et al., Scharmer, Starfield
4. Treatment Outcome	Treatment Outcome	Bodenheimer, Wagner, & Grumbach, Fischer & McCabe, Gharajedaghi, Scharmer, Sia et al.
5. Care Coordinator Influence/Support	Patient Understanding of Medical Home Model	Babbott et al., Bujak, Rosenberg, Schoen et al., Tan & Brown
	Coordinated Medical Treatment	Babbott et al., Gharajedaghi, IOM, Rittenhouse et al., Scharmer, Starfield
	Treatment Outcome	Bodenheimer, Wagner, & Grumbach, Fischer & McCabe, Gharajedaghi, Scharmer, Sia et al.

Presentation of Data and Results

Research Question

The study was guided by the research question: *How do patients understand coordinated medical treatment within the Minnesota medical home model?* The semi-structured phone interview process addressed the research question. Interview questions with additional probing questions were formulated for participants to elaborate on their responses (Creswell, 2009). The understanding of coordinated medical treatment from the participants' perspective was captured by the responses based on experiences and reflections shared during the interview process.

The frame of reference was established from the data collected through the interviews. Three themes were identified from the data collection and analysis process which include: (a) patient understanding, (b) coordinated medical treatment, and (c) treatment outcome. The comprehensive data analysis provided the participants' perspective and developed a thorough understanding of the phenomenon.

Theme 1: Patient Understanding of Medical Home Model

Health Care Home was defined at the beginning of each interview as an approach to provide accessible, coordinated, comprehensive, collaborative, and family centered care that is continuously improved (AHRQ, 2010). The purpose to provide a definition served two purposes: (1) increased awareness of the model of care being discussed in the interview and (2) differentiate the model from a similarly named model of care, home health care.

When the participants shared their understanding of Health Care Home, 40% of the participants were confused with the term as related to home health care, which

provides home services. The medical home term conjures up various thoughts, like a

nursing home rather than a model of care. The comments from 53% of the participants

shared an underlying issue with a clear definition of what Health Care Home is and how

it works. As P9 expressed, "To my generation Home Health Care is nursing home."

After clarification, all participants recognized the name and the model of care

known as Health Care Home. Approximately 73% of the participants shared a similar

Health Care Home definition as "patients, providers, and nursing staff involved in the

care of a patient collaborate on how best to treat the patient."

The perspective from P1 shared an eloquent description of the model:

> What comes to mind is that all appropriate entities of health care would be put
> into play for my particular concern that is whether it is the doctor, lab, physical
> therapy, county assistance or anything related to promote my health care or to
> improve my condition or just in general assist me.

Health Care Professional Support

Patients diagnosed with multiple chronic illnesses require a management system

headed by their primary care physician who understands chronic conditions, how the

active conditions interact and affect the care of the patient and are able to allow time to

manage the conditions with input from the patient (Babbott et al., 2007). The medical

home model is led by a physician who provides continuous and coordinated care as

needed while learning about the patient's illness, supporting the patient's decision for

treatment, and maintaining a relationship with the patient (Rosenberg, 2009).

The support from health care professionals ranked the highest in the code set with

100% of the participants referencing either their primary care physician or care

coordinator in their conversation. The consensus from the participants is being supported

69

by a health care professional was key to access to care and treatment success. P14

provided an insightful comment:

> I have been treating with my Internist physician in the clinic for many years. My
> file is all there. Actually, I had some sense of Health Care Home before the
> formality even started and whenever I have contacted my coordinator she is
> Johnny on the spot and very responsive.

P14 comments illuminates that all patients have a Health Care Home with their

primary care physician, but the systemic components and processes were missing to

recognize the primary care clinic as the patient's Health Care Home.

Care Coordinator

The care coordinator plays a vital role being in a patient's care team, particularly

with the role of point of access for care and information. P7 commented on the care

coordinator acting as an "In-house advocate within [clinic], it is a point I can go as she

has access to all the providers." The general consensus was 67% of the participants

communicate primarily through the care coordinator to access care or information. A

number of the participants referenced the pleasure of working with the care coordinator

and comments ranged from P1 stating "the coordinator has been kind and helpful with the

little bit of information that I did need" to P10 commenting:

> It has just been really great how I am able to get appointments when I need them
> and get meds when I need them and thanks to the coordinator, I understand what
> my meds do, what they are for and the side effects.

When the participants were asked about how care coordination is encouraged in

Health Care Home, 53% of the participants referenced the care coordinator assisted them

with setting up appointments, answering medication questions, and accessing other

resources to support their care. An impressive 80% of the participants stated the care

coordinator maintained continuous care with the patient. Approximately 87% of the

participants mentioned the care coordinator provided compassionate care, while some

participants commented that each of their interactions with the care coordinator were

"stupendous" and "outstanding." However, two participants referenced turnover with

their care coordinator and commented that they were not pleased as they built a strong

rapport with the individual.

Primary Care

The initial point of contact between a patient and their primary care physician

create a "conversational process that helps groups of all sizes to engage in constructive

dialogue, to build personal relationships, and to foster coordination" (Tan & Brown,

2005, p. 84). Approximately 93% of Americans prefer a single place or doctor to provide

primary care with care coordination, but only half experience this model of care (Schoen

et al., 2007; Stremikis, Schoen, & Fryer, 2011). When the participants were asked about

how they learned about Health Care Home, 87% of the participants responded that their

primary care physician recommended the program. P1 provided how she was introduced

to the program:

> My doctor told me about it and that would have been last September. She told me
> just briefly what it was and she thought it would be something very good for me
> to do. I did not know what it was in any great detail and I did not know why she
> thought that at the time. That was it, my doctor suggested it.

Only 40% of the participants referenced interaction with their primary care

physician while being a Health Care Home patient. Of those 6 participants, 100% stated

their point of contact is the care coordinator because they know their primary care

physician is "too busy to handle all of my questions", as three of the participants

mentioned.

Needed Change

The transformative change in health care will focus on process and systems and

therefore, coordination occurs more naturally with other specialties and disciplines and

across system boundaries (Bujak, 2008, p. 5). The consensus of the participants indicated

that health care must change. Approximately 67% of the participants recognized how

Health Care Home is the starting point of accessing care and 27% mentioned their

experience is much different from the typical routine of calling to schedule an

appointment before receiving care. As P11 pointed out:

> Primarily having an entry point and a place to resolve issues that do come up. I
> guess Health Care Home is a way for a person in my case. I have been described
> as medically complicated and it is a way to say I am not going to make this
> decision.

The objective of Health Care Home is collaboration among the patient and health

care professionals across the health care system to achieve greater health outcomes.

Placing the patient at the center of their care is vital to the overall treatment success of the

patient. The patient is able to make informed choices about their care, as some of the

participants recognized, including P9:

> I learned about Health Care Home through my doctor and after having a heart
> attack, everyone decided they would work together to get me back on my feet and
> I have not been a very good patient about listening to what my doctor said I
> should do. Now, I have my physician, my cardiologist, everyone working
> together and I am 100% cooperating with them.

72

New Learning

Trust is challenging to understand and develop because most individuals enter cautiously into a potential team situation because of the individualist mind set and experience condemns us from placing our fate in the hands of others (Katzenbach & Smith, 2003, p.168). It is not necessary to take significant leaps into unknown territories, but it is important to continue taking steps that allow individuals, teams, and organizations to learn and improve (Mcmillen & Stewart, 2009). Without the learning mechanism, obtaining the patient's goals and providing quality care that is affordable is unlikely (de Geus, 2002, p. 20).

The patients expressed interest in learning and experiencing a new model of care, which increases the organization's capacity to redesign processes and systems to create a cultural transformation (Gharajedaghi, 2011). In responding to new learning experiences, 100% of the participants mentioned that participating in Health Care Home was an experience they enjoyed and "understanding how the program works improved their ability to get more out of the program", as P4 mentioned. The care coordinator played the most significant role in assisting the participants, as P8 pointed out, "The care coordinator explained my care well enough for me to understand it better."

However, Health Care Home is a model of care that may not be publicly known to the general population, which some of the participants expressed. P9 explained:

> After I realized what it really is it is people helping me through all the bumps, people to go to and talk to and run ideas by. I was thinking nursing home and I was thinking I do not need that kind of care. I am not that decrepit, I want to do this on my own. I do not want to be handicapped. That was my first idea, but now it is just a bunch of people helping me stay alive, stay on my own, stay living by myself.

Collaboration

Coordination of care requires health care professionals to collaborate on a large

scale to better serve the patient's needs. Collaboration in Health Care Home is defined as

understanding the goals, roles, communication and decision making across people and

sites (Rittenhouse, Casalino, Gillies, Shortell, & Lau, 2008). Care coordination is

fundamental to successful implementation of Health Care Home and 73% of the

participants were able to describe in detail their experiences first hand, including P1:

> I have had an experience where I realized with a totally different situation that
> affected our family, not me and not me directly, in which after the fact we
> realized the doctors were not particularly talking to each other. We got advice
> from one doctor and we made the assumption all the doctors were on board with
> whatever was suggested and we went along with it and later we found out that
> probably wasn't the case and we made a wrong decision. It very greatly affected
> me and my husband too because we were hoping that when there were a whole lot
> of doctors involved, with in this case it was my husband's sister, there would be a
> lot of communicating within at least the doctors and whoever else might be
> involved so that whoever might give us advice or tell what was happening and
> here is what we think should be done would be a consensus rather than one
> individual's opinion.

The implementation of electronic medical records (EMR) has allowed health care

systems to manage patient information and communication even among large, complex

systems. An EMR system can bring parts of the system closer together to collaborate on

patient care. Some of the participants shared this knowledge and felt it assisted in the

collaborative process, as P6 and P14 expressed:

> I think that [clinic] has very good coordination because they do talk to one
> another and there is a centralized electronic medical record that they use.

> The care of my primary physician and Health Home coordinator that their file
> includes all of the people I am seeing and all of the procedures I am having and
> all the issues I am having in the health care arena and what I am doing about
> them; what the treatment is and what is coming.

Only two participants referenced communication between their primary care physician and other health care professionals when assisting in their care. Communication in Health Care Home should be dynamic when patients receive care outside of their primary care clinic.

Theme 2: Coordinated Medical Treatment

Coordination of care is considered to be the most critical element in the Health Care Home Model (Rittenhouse et al., 2008). Most definitions define coordination of care as the level of interaction between various sources share information (Starfield, 1994; McDonald, Sundaram, & Bravata, 2007; Donaldson, Yordy, Lohr, & Vanselow, 1996). Quality coordination of care includes timely communication between the patient, primary care physician and other specialists in order to integrate the recommendations by the specialist into the patient's care. Patients value the coordination of care and interaction between their primary care physician and specialists (Laine, Davidoff, & Lewis, 1996; Anderson, Barbara, & Feldman, 2007) and coordination is strongly correlated to higher quality of care, primary care physician satisfaction care received from a specialist, and use of health maintenance services (Starfield, 1994; McDonald, Sundaram, & Bravata, 2007; Stille, Jerant, Bell, Meltzer, & Elmore, 2005; Forrest et al., 2000).

Care coordination integrates the patient's care across providers and settings according to the preference of the patient and their family (IOM, 1996; Starfield, 1994; McDonald, Sundaram, Bravata, 2007). Coordination among the team and effective communication by each member is required to work closely together and to educate the patient (Babbott et al., 2007). Patients characterize care coordination in various ways.

75

For example, Medicare patients were more likely to rate care coordination higher than those who are not on Medicare. Coordination of care assessments provided no difference in ethnicity, race, income, or primary language (O'Malley & Cunningham, 2008).

Care coordination was defined as the organization of patient care activities across the health care system. When participants were asked to share their understanding of Health Care Home, 73% referenced a similar definition. The underlying theme of the responses was correlated to accessing other services in the system. However, other descriptors were used to provide a clearer definition regarding the components of coordinated medical treatment. P8 asserted the power of care coordination:

> Working with my heart, diabetes, blood pressure, all of those things I have wrong with me right now, the providers are working together. One person saying this med is not working for you. That is my biggest thing, my meds were off. It is all these people and all of these hands helping me stay on my feet.

Access to Care

The patient perspective yearns for access to coordinated care in time of need rather than a model that simply measures performance or provides reminders. There is a sense of "medical homeness" that is developed through consistent and constant contact from familiar people in a familiar place. These qualities are evaluated better through the patient's perspective than the primary care physician. Measuring the transparency that exists in the medical home remains the underlying quality in patients receiving care (Rittenhouse et al., 2008). The conclusions to other research show a correlation between access and health outcomes (Starfield and Shi, 2004; Seid, Varni, Cummings, & Schonlau, 2006; Szilagyi et al., 2006).

Patients with chronic conditions may suffer from frequent acute events, which requires more access to care even when care is delivered via telephone (Rittenhouse et al., 2008). When participants were asked about their access to care, 87% of the participants responded they were able to access the right amount of care at the right time being a Health Care Home patient. However, the same participants stated there were no changes to access to care even after becoming a Health Care Home patient.

The two participants, P5 and P11, who did not share a positive experience mentioned they "did not know how to use Health Care Home." Overall, the participants clearly defined access as the single most important element of their care, as highlighted by P10:

> My experience has been really great. I can call anytime, day or night and if they are not available I can leave a message. It has been really great about how they call me back and how they help me to understand everything. I have a very serious disease and they are helping me to understand and how to cope with it.

Access to care is not simply accessing health care, but Health Care Home may locate specialty care and community resources for a patient. In fact, some of the participants shared positive experiences with this aspect of Health Care Home, such as P9:

> Through the programs they have set up that you can go to that help you out. I was having so many problems with dizziness and I did not want to tell anything. I was scared. I didn't want to tell the doctor and I didn't want to tell the nurse. I was actually afraid of falling down all the time when I would walk. I just all of the sudden had enough and I have just a regular doctor appt and she got me into a rehabilitation program at the clinic and 100% helped me. The same day I left there, my dizziness was gone and they showed me tricks to help me catch my balance. They did a whole treatment on me. I don't know what it was, but it was like a miracle. Things like that, they present things. I went to a dietician clinic about diabetes. They have all these clinics and all these things that will help you. That is what it takes.

Communication

Communication creates "a process whereby learners construct new meaning and transform their collective experiences into knowledge" (Baker, Jensen, & Kolb, 2005, p. 412). Communication is a catalyst for engaging differently in relation to the work at hand and relationship to those around us. Patients identified continuous communication, integration with heath care providers, and the fulfillment of meeting needs were strongly correlated with improved levels of care coordination between primary care physicians and specialists (Haggerty, Pineault, & Beaulieu, 2008).

Continuous communication is a key activity in ensuring clinical information is shared between providers and the patient to share a role in the decision making process (Pham et al., 2007). When a patient receives care across providers and settings, care coordination becomes fragmented due to lack of communication and shared decision making (IOM, 1996; Starfield, 1994; McDonald, Sundaram, Bravata, 2007).

As mentioned previously, some of the participants were unclear about what exactly Health Care Home was and how it worked. Only 40% of the participants referenced communication as a key element in receiving care in Health Care Home. P1 commented:

> I think it could make a whole lot of difference just in the communication effort alone so that families can fully understand what decision it is that they have to make and get a big ballpark picture rather than one particular small viewpoint.

Clear and timely communication has allowed patients to positively express interest in Health Care Home. As P6 mentioned, "They ask me what I need and suggest things that will help in my care. They are not pushy but they are very helpful."

Furthermore, P1 clearly stated the purpose of Health Care Home from a communication perspective:

> Health Care Home could help coordinate that sort of thing so that patients and patients' families can get a consensus of ideas when major decisions needs to be made for a patient.

The communication style from the care coordinator allowed patients to understand their care more clearly, as P10 and P15 reflected on their experiences:

> They are really amazing about answering questions and that helps with compassion. They are really patient with me. They are very direct which I like.

> The care coordinator and my primary care physician have a much more detailed

history of my medical problems and this allows them to know my background without spending too much time on what should already be known. I have found that the care I receive is more responsive to my care needs and access is exceptional.

Engagement

The commitment and cohesion of the team, individually and collectively, is what sets the care coordination practice apart from any other care model. Commitment is the willingness to make a promise with no expectation of return (Block, 2008, p. 71). The unconditional promise to the patient is a unique element that brings the team together to fulfill an obligation (Block, 2008). Coordination of care was rated higher by patients who played an active role in their management of care. Patients with Medicare and Medicaid coverage and over 65 years of age rated care coordination higher than patients with only Medicare coverage (O'Malley & Cunningham, 2008).

When patients described their engagement in Health Care Home, the responses varied. Nine patients, or 60%, described little to no engagement in managing their own

care. Literature outlines the purpose of Health Care Home is to focus on the patient,

provide treatment options, and allow the patient to decide the treatment method

(Rittenhouse et al., 2008). P3 expressed:

> I do not feel that there is any involvement on my part. This is something that the doctor really gives some instructions to the people and then they administer what the doctor asked them to do.

> P2 and P6 described their engagement level as "I do what my physician tells me

to do without any questions."

> On the other hand, P10 said, "I am attuned to my health and question the care and

services I receive from my doctor because I need to know." A primary feature of Health

Care Home is patient involvement and engagement in managing their health and

developing an understanding of the care and services they receive (Rittenhouse et al.,

2008). On the other hand, 3 participants recognized the need to be more involved in their

care to achieve better health outcomes, as P9 shared an enlightening experience:

> They are not pushy. They are just saying they would like to try this. When someone says that to me it catches me right away because it is like "Do I have a choice"? It just makes me want to do it. I wanted to take more control of my life and the care I received and cannot rely on others to do it for me. That is why I became more involved and I feel my contributions have made a significant return on my health and well being.

> Two participants indicated changes in their engagement after enrolling in Health

Care Home. P5 indicated "After I got over my initial paranoia over it, I have used it quite

a few times" while P9 stated:

> I have a friend who is in the hospital and the doctor is saying the doctor is saying home health care, she is going to need extra care and she says I don't want people in my house, I don't want people calling and she says I can take of this. I said, ok but when you get home and your attitude starts changing you call me because I know the plan works and it will get you back on your feet.

Relationships

Developing multiple relationships fosters a community of individuals who share

common beliefs and values, which ultimately provides healthier relationships for more

successful outcomes. Without connectedness, individuals lose touch with common

concerns and sense of purpose in their relationships with others. Ignoring the need for

belongingness has serious implications for healthy relationships, teams, and systems

(Senge et al., 2004, p. 72).

Through Chimhanzi's (2004) research, social interactions have shown to create a

positive and significant relationship between integration and coordination. The results

propose that different members who interact informally within a social interaction are

more at ease with each other and their roles (Chimhanzi, 2004, p. 729).

Approximately 87% of the participants shared their interactions with their primary

care physician and care coordinator that entailed seeking resources and advice on

treatment options. The same group of participants expressed their experience with the

care coordinators was positive. The patients felt it was important to have a good

relationship with their primary care physician, nurses, and care coordinator to assist them

with their care. P9 acknowledged:

> I have to cooperate. I am the worst cooperator in the world but I have learned. I
> thought I was going to die and one day I said are you going to live and cooperate
> with these people and help yourself. A lot of it is I have to be aware of what is
> going on with me and then I can work with them. I have to be 100% involved.

Three participants indicated value in having staff know their names and not

needing to go through their primary care physician for questions, as P14 indicated, "My

direct access to my Health Care Home coordinator who can do a lot of things for me

without me contacting my PCP that changed." Health Care Home adds a care coordinator to the network of health care professionals that patients may seek information from who acts as a buffer between the patient and their primary care physician, as P15 acknowledged:

> I keep continuous interaction with my care coordinator because my doctor is so busy and I am glad to know they can pick up where we left off the last time I spoke to them.

Follow-Up

Care coordination requires the care team to follow-up with other health care professionals when the patient was referred for services. Only 27%, or 4 participants, referenced receiving care outside of the primary care clinic. Of the 4 participants, 2 participants stated the primary care physician or the care coordinator reference or discuss the details of these services. P6 described that the "primary care physician was inquisitive about the recent visit" and "personally discussed the situation with my specialist."

The follow-up to recent services is a component of comprehensive and continuity of care that are strongly correlated with quality care coordination. The primary care physician and the care team must remain current with the details of the patient's care in order to eliminate duplication of services and improve the effectiveness and efficiency of care (O'Malley & Cunningham, 2008).

Emotionally Connected

Approximately 60% of the participants were emotionally connected with Health Care Home, particularly when describing the spectrum of their health and how Health Care Home improved their care and outcomes. The participants were enthusiastic to

82

share their experiences, even while in the midst of transformational changes in their lives because of Health Care Home. P15 described:

> Knowing that the staff care for me and my health creates an emotional attachment to be a part of Health Care Home and I want to make a difference in my life because of this.

Patients who develop an emotional connection with their care create a sense of ownership and stake in the treatment outcomes. When a patient feels emotionally connected with their care, positive treatment outcomes may increase by up to 45% or more. Without an emotional connection, patients simply feel they are going through the motions in receiving their care (Chimhanzi, 2004).

Theme 3: Treatment Outcome

Patients with chronic conditions have shown to decline in functional and physical ability, increased likelihood and risk of developing future illnesses, higher rate of injuries, social isolation, cognitive impairment, and loss of independence (Fisher & McCabe, 2005). However, Health Care Home incorporates prevention, acute, and chronic care in the spectrum of care it provides. The purpose of Health Care Home is to improve patient experience and access to care through care coordination, regardless of which type of care the patient requires.

When the participants were asked about treatment outcomes, the majority indicated improvement in their personal and social life. On the other hand, 80% of the participants indicated improvement in their health. The prominent message from the participants demonstrated that as long as improvement occurred in personal, social, or own health that Health Care Home was a success.

83

Improved Outcomes

Approximately 87% of the participants indicated overall success with the program

and improvement in their personal and social life. The optimism clearly showed during

this stage of the interview process, as expressed by P9:

> I can walk down the stairs, I can go outside for a walk, play with my grandkids, I
> can breathe. I am not on a machine for anything else for a pacemaker. I have a life
> and I didn't have that before.

More importantly, some patients described better access to care, receiving the

right care at the right time, as P1 indicated:

> I got more immediate attention and I could get to the doctor so much quicker to
> see if some change should be made in the administration or the medical care I was
> receiving. Everything just happens so much faster and as a patient that is
> important. The one thing that irritates us as patients is that we understandably
> have difficulty getting in on a spur of the moment; they have so many other things
> to do. I can get my medical care attention so much quicker. I think that is the one
> word that goes with Home Care and that is quick attention.

In terms of health outcomes, P6, P10, and P12 indicated receiving less care

because they are healthier now:

> The better I felt the less I needed them so they backed off and they would check
> with me every once in awhile but not every week or every day or things like that.

> I don't have to go in to the clinic as much, it has changed where I have to go in
> probably once a week and now I just have to go in once a month or less. I don't
> have to take as many meds as I used to. I got a lot better and the levels in my
> blood got better so I was able to get off of a lot of them.

> More optimistic about my lifespan and comfort level. I have quite a few medical
> issues and knowing [clinic] is able to take care of me I am very pleased to be
> where I am at.

However, two participants described not noticing any success or improved health

because of the program, as P15 expressed:

The care in the health care home model has not changed any particular part of my life, other than having a subconscious feeling that I am well taken care of now that I am a health care home patient.

Some participants offered suggestions to improve the program, including

comments from P13 and P15:

The patient needs to be more aware of what it is all about, step by step to get the word out.

More explanation when enrolling patients would be ideal to let the patient know truly what the program is and how it can benefit them and their care. The program was casually discussed with me and I figured I would give it a shot. [Clinic] should really be aggressive in marketing this program to patients to get the word out as there are a lot of people who could utilize this service and do not even know it exists.

Feeling Valued/Recognized

Integral components of the Health Care Home model to treat chronic patients

include support of patient self management. Previous studies have shown that patients

who are held accountable and are integrated within their treatment improve their

outcomes when treating chronic conditions, such as diabetes and cardiovascular disease

(Bodenheimer, Wagner, & Grumbach, 2002). Patients value the coordination of care and

interaction between their primary care physician and specialists (Laine, Davidoff, &

Lewis, 1996; Anderson, Barbara, & Feldman, 2007).

The participants shared a sense of feeling valued and recognized while

participating in Health Care Home. In fact, 80% of the participants mentioned this

specifically during their interview. Engaging a patient in their care is one method to

achieving successful health outcomes (Bodenheimer, Wagner, & Grumbach, 2002), but

20% of the participants shared the same feeling of "going through the motions similarly

to the care I received before I was a Health Care Home patient", according to P3.

However, a number of the participants shared insightful experiences with Health Care

Home, as P6 and P11 detailed:

> She (care coordinator) has helped me in many ways. First, educationally; letting
> me know services and facilities that were available and psychologically of being a
> supportive service and being there when I needed her.

> I would not anticipate receiving care outside of Health Care Home, except more
> deliberately and more consciously by putting me in the right place without having
> to bounce around.

> P9 shared the moment when she realized she recognized the value of Health Care

Home:

> When they call, they know you are going to cooperate so they are there with it.
> Sometimes, I just didn't bother. They would give me the paperwork and I just
> tossed it as I thought it was silly, this is stupid, I don't need this. I do not know
> when I got smart. I just know one day I called in and the lady I called and said
> "what do you need from me"? I was dumbfounded, like she was really listening. I
> went from having no help at all and calling in and getting nowhere and calling in
> now and they take you serious. I cannot see myself receiving care in any other
> system.

Sharing Experience

About 73% of the patients shared their experiences with other family members

and friends because of their positive experience with Health Care Home. Many of these

participants advocate others to participate in the program, including P3, P9, and P13:

> I think probably the only ones that I have told are my family, my immediate
> family and my brothers and sisters and brother-in-laws and sister-in-laws. We
> talk about how you are doing and you respond by saying. I think I bragged up my
> home care person quite a bit because she provided immediate care and caring
> care. She gave you the impression she really cared to do something for you.

> If I call in they are there to help me solve it. I have heard others say the same
> thing. I have told others to get with the program because they will help you. I tell
> that to everyone, all of my friends and everyone knows I would not be here if it
> wasn't for the people who stuck by me, answered my questions. It all works
> together.

I let everyone know what a good program we have here at the [clinic].

Other participants simply let others know they are in Health Care Home so they are familiar with the program and to develop a comfort level with significant others, as P1 pointed out:

> My son will be eventually someday power of attorney and taking care of us. If we need it and just wanted to let him know that I am participating in this. Although, I do not know that he fully understand what it was, at least I thought I would let him know so there was some familiarity with it if that should come up.

The four participants who did not share their experience with Health Care Home stated they do not feel their health or participation in Health Care Home is other people's business. P4 indicated the idea of sharing his experience would be worthwhile, especially to his family, but never considered it.

Compassionate Care

Compassionate care was vibrantly discussed by 60% of the participants and the experiences were derived from interactions with the care coordinator. Some participants, such as P5, expressed that compassionate care is "Getting an answer, I think that is compassionate. Taking time out of what she is doing and going to find my answer" while others had a much more detailed response, as P6 explained:

> Compassionate care to me means more than a person going through the motions that indicates that they really care about you individually and are concerned about her welfare and what they can do for you and not just going through the list of to-do things, but to individualize the need of care that is available and what she would recommend. I know when she does that she is recommending it for me and not just a person so many years old.

More importantly, a number of the participants expressed that simply having someone available to answer questions is compassionate. P9 expressed sincere appreciation for the care coordinator:

> They are awesome. When I die I hope people say I am as compassionate as the people I deal with in Health Care Home. They sincerely care. They are not just there taking home a paycheck. They listen to what you say. It makes you feel better and if you feel better about your care you will get better. Just that the people that go into the field to take care of us every day, they are the best. Do not give up on the patient. The kindness and compassion they show are so important. It saves lives.

Appreciation

Almost all of the patients, 93%, discussed how much they respected or appreciated being a Health Care Home patient. As P3 commented:

> The only thing I can speculate is that because of getting more immediate attention I feel better quicker and that is important to feel that something is being done and that happens through Home Care. I can't emphasize enough how much that means to me as a patient. I don't like it when the doctor says I can see you in 2 weeks. If I am sick now I want to see someone who can give me some attention now.

At the same rate, 93% of the participants directed this appreciation towards the care coordinator, which P3 and P7 clearly describe:

> I just know that the one that worked with me provided so much care that I can't see where they could treat very many patients with the staff they have.

> There is a strong element of respect on her part for my issues, whether they are grounded or ungrounded. She does not judge.

Continuous Care

Evidence supports that the medical home model develops a stronger relationship between the primary care physician and their patient, which leveraged the ability to

improve the quality of care and reduce spending. Additionally, a primary determinant of patient satisfaction is continuity of care (Fan, Reiber, Burman, McDonell, & Fihn, 2005).

Patient satisfaction is directly correlated to the continuity of care they receive (Babbott et al., 2007). Patients who have medical home experience reported a higher continuity of care (Christakis, Mell, Koepsell, Zimmerman, & Connell, 2001), missed days of work, stress, and satisfaction (Palfrey et al., 2004).

When the participants were asked about their continuous care in Health Care Home, amazingly 53% responded that it improved since joining the program. A number of the participants were quite attentive to this aspect of Health Care Home, particularly P5 and P14:

> She went out of her way to write me a thing to take along with me in my purse that was nice. Something I could take with me in case I got sick somewhere and they knew all my medical history, which was nice. If I am in North Dakota and get sick, I can bring this paper with me and they know all the antibiotics I am on and all the diagnoses.   It makes things easier.

> I think my physician and my coordinator, my nurse, but probably particularly my coordinator is more attentive to my overall picture. If I call her, I can tell her what is going on with me and a particular issue and it would not be a surprise to her unless it was new. I do not have to start from the beginning every time I talk to her. It is much more continuous and very responsive. I have medical conditions that the physicians would refer to as comorbid but I have some sort of systemic type things, allergies and upper respiratory, when really all I need a prescription of the same stuff I had last time. I am not a young man and I know what my condition is and she knows what it is from my chart and past experience and from that sense the continuousness is improved.

P9 succinctly summarized the benefit of continuous care as "I can call my doctor without starting from scratch every time. It makes things easier and efficient." The remaining 47% of the participants felt the continuous care was the same as before becoming a Health Care Home patient. Early and continuous screening is important to

incorporate in the medical home to address health care needs as early as possible. This

approach allows the patient and their family to receive appropriate services, including

continuous screening, prevention, and wellness that may interfere with the patient's well

being and development (Sia, Tonniges, Osterhus, & Taba, 2004).

Comprehensive Care

Comprehensive care is defined as providing whole person oriented care across the

spectrum of health, including preventive, acute, chronic and end of life care (Rittenhouse

et al., 2008). Unfortunately, only 33% of the participants made references to

comprehensive care while participating in Health Care Home. This may be attributed to

most of the patients receiving care for their chronic condition through their primary care

physician and there was no need to seek care outside of primary care. P2 expressed in

detail the comprehensive care he experienced:

> Interest in my general health, interest in the problems I have at the present time
> and then there is good follow-up on treatment and I have a request or mention that
> I have noticed a change in my health or have had some experiences the doctor
> will check my medication list to see if there was a collusion of meds that caused
> my problems and sometimes he changes it. They seem to cover all the aspects of
> care so I can't see that I can recommend any improvements.

However, some of the participants expressed strong opinions for improvement in

this area, including P14:

> Probably a little more proactive contact from the care coordinator checking in via
> the phone. I do not want to represent that as a particular issue where I am
> concerned because my health has been well managed and well taken care of but if
> you asked for anything that might be the case. My wife and I both have friends
> who choose to go to the Mayo Clinic because of that team approach that they use
> there. You walk in there and you have 3-4 people around you and if someone
> isn't there they get on the line. There is this immediate all encompassing,
> comprehensive evaluation of whatever it is that is touching on what you are there
> for and St Cloud has, in my opinion, a very fine medical community but it could
> do a lot better on that subject.

Summary

The participants responded to the research question, "*How do patients understand coordinated medical treatment within the Minnesota medical home model?*" was explored in this chapter. Three themes emerged from the data analysis and allowed participants to share their experiences and understanding of coordinated medical treatment in the medical home model. The participants' responses were recapitulated guided by the research focus areas: (a) reflections of a patient in medical home model, (b) experience and understanding of medical home model, (c) coordination of care, (d) treatment outcome, and (e) care coordinator influence/support. Chapter 5 will present the larger meaning of the results.

Reflections of a Patient in Medical Home Model

The general consensus of the medical home model based on the description offered by 60% of participants was "patients, providers, and nursing staff involved in the care collaborate on how best to treat the patient." The participants' collective responses support the definition provided by Agency for Healthcare Research and Quality (AHRQ) (2010). However, the key concepts lacking from participant descriptions include communication, access to care, comprehensive care, continuity of care, and family centered care.

Experience and Understanding of the Medical Home Model

Approximately 40% of the participants were confused with the term as related to home health care. The comments from 53% of the participants shared an underlying issue with a clear definition of what Health Care Home is and how it works. When clarification was made regarding Health Care Home, 73% of the participants understood

91

the meaning and purpose of the Health Care Home model. Health Care Home was defined as an approach to provide accessible, coordinated, comprehensive, collaborative, and family centered care that is continuously improved (AHRQ, 2010).

The support from health care professionals ranked the highest in the code set with 100% of the participants referencing either their primary care physician or care coordinator in their conversation. When the participants were asked about how they learned about Health Care Home, 87% of the participants responded that their primary care physician recommended the program. Only 40% of the participants referenced interaction with their primary care physician while being a Health Care Home patient. Of those 6 participants, 100% stated their point of contact is the care coordinator because they know their primary care physician is "too busy to handle all of my questions," as three of the participants mentioned.

Approximately 67% of the participants recognized how Health Care Home is the starting point of accessing care and 27% mentioned their experience is much different from the typical routine of calling to schedule an appointment before receiving care. In responding to new learning experiences, 100% of the participants mentioned that participating in Health Care Home was an experience they enjoyed. Care coordination is fundamental to successful implementation of Health Care Home and 73% of the participants were able to describe in detail their experiences first hand. The Health Care Home model is led by a physician who provides continuous and coordinated care as needed while learning about the patient's illness, supporting the patient's decision for treatment, and maintaining a relationship with the patient (Rosenberg, 2009).

Coordination of Care

Coordination of care is considered to be the most critical element in the Health Care Home Model (Rittenhouse et al., 2008). A coordinated care model is transparent in gathering information to facilitate the management of chronic conditions and provides the practice with an opportunity to improve the health of a patient (Babbott et al., 2007). When participants were asked to share their understanding of Health Care Home, 73% referenced a similar definition. The underlying theme of the responses was correlated to accessing other services in the system.

When participants were asked about their access to care, 87% of the participants responded they were able to access the right amount of care at the right time being a Health Care Home patient. However, the same participants stated there were no changes to access to care even after becoming a Health Care Home patient. Only 40% of the participants referenced communication as a key element in receiving care in Health Care Home. When patients described their engagement in Health Care Home, the responses varied. Nine patients, or 60%, described little to no engagement in managing their own care.

Approximately 87% of the participants shared their interactions with their primary care physician and care coordinator that entailed seeking resources and advice on treatment options. Care coordination requires the care team to follow-up with other health care professionals when the patient was referred for services. Only 27%, or 4 participants, referenced receiving care outside of the primary care clinic. Approximately 60% of the participants were emotionally connected with Health Care Home, particularly

when describing the spectrum of their health and how Health Care Home improved their care and outcomes.

Treatment Outcome

The evidence supports that quality medical care homes have the potential to improve patient satisfaction and promote healthy outcomes (Kilo and Wasson, 2010; Rosenthal, 2008). The outcomes of the study may be predictive of the effects a medical home may have on adult patients. When the participants were asked about treatment outcomes, the majority indicated improvement in their personal and social life. On the other hand, 80% of the participants indicated improvement in their health. The prominent message from the participants demonstrated that as long as improvement occurred in personal, social, or own health that Health Care Home was a success.

Approximately 87% of the participants indicated overall success with the program and improvement in their personal and social life. The participants shared a sense of feeling valued and recognized while participating in Health Care Home. In fact, 80% of the participants mentioned this specifically during their interview. About 73% of the patients shared their experiences with other family members and friends because of their positive experience with Health Care Home.

Compassionate care was vibrantly discussed by 60% of the participants and the experiences were derived from interactions with the care coordinator. Almost all of the patients, 93%, discussed how much they respected or appreciated being a Health Care Home patient. When the participants were asked about their continuous care in Health Care Home, amazingly 53% responded that it improved since joining the program.

94

Unfortunately, only 33% of the participants made references to comprehensive care while participating in Health Care Home.

Care Coordinator Influence/Support

A key figure throughout the discussions with the participants is the care coordinator. The general consensus was 67% of the participants communicate primarily through the care coordinator to access care or information. When the participants were asked about how care coordination is encouraged in Health Care Home, 53% of the participants referenced the care coordinator assisted them with setting up appointments, answering medication questions, and accessing other resources to support their care. An impressive 80% of the participants stated the care coordinator maintained continuous care with the patient. Approximately 87% of the participants mentioned the care coordinator provided compassionate care. Developing long term relationships and personalized care is rewarding for the patient as well as the care coordinator (Babbott et al., 2007).

<div align="center">

Conclusion

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This chapter explored 15 participants' lived experiences of coordinated medical treatment in the Minnesota medical home model. The data collection and analysis contributed to factors in the medical home including understanding the model, coordination of care, treatment outcome, and care coordinator influence/support.

Reflections of a Patient in Medical Home Model: Approximately 60% of the participants concluded that the medical home model is the collaboration between patients, providers, and nursing staff focused on treating the patient. The consensus lacked defining other critical components, including communication, access to care, comprehensive care, continuity of care, and family centered care (AHRQ, 2010).

<div align="center">95</div>

Experience and Understanding of the Medical Home Model: A number of the participants, 73% understood the meaning and purpose of the Health Care Home model. All of the participants referenced their primary care physician or care coordinator in assisting in their medical care. However, only 40% of the participants referenced interaction with their primary care physician while being a Health Care Home patient. Six participants attributed the interaction was because the "physician is too busy to handle my questions." Approximately 73% of the participants were able to describe the coordination of care first hand while in Health Care Home.

Coordination of Care: Coordination of care is considered to be the most critical element in the Health Care Home Model (Rittenhouse et al., 2008). The underlying theme from participants was correlated to accessing other services in the system. Approximately 87% of the participants responded they were able to access the right amount of care at the right time being a Health Care Home patient. However, the same participants stated there were no changes to access to care even after becoming a Health Care Home patient.

Treatment Outcome: The evidence supports that quality medical homes have the potential to improve patient satisfaction and promote healthy outcomes (Kilo and Wasson, 2010; Rosenthal, 2008). Nearly 87% of the participants indicated overall success with the program and improvement in their personal and social life. The prominent message from the participants demonstrated that as long as improvement occurred in personal, social, or own health that Health Care Home was a success.

Care Coordinator Influence/Support: Approximately 67% of the participants communicated primarily through the care coordinator to access care or information.

When the participants were asked about how care coordination is encouraged in Health Care Home, 53% of the participants referenced the care coordinator assisted them with setting up appointments, answering medication questions, and accessing other resources to support their care. An impressive 80% of the participants stated the care coordinator maintained continuous care with the patient.

Chapter 5 will present the analysis and interpretation of the findings from the 15 participants. The theoretical framework offered by Gharajedaghi's system theory will be reviewed to compare and contrast to findings in this study. This chapter will discuss the meaning and implications of the results, study limitations, future research recommendations and conclusions.

CHAPTER 5. DISCUSSION, IMPLICATIONS, RECOMMENDATIONS

This exploratory qualitative inquiry study builds on the current understanding of coordinated medical treatment in the medical home model. The findings urge stakeholders to explore transformational change in the health care industry (Scharmer, 2009). Chapter 5 summarizes and discusses the findings and conclusions of the study and provides recommendations for future research.

Summary of the Results

This study explores the patient understanding of coordinated medical treatment in the Minnesota medical home model. The understanding sought was important to the transformative change behind coordination of care in health care (Gharajedaghi, 2011). Patients are developing more chronic conditions that require a trained physician to manage complex patients, which requires a systemic approach through means of care coordination (Anderson, 2002; Wu & Green, 2000).

The documentation of the patient's understanding of coordinated medical treatment through the medical home model adds significant amount of insight to the field of organization and management. Literature on medical homes is limited from the patient's perspective and the majority is quantitative. This exploratory qualitative inquiry captured the perspective of the patient's understanding and experience of medical homes through the qualitative perspective to contribute to the scientific body of knowledge on medical homes. The inquiry explored the meanings patients attach to their medical home

experiences and their perspectives to understand the phenomenon (Caelli, Ray, & Mill, 2003; Creswell, 2009; Taylor & Bogdan, 1998).

This study uncovered topics from literature review such as coordinated medical treatment, continuous care, comprehensive care, and family centered care. Gharajedaghi's (2009) systems theory guided the study in the understanding of interactions among the parts of the system to understand the whole system. There were no new findings published during the completion of the dissertation exploring patient understanding of coordinated medical treatment in the medical home model. This exploratory qualitative inquiry fills a gap in literature, benefiting scholars and practitioners in developing a deeper understanding of this phenomenon.

The exploratory qualitative inquiry methodology was selected for this study to allow 15 participants share their reflections and perspectives of coordinated medical treatment in a medical home model. The data was collected via semi-structured phone interviews with each patient. The responses provided rich detail and descriptions describing the patient perspective into coordinated medical treatment in a medical home model.

Chapter 5 begins with a brief summary of the findings in response to the research question, "*How do patients understand coordinated medical treatment within the Minnesota medical home model?*" and guided by the research focus areas: (a) reflections of a patient in the medical home model, (b) experience and understanding of the medical home model, (c) coordination of care, (d) treatment outcome, and (e) care coordinator influence/support.

Reflections of a Patient in Medical Home Model: Approximately 60% of the participants concluded that the medical home model is the collaboration between patients, providers, and nursing staff focused on treating the patient. The consensus lacked defining other critical components, including communication, access to care, comprehensive care, continuity of care, and family centered care (AHRQ, 2010).

Experience and Understanding of the Medical Home Model: A number of the participants, 73% understood the meaning and purpose of the Health Care Home model. All of the participants referenced their primary care physician or care coordinator in assisting in their medical care. However, only 40% of the participants referenced interaction with their primary care physician while being a Health Care Home patient. Six participants attributed the interaction was because the "physician is too busy to handle my questions." Approximately 73% of the participants were able to describe the coordination of care first hand while in Health Care Home.

Coordination of Care: Coordination of care is considered to be the most critical element in the Health Care Home Model (Rittenhouse et al., 2008). The underlying theme from participants was correlated to accessing other services in the system. Approximately 87% of the participants responded they were able to access the right amount of care at the right time being a Health Care Home patient.

Treatment Outcome: The evidence supports that quality medical homes have the potential to improve patient satisfaction and promote healthy outcomes (Kilo and Wasson, 2010; Rosenthal, 2008). Nearly 87% of the participants indicated overall success with the program and improvement in their personal and social life. The

prominent message from the participants demonstrated that as long as improvement occurred in personal, social, or own health that Health Care Home was a success.

Care Coordinator Influence/Support: Approximately 67% of the participants communicated primarily through the care coordinator to access care or information. When the participants were asked about how care coordination is encouraged in Health Care Home, 53% of the participants referenced the care coordinator assisted them with setting up appointments, answering medication questions, and accessing other resources to support their care. An impressive 80% of the participants stated the care coordinator maintained continuous care with the patient.

<div align="center">Discussion of the Results</div>

Experience and Understanding of the Medical Home Model

Health Care Home was defined at the beginning of each interview as an approach to provide accessible, coordinated, comprehensive, collaborative, and family centered care that is continuously improved (AHRQ, 2010). The medical home model is led by a physician who provides continuous and coordinated care as needed while learning about the patient's illness, supporting the patient's decision for treatment, and maintaining a relationship with the patient (Rosenberg, 2009). When the participants shared their understanding of Health Care Home, 40% of the participants were confused with the term as related to home health care, which provides home services. The comments from 53% of the participants shared an underlying issue with a clear definition of what Health Care Home is and how it works.

Approximately 93% of Americans prefer a single place or doctor to provide primary care with care coordination, but only half experience this model of care (Schoen

et al., 2007; Stremikis, Schoen, & Fryer, 2011). When the participants were asked about how they learned about Health Care Home, 87% of the participants responded that their primary care physician recommended the program. Only 40% of the participants referenced interaction with their primary care physician while being a Health Care Home patient. The findings from this study support the shift in patient experience from care being delivered by the physician to the care coordinator.

Collaboration in Health Care Home is defined as understanding the goals, roles, communication and decision making across people and sites (Rittenhouse et al., 2008). Collaboration is fundamental to successful implementation of Health Care Home and 73% of the participants were able to describe in detail their experiences first hand. Only two participants referenced communication between their primary care physician and other health care professionals when assisting in their care.

Coordinated Medical Treatment

Coordination of care is considered to be the most critical element in the medical home model (Rittenhouse et al., 2008). The participants in the study support the definition of coordinated medical treatment as defined by IOM (1996) as patient's care across providers and settings according to the preference of the patient and their family. As participants in the medical home model, 73% described a similar definition of coordinated medical treatment while participating in the medical home. The underlying theme of the responses was correlated to accessing other services in the health care system.

These results support the notion that patients understand care coordination while participating in the medical home and the belief that patients must be engaged with their

care to achieve treatment success. Coordination of care was rated higher by patients who played an active role in their management of care (O'Malley & Cunningham, 2008). However, the commitment and cohesion of the team, individually and collectively, is what sets the care coordination practice apart from any other care model. Commitment is the willingness to make a promise with no expectation of return (Block, 2008, p. 71). This theory was supported when participants explained their interactions with the care coordinator and being actively involved in their own care assisted in achieving treatment success. The unconditional promise to the patient is a unique element that brings the team together to fulfill an obligation (Block, 2008).

Unfortunately, the study was not able to dispel if patients with Medicare and Medicaid coverage and over 65 years of age rated care coordination higher than patients with only Medicare coverage (O'Malley & Cunningham, 2008). When patients described their engagement in Health Care Home, the responses varied. Nine patients, or 60%, described little to no engagement in managing their own care. Literature outlines the purpose of Health Care Home is to focus on the patient, provide treatment options, and allow the patient to decide the treatment method (Rittenhouse et al., 2008).

Treatment Outcome

Patients with chronic conditions have shown to decline in functional and physical ability, increased likelihood and risk of developing future illnesses, higher rate of injuries, social isolation, cognitive impairment, and loss of independence (Fisher & McCabe, 2005). When the participants were asked about treatment outcomes, the majority indicated improvement in their personal and social life. On the other hand, 80% of the participants indicated improvement in their health. The prominent message from

103

the participants demonstrated that as long as improvement occurred in personal, social, or own health that Health Care Home was a success.

Approximately 87% of the participants indicated overall success with the program and improvement in their personal and social life. Previous studies have shown that patients who are held accountable and are integrated within their treatment improve their outcomes when treating chronic conditions, such as diabetes and cardiovascular disease (Bodenheimer, Wagner, & Grumbach, 2002). The participants shared a sense of feeling valued and recognized while participating in Health Care Home. In fact, 80% of the participants mentioned this specifically during their interview. Engaging a patient in their care is one method to achieving successful health outcomes (Bodenheimer, Wagner, & Grumbach, 2002), but 20% of the participants shared the same feeling of "going through the motions similarly to the care I received before I was a Health Care Home patient", according to P3.

Care Coordinator Support/Influence

Evidence supports that the medical home model develops a stronger relationship between the primary care physician and their patient, which leveraged the ability to improve the quality of care and reduce spending. Additionally, a primary determinant of patient satisfaction is continuity of care (Fan, Reiber, Burman, McDonell, & Fihn, 2005). Patient satisfaction is directly correlated to the continuity of care they receive (Babbott et al., 2007). The consensus from the participants is being supported by a health care professional was key to access to care and treatment success. The study indicates that patients have developed a strong rapport and trust with their care coordinator who have

provided quicker access to care and information than before the patient enrolled in Health Care Home.

Approximately 67% of the participants communicated and interacted primarily through the care coordinator to access care or information. The results of the study clearly indicate that some participants were confused with what Health Care Home is, but most of the participants understood how it works and the vital role the care coordinator plays in accessing care and information. As one participant (P7) reflected on his experience with the care coordinator as an, "in-house advocate within [clinic], it is a point I can go as she has access to all the providers."

Limitations

The study utilized exploratory qualitative inquiry, which poses two limitations of this study: generalizability and longitudinal effects. The phenomenon described in the study with a sample size of 15 participants may not be transferable to all clinics and medical home models. The design of the research was not intended to be applicable to be representative of a wider population (Lincoln & Guba, 1985; Miles & Huberman, 1994; Swanson & Holton, 2005). It may be possible that a larger sample size, different clinic, or different medical home models may influence the results. Qualitative research requires other researchers to legitimize the purpose, method, analysis and results as being systematic and methodological with similar results (Giorgi & Giorgi, 2003; Swanson & Holton, 2005).

The study presented several limitations, including the qualifying parameters for the participants and the methodology used in the study. To qualify to participate in the study, the participant must be at least 18 years of age, primary language is English, a

patient of the Minnesota clinic Internal Medicine department, been enrolled in health care

home for at least 6 months, not diagnosed with a mental health condition, and diagnosed

with a chronic condition. The summation of these qualifications narrows the scope of the

patients eligible for the study. However, it is possible that using differing qualifying

circumstances in different geographic areas may influence the results.

The participant's age range were from age 31 to age 93, which 69 being the average age

of the sample group. The age of the patient was a self-reported number during the

interview process from each patient. The estimation of at least 6 months experience in

the health care home model may have been sufficient for an initial inquiry into patient

understanding of coordinated medical treatment. Each qualifier to be eligible to

participate in the study may hinder the findings and results of this study. Qualitative

research is based on other researchers being able to use similar methods and models to

yield the same results (Giorgi & Giorgi, 2003; Swanson & Holton, 2005). The

transferability and generalizability of this study is minimal (Lincoln & Guba, 1985; Miles

& Huberman, 1994; Swanson & Holton, 2005).

Implications

The study has several implications as a result of the findings:

1.   Most of the participants embraced the Health Care Home program when

        initially discussed by their primary care physician.

2.   The majority of patients in Health Care Home understand what the model

        of care is, but 40% were initially confused with the purpose and roles of

        the Minnesota Health Care Home.

3. Most of the participants referenced the care coordinator as being a key

member of the care team in assisting with access to care and information.

4. Most of the patients indicated little to no engagement in managing their

care since joining Health Care Home.

5. Participants perceived lack of coordination of care and collaboration with

other parts of the health care system.

6. Approximately 87% of the participants indicated improvement in their

personal and social life since joining Health Care Home.

7. Participants demonstrated that as long as improvement occurred in

personal or social parts of their life that Health Care Home was a success.

Recommendations for Further Research

This study explored patient understanding of coordinated medical treatment in the

Minnesota medical home model. Researchers should consider the findings of the study

and expanding the parameters in the following areas: (a) sample group with broader size

of patients, length of enrollment, and department, (b) other types of health care facilities,

and (c) other types of medical home models.

Future researchers may also want to consider minorities and non-Caucasian

participants for the sample group. The race of the patient was self-reported during the

interview process. The sample size was designed for 20 participants; however, only 15

participants participated. Therefore, replicating the study with a larger sample size may

expand the generalizability of the findings. Future studies may provide further details in

to patient understanding of coordinated medical treatment in medical homes as new care

delivery model emerges and transforms the aspect of "care coordination" in medical care

throughout the care continuum in patient care from initial entry to departure from the system.

Conclusions

The exploratory qualitative inquiry method was used to explore the question, "How do patients understand coordinated medical treatment success within the Minnesota medical home model?" was thoroughly answered through the lived experiences of 15 patient participants. The findings were consistent with various literature on coordinated medical treatment, medical homes, and systems thinking. The data collection, coding and analysis process revealed contributing factors impeding patient understanding of the medical home model, coordinated care, treatment outcomes, and the importance of the care coordinator support and its influence.

Some of the interesting findings in the study include patients vaguely understanding what Health Care Home is, but have a clear understanding of what coordinated medical care is, as defined by the IOM (1996). The majority of the participants embraced the Health Care Home model who were referred to the program by their primary care physician. The participants feel valued and appreciated while receiving compassionate care from their care coordinator, but perceive a lack of coordination and collaboration with different parts of the health care system.

The results of the study are significantly related to systems theory and how the system must communicate, collaborate, and coordinate patient care leveraging parts of the system to deliver high quality care. The results of the study reinforce the urgency of transformational change in health care; clearly defining how care is delivered to patients (Scharmer, 2009). The research further adds to Gharajedaghi's systems theory;

highlighting the need for health care to develop a systemic process of delivering care to patients; using a full integration of ways and means; while eliminating the blind spots that now make patients coordinate their own care in a dysfunctional health care system..

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