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Toward Excellence: Exploring Leader Strategies in Chronic Wound Care Centers

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This is to certify that the doctoral dissertation by

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2018

Abstract

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Geraldine Faye Rosol

MHA, University of Phoenix, 2006

BS, University of Maryland, 1977

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Health Care Administration

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Abstract

The number of chronic wounds is rising in the United States, and health leaders face the economic and health burdens these wounds pose to the U.S. health care system. Many investigators have documented the importance of leadership in promoting excellence and reducing health care costs in chronic disease. Yet, the literature lacks information regarding leader strategies used to promote wound treatment cultures of excellence directed toward improved quality and reduced health costs. This study examined leader strategies used to promote excellence in chronic wound treatment to address the problem of the economic and health burdens associated with chronic wounds. The full range leadership theory (FRLT), concepts of patient-centered care, and the disease-specific centers of excellence (COE) model served as the framework for this study. The research questions focused on identifying key leader strategies used to promote quality and excellence in chronic wound centers. Sources of information used in this case study included a questionnaire, company documents, and news articles. A sample of 30 wound COE leaders within the same company were randomly selected. Open coding and thematic data analysis of participant questionnaires generated themes of quality, communication, patient-centeredness, leadership, work environment, and team work. The study results indicated many of the leaders exhibited leadership styles and behaviors consistent with the FRLT; moreover, the use of patient-centered concepts fostered cultures of excellence. This study is important to health leaders and contributes to positive social change by identifying leadership strategies that improve health outcomes, increase quality of care, and reduce health costs associated with chronic wounds.

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Dedication

I want to thank my husband Paul for walking beside me in this journey. Your unfailing love and support exemplified the character of our Lord and Savior Jesus Christ. Thank you for the early morning cups of coffee, and the late night back rubs. I love you.

A special token of gratitude goes out to my granddaughter Alexis Hannah who believed in me when I struggled believing in myself; you listened to my doubts and provided prayer and encouragement. Thank you sincerely for your belief in me. A saying in our family is “There are no quitters.” You helped me to honor this motto.

To my friends who supported me during this journey, thank you. Many of you were prayer warriors who continuously kept me in prayer. A special thank you goes out to my dear friend Patricia Funk; your words of encouragement and congratulatory remarks at each milestone kept me moving forward.

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For Dr. Richins, thank you for the support and advice in guiding me through this process. Thank you so much for demonstrating patience with my technical issues. The journey was sometimes easy and other times difficult, yet you helped me to achieve my goal. When the process became difficult or confusing, you provided clarity and offered words of encouragement.

A special acknowledgement goes to Dr. Lawson-Dixon for your consistent availability and methodological input during my data research stage. Thank you for your personal attention and kindness.

I acknowledge the Lord Jesus Christ as my Savior, Sustainer, Enabler, and Guide through this dissertation journey. Without His unfailing love, I could not have finished this task. Many prayers were spoken to the Father on my behalf by dear brothers and sisters in Christ. With a grateful heart, I can say “It is well with my soul”.

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Chapter 1: Introduction to the Study

Introduction

The number of chronic wounds in the United States is escalating and affects more than five million individuals annually (National Institutes of Health, 2014; Yim, Sinha, Diaz, Kirsner, & Salgado, 2014). Nonhealing wounds are costly to treat (Augustin et al., 2015; Carter, 2014; Ennis, Hoffman, Gurtner, Kirsner, & Gordon, 2017; Shannon, Hawk, Navaroli, & Serena, 2013) and often result in increased patient mortality and morbidity (Kirsner, & Vivas, 2015; Piccin et al., 2016; Powers, Higham, Broussard, & Phillips, 2016). Each year, treating chronic wounds cost billions of dollars (Ennis et al., 2017, Nussbaum et al., 2018)). Data indicate the number of wounds requiring treatment is growing annually by nearly 15% (Shared Health Services, Inc., 2017). According to Matrix Health Services, LLC (2014), 2% of the U.S. population has a chronic wound at any given time. Chronic wounds pose a significant burden to patients, medical providers, and the global health care system (Yim et al., 2014). Chronic disease management is an increased focus of health care leaders in the United States as the nations' population ages in record numbers (Attieh et al., 2014; Nussbaum et al., 2018; Wholey et al., 2014).

There is a need to know more about how health care leadership affects quality improvement in outpatient wound care centers, and what strategies leaders might use to influence a culture of excellence. Siracusa et al. (2014) demonstrated the importance of effectual leadership skills in improving clinical outcomes for patients suffering with a chronic disorder. Oschman (2017), and Studer, Hagins, and Cochrane (2014) illustrated the importance of leaders embracing effective strategies to inspire staff toward a culture

of long-term excellence, which is vital for successful fiscal management. Declaring that health care leaders play a vital role in the patient experience and quality improvement programs, McInnes, Phillips, Middleton, and Gould (2014) identified a need for the following leader strategies: leaders at all levels needed to spearhead culture change, provision of open communication and continuing education, improvement strategies tailored to specific situations, and leading by example to foster shared mindfulness of the importance of best practice.

In this qualitative study, I focused on leadership strategies that cultivate cultures of excellence in outpatient chronic wound centers and addressed the under-explored topic of leader strategies in fostering wound care centers of excellence. The concept of patient-centered care (American College of Wound Healing and Tissue Repair & The Angiogenesis Foundation [ACWHTR], 2015; Scholl, Zill, Härter, & Dirmaier, 2014), and the model of disease-oriented centers of excellence (COEs) as depicted by Eastman (2016), Kelly and Chinta (2015), Kelly, Chinta, and Privitera (2015), Mehrotra et al. (2013), Santos-Moreno et al. (2015) guided this study. Additionally, the full range leadership theory (FRLT) functioned as a channel for recognizing effective leader style in fostering cultures of excellence. The FRLT is composed of nine elements signifying three wide-ranging sets of behaviors of transformational, transactional, and laissez-faire leadership (Avolio & Bass, 1995; Avolio & Bass, 2004). Curtis (2018) suggested the FRLT and other approaches to leadership often arise from different theoretical traditions but may intersect in concept and practice. Moreover, the FRLT serves as a framework to

assess transformational, transactional, and laissez-faire leadership styles (Samad, 2015; Witges & Scanlan, 2014).

Disease specific COEs provide a process for improving patient outcomes while decreasing health care costs (Kelly, Chinta, & Privitera, 2015; Mehrotra et al., 2013; Woods et al., 2018). Health care consumers and leaders advance social change by demanding innovative processes that tackle healthcare inequities. This research contributes to positive social change by identifying leadership strategies that foster a culture of excellence and improve the quality of health care. Goodman, Posner, Huang, Parekh, and Koh (2013) listed age distribution and population growth trends in the United States as contributors to the increase in chronic diseases, which jeopardize the nation's public and financial health. Improved quality and organizational performance in health care systems contributes to the social welfare of people and communities (Elrod & Fortenberry, 2017). Improved quality and organizational performance in outpatient chronic wound centers may improve the health of the population in the United States. Enhancing the patient care experience may improve the health of the United States population through decreased mortality and morbidity rates, and reduced health care costs (Montori, Kunneman, Hargraves, & Brito, 2017; Weston & Roberts, 2013). The provision of effectual patient-centered health care for the wound care population may improve human conditions and have a positive social impact. Wound center leaders who focus on a patient-centered culture of excellence may contribute constructively to the social health of individuals and populations by speaking to the broader health care determinants of population health in relation to chronic disease (Institute for Healthcare

Improvement, 2017a). Chapter 1 includes a description of the background of the study, the problem and the purpose of the study, the research questions that guided the study, the conceptual framework and the nature of the study, and the assumptions, scope, and limitations of the study.

Background

For health care organization leaders, the shift toward patient-centered quality improvement in health care is swiftly becoming the standard (Avci, 2017; Weston & Roberts, 2013). With the increasing prevalence of chronic diseases, health care leaders face economic and social burdens of advancing value-based care. Augustin et al. (2015), Brown (2013), and Shannon, Hawk, Navaroli, and Serena (2013) discussed the impact of chronic wounds on the patient and health care system and identified clinical outcomes, financial implications, and quality of life impairments as challenges in the treatment of chronic wounds. The American College of Wound Healing and Tissue Repair & The Angiogenesis Foundation (ACWHTR) argued the need to establish COEs to deliver patient-centered care, contain health care costs, and reduce patient mortality and morbidity (American College of Wound Healing and Tissue Repair & The Angiogenesis Foundation [ACWHTR], 2015). In agreement, Bosco, Iorio, Barber, Barron, and Caplan (2016), Cosgrove et al. (2013), and Dowsett, Bielby, and Searle (2014) demonstrated that a patient-centered approach via COEs provided value-based care.

Leader strategy is essential in fostering patient-centered care (Disch et al., 2016; Douma, 2015). Leader engagement is integral in promoting a culture of excellence and providing value-based care (Gerwitz, 2016; Goff et al., 2015; Studer, Hagins, &

Cochrane, 2014). Effective leadership improved patient outcomes and reduced costs across a range of health systems as shown by Phillips, Stalter, Dolansky, and Lopez (2016); Siracusa et al. (2014); Smith (2015); St. Pierre et al. (2014); and Wholey et al. (2014). A search of the literature revealed abundant research regarding health care leader strategies in quality improvement; however, I did not find any research on the strategies of leaders in fostering centers of excellence in the chronic wound care center. This study may fill the gap in understanding by identifying leader strategies that foster a culture of excellence in chronic wound centers, with the aim of increasing patient-centered care, improving health outcomes, and reducing health care costs. This study is needed to inform wound center leaders of strategies that may be beneficial in advancing value-based care and addressing the economic and social challenges associated with the increased prevalence of chronic wounds.

Problem Statement

In 2014, the National Institutes of Health (NIH) reported over five million people a year acquired a chronic wound (National Institutes of Health, 2014; Yim et al., 2014) and this number could increase due to growing elderly and diabetic populations (Ennis et al., 2017; Powers et al., 2016; Yim et al., 2014). Chronic wounds contribute to increased medical costs and increased patient mortality and morbidity (Ennis et al., 2017; Powers et al., 2016). Leaders in chronic wound centers need to drive programs to increase quality of care and reduce costs.

Prevalent risk factors contributing to the development of a chronic wound include aging, diabetes, obesity, vascular insufficiency, and heart disease (Augustin et al., 2015;

Chan, 2017; Shannon et al., 2013). Nussbaum et al. (2018) estimated the prevalence rate for chronic nonhealing wounds was 1% to 2% of the population in developed countries. The population 60 years of age and older is the fastest growing age group; increased age is a major risk factor for impaired wound healing (World Health Organization, 2017). The Centers for Disease Control and Prevention (CDC) noted over 29 million adults in the United States have diabetes, and nearly 90 million Americans are obese (Centers for Disease Control and Prevention, 2016). Furthermore, approximately 8.5 million individuals in the United States experience peripheral arterial disease, and one out of four Americans die from heart disease (Centers for Disease Control and Prevention, 2016). With an estimated annual cost for treatment ranging from $25 to $50 billion (Carter, 2014; Ennis et al., 2017; Jung et al., 2016), chronic wounds result in staggering economic repercussions for the public (Augustin et al., 2015; Shannon et al., 2013) and give rise to increased patient mortality and morbidity (Kirsner & Vivas, 2015; Piccin et al., 2016; Powers et al., 2016).

Chronic wounds are clinically challenging, costly to treat, and exert an adverse impact upon patients, health professionals, and society overall (Powers et al., 2016). Numerous researchers investigated the role of health care leaders in fostering quality improvement (Mehrotra et al., 2013; Raziq, Borini, Malik, Ahmad, & Shabaz, 2018; Saeed, Bloch, & Silver, 2015; Studer, 2014). While much is known about leadership strategies and their impact upon organizational performance, developing research proposes a requisite for leadership that directs health care reform by increasing quality while lowering cost of care (Conrad, Grembowski, Hernandez, Lau, & Marcus-Smith,

2014; Steaban, 2016; Swensen, Pugh, McMullan, & Kabcenell, 2013; Taplin, Foster, & Shortell, 2013).

A gap exists in current research literature regarding strategies used by wound care center leaders to promote cultures of excellence aimed toward improving quality and reducing health care costs. Chronic wounds result in substantial medical costs and increased mortality and morbidity (Powers et al., 2016); therefore, health care leaders need to drive programs aimed at increasing quality of care and reducing costs. With over five million people affected annually by chronic wounds (National Institutes of Health, 2014; Yim et al., 2014) and an expected increase due to growing elderly and diabetic populations, wound center leaders should focus on patient-centered outcomes that foster cultures of excellence (ACWHTR, 2015). Understanding how leadership strategies contribute to a culture of excellence in chronic wound centers is important to improving health outcomes and reducing health care costs; yet, I did not find any research on leader strategies in developing COEs in the chronic wound care center. There is a need to know more about leader strategies and quality improvement in chronic wound care centers. There is a need for increased understanding concerning leaders' strategies that foster a culture of excellence in chronic wound centers with the goal of improving outcomes and reducing costs.

Purpose of the Study

The purpose of this study was to explore strategies wound center leaders utilize to promote COEs in chronic wound treatment. For this study, I used a qualitative approach with a case study inquiry. I examined data from member questionnaires and endeavored

to provide an enhanced knowledge of the strategies employed by wound center leaders to improve quality outcomes that promote a culture of excellence. In this study I looked at leadership strategies used in wound COEs to improve quality and patient-centered care.

Research Questions

I used two research questions to guide this study:

Research Question 1 (RQ1): What do leaders of wound care COEs perceive as principal factors in fostering and maintaining cultures of excellence?

Research Question 2 (RQ2): What leadership strategies do wound care center leaders use, and how do they promote quality improvement toward establishing a COE?

Conceptual Framework

In this study I focused on leadership strategies that effectively produce cultures of excellence in the outpatient chronic wound care setting. I based the conceptual framework for this study on the integrative model of patient-centered care as defined by the ACWHTR (2015), Scholl, Zill, Härter, and Dirmaier (2014), and Zill, Scholl, Härter, and Dirmaier (2015), and the disease-oriented COE model as described by Eastman (2016), Kelly et al. (2015), Mehrotra et al. (2013), and Santos-Moreno et al. (2015). Superior performance on evidence-based quality metrics (Sauerwein & True, 2016) is a requirement for COE designation. COEs provide higher quality care at reduced costs (Kelly et al., 2015; Mehrotra et al., 2013; Santos-Moreno et al., 2015). Therefore, effective leader strategies induce a center toward excellence. The FRLT posited by Avolio and Bass (1995) provided a framework for recognizing effective leader style in fostering cultures of excellence. The FRLT is composed of nine elements signifying three

wide-ranging sets of behaviors of transformational, transactional, and laissez-faire leadership. Witges and Scanlan (2014) suggested that the components of transactional leadership within the FRLT underpin the journey to generate transformational results. According to Loughead (2017), effective leaders display a broad diversity of leadership behaviors that are within the FRLT. Leaders that have a full understanding of the elements of the FRLT can employ useful transactional actions as a basis for attaining transformational leadership habits.

In this study I explored the strategies used by wound care center leaders to promote a culture of excellence. I examined the findings through the contextual lens of the FRLT, patient-centeredness, and the COE model. Globally patient-centeredness is a key element in high-quality health care (Zill, Scholl, Harter, & Dirmaier, 2015) and as a focus in meeting patient needs in organizational service excellence (Erdtmann, 2016). Patient-centered health care aims to build patient trust, increase satisfaction with care, improve adherence to treatment plans, and improve health outcomes (Hifinger et al., 2017). COEs provide approaches to increase effectiveness of clinical practices, improve patient outcomes, and lessen health risks (Dowsett, Bielby, & Searle, 2014; Kelly et al., 2015; Sugarman, 2013). The FRLT suggests leaders demonstrate behaviors within the three perspectives of transformational, transactional, and laissez-faire leadership (Witges & Scanlan, 2014). The components of the FRLT provide health leaders with a means to transform organizational behavior and culture by developing processes that engage the entire organization in the improvement effort (Institute for Healthcare Improvement,

2017c). I provide a more detailed explanation of the FRLT, the concepts of patient-centeredness, and the COE model in Chapter 2.

A case study design can enable the researcher to explore a wide range of health care issues in their real-life settings (Higgins et al., 2014). In this study I used a qualitative case study approach to explore what leaders in wound COEs perceived as principal factors in fostering and maintaining cultures of excellence, and what strategies they used to promote quality improvement. Within the conceptual framework of patient-centeredness and COEs I explored the key research questions using a questionnaire that contained 10 questions. Via questionnaires using semistructured open-ended questions, I examined participant responses to discover their perception and strategies used in cultivating a wound COE. The case study approach provided a means of exploring the multifaceted issues encompassing the promotion and incorporation of leader strategies within a wound care COE.

Nature of the Study

I used the qualitative method to capture contributors' views, mindsets, behaviors, and cultural beliefs. Hoang-Kim et al. (2014) stated that the qualitative model strengthens research context insufficiently understood or unclear. Qualitative designs allow for in-depth examination of interactions, help integrate context, and provide a means to hear the voices of contributors (Hoang-Kim et al., 2014). Qualitative research permits researchers to examine participants in their natural environment to achieve a better perception of the factors influencing their situation (Yin, 2013). In this study I used the qualitative research approach because this method provided a means to address the research questions.

Detailed information collected from participants could add to the body of knowledge regarding effective leader strategies in a disease-specific COE.

The focus of this study was to explore leadership strategies from the perspective of leaders of wound COEs, which rendered the qualitative method suitable for this study. A quantitative method was not suitable for this study because the quantitative research method tests a theory or hypothesis and requires numerical and statistical data (Foley & Timonen, 2015; Silber et al., 2014). I did not test a theory or hypothesis, nor did I collect numerical data collected for statistical analysis. The mixed methods approach was not applicable for this study because mixed method studies use both statistical and text analysis (Goldman et al., 2015; Pokorná & Leaper, (2015). I focused on participant perceptions and experiences, thus, neither the quantitative nor mixed methods approach was appropriate for this study because both use numerical data.

The main qualitative inquiries are case study, ethnography, grounded theory, narrative, and phenomenology. A single exploratory case study design was the most appropriate design for this study. Case study research, as defined by Hoang-Kim et al. (2014), is a detailed study of a system utilizing diverse data collection resources where the researcher positions the system or case inside a broader context or setting. A qualitative case study design is an in-depth examination of people or groups of people enabling researchers to examine real life environments systematically for a specific phenomenon (Cronin, 2014). Hauck, Ronchi, Lourey, and Lewis (2013) described the case study as a probe into a constituent of a specific population which does not focus on an individual but an institution, a program, a system, or a population. In this study I

applied a case study approach which provided the ability to explore and describe in-depth leadership strategies that addressed the problem.

Other potential qualitative designs that I considered were ethnography, narrative, and phenomenology; moreover, I did not consider grounded theory inquiry because the goal was not to discover or build a theory (Foley & Timonen, 2015). Ethnographic inquiry was not suitable, because according to Eika, Dale, Espnes, and Hvalvik (2015) ethnographers attempt to exam a culture of individuals to obtain detailed perspectives of their customs, behaviors, and lifestyles. According to Hoang-Kim et al (2014) narrative research encompasses the biographic accounts from individuals regarding their lived experiences through narrated self-reflection and autobiographies; therefore, the narrative inquiry was not appropriate. The central objective of phenomenological inquiry is to elucidate the human experience from the belief of those experiencing the phenomenon (Ezeobele, Malecha, Mock, Mackey-Godine, & Hughes, 2014); hence, for this study the phenomenological design was less appropriate. Cronin (2014) stated that case studies can provide an in-depth focus on the context of the research within the boundary of a health care organization. Therefore, the case study design was appropriate for this study.

I selected the case study inquiry for this target population of wound care COE leaders across the United States that worked within the same company. Using the case study design, I explored the strategies used by COE leaders to influence a culture of quality and excellence. Data sources included participant questionnaires and document reviews. In this study I collected data via individual questionnaires using open-ended semistructured questions. I reviewed existing artifacts such as media reports and other

public records that pertained to the study population. Macur (2013) and Yin (2013) stated that artifacts and documents enable the search for *why* and *how* answers relating to an existing phenomenon. Accordingly, the data extracted from those documents were distinct to leaders' perceptions of the importance of strategies that foster a culture of excellence and aided in the search for why and how answers. I analyzed participant data for any themes or issues. St. Pierre and Jackson (2014) asserted data analysis from qualitative research should be decidedly deliberate and methodical to discern any emerging themes.

Definition of Terms

Center of Excellence: a disease-specific program designed to provide an efficient, coordinated, and integrated approach to treatment (Eastman, 2016). COE designation is based on a set of comprehensive evidence-based criteria (Mehrotra et al., 2013; Sugarman, 2013): qualifying elements for COE include reducing costs, increasing quality, and increasing consumer satisfaction (Kelly & Chinta, 2015). Specific to this study, designation as a wound COE was determined by performance on the quality metrics of healing rate, median days to heal, outliers, and patient satisfaction.

Chronic or nonhealing wound: a sore not responding to initial appropriate therapy (Frykberg & Banks, 2015), and is a wound that fails to progress through the normal stages of wound healing in an orderly process (Ueno, Omi, Uchida, Yokota, & Kawana, 2014; van Montfrans, Stok, & Geerkens, 2014). A chronic wound is unlikely to heal within 6 weeks without advanced wound care treatment (van Montfrans et al., 2014; Zhao, Liang, Clarke, Jackson, & Xue, 2016).

Healing rate: functions as a measurement of an individual's health and describes the elapsed time to wound closure with full epithelialization (Poutahidis et al., 2013). Healing rate is the most widely used measurable metric for wound healing (Ennis et al., 2017; Fife, Eckert, & Carter, 2018). Changes in wound area are computed at regular intervals and the change in volume is calculated to obtain the heal rate (Mohafez, Ahmad, Roohi, & Hadizadeh, 2016). Poutahidis et al. (2013) calculated the healing rate factor using regression analyses matched to a log-transformed wound area; percent healing refers to reduction in wound area relative to day 0. For this study, healing rate was measured in percent after exclusion criteria was applied and described the volume of patients healed within a calendar year.

Leader: a person who engages in a social process with partners, individuals, and teams to meet challenges and work jointly to advance mission-aligned goals to improve productivity and performance (Swensen, Gorringe, Caviness, & Peters, 2016); an individual who can influence others regarding achieving goals (Kumar, Adhish, & Deoki, 2014); an individual who systematically ensures their endeavors provide value and correspond to the organizational needs (Malloch, 2014).

Median Days to Heal: the middle value in a group of measurements when ordered by size. Median is the middle value of the given numbers or distribution in their ascending order; specific to wound healing, a measure of central tendency in days for a wound to heal (Fife et al., 2018; Harding, 2015).

Outlier: specific to this study, was any wound that had not healed within 3 months or 14 weeks of treatment (McDaniel & Browning, 2014).

Patient-centeredness: a focal precept of health care delivery that posits patient care focuses on health care consumer's needs, situations, preferences, and welfare (Cosgrove et al., 2013).

Patient satisfaction: a patient's overall satisfaction with health care received regarding efficiency, provider behavior, quality of service, communication, wait time, personal treatment, and being at ease (Cock & Kent, 2017; Kapoor, 2017). Patient satisfaction is a standard for measuring health care performance (Ogbonnaya, Tillman, & Gonzalez, 2018).

Value-based health care: a quality-based health care payment system that focuses on value; incorporates the triple aim of better outcomes, reduced costs, and improved health of populations (Chazal, Casale, & Martin, 2016); used for improving health care services by linking patient outcomes to costs (Ebbevi, Hvitfeldt Forsberg, Essén, & Ernestam, 2016).

Assumptions, Scope, Delimitations and Limitations

The assumptions, scope and delimitations, and limitations established the contextual boundaries of this study. Assumptions are evidences accepted as true or expected to happen, but the researcher cannot prove them. Assumptions are intuitive, and researchers must address assumptions. According to Lee (2016), not considering assumptions can inhibit formation of appropriate research questions. The scope refers to the boundaries of the study and the research problem fits within a specified domain (Boblin, Ireland, Kirkpatrick, & Robertson, 2013). Delimitations are aspects the researcher can control. Limitations are probable weaknesses of the study, for example, a

researcher's lack of ability to assess the relevance and suitability of all related theories and constructs to the context of the study (McAlearney et al., 2014).

Assumptions

In any study, the researcher brings a set of beliefs and philosophical assumptions. According to Yin (2013), central assumptions determine how to begin a qualitative study. In this study, I assumed wound center leader participants would provide thoughtful and honest responses to the questions. I preserved participant anonymity and confidentiality, ensured voluntary participation, and informed participants they could withdraw at any time from the study with no implications. Another assumption was the participants in the study would be a representative sample population of the leaders of wound COEs throughout the company under study. I assumed the participant's experiences, which form the basis of their perceptions and processes for fostering a culture of excellence, would describe the phenomenon explored.

Scope and Delimitations

Delimitations are features that restrain the scope and describe the limits of the study. The delimitations are in a researcher's control. The first delimiter was the problem chosen to research. In this study I selected the problem of leadership strategies used to foster excellence in chronic wound centers: The escalating chronic wound problem in the United States (Augustin et al., 2015; National Institutes of Health, 2014) demands attention. I examined only leadership strategies of leaders in COEs within the same company across the United States; therefore, this delimited the scope of my research.

Another delimitation was the purposeful sampling of leaders in wound COEs. I selected this population to elucidate the specific challenges surrounding the management of chronic wounds. The concepts of patient-centeredness and COE requirements can provide an effective framework to assess leader strategies used to foster a culture of quality. I excluded other populations because they were not relevant to the research problem studied.

Transferability describes the process of applying the results in research of one setting or group to other similar settings or groups (Cope, 2014). The results of this study could be relevant to leaders who work in chronic wound centers across the United States, and who have been in a leadership position for at least two years. The results of the study may be transferrable to provide insight into effective leader strategies in other health care settings.

Limitations

Limitations are disadvantages in the study and are out of the control of the researcher (Fryer et al., 2016). Sampling is one of the most problematic aspects in qualitative research according to Roy, Zvonkovic, Goldberg, Sharp, and LaRossa (2015). One limitation in this study was that data collected came only from leaders of COEs, thus, this may limit transferability to other health disciplines. In this study I provided an in-depth exploration into leaders' strategies to promote a wound care COE, which may provide practical application for effective leadership in other settings. A second limitation was the size of the sample, which may not be sufficient for broad generalizations in other social contexts or health care settings. While the sample size was appropriate for a

qualitative case study, gaining a comprehensive understanding of one organization may not be adequate to confirm transferability across other settings and enterprises.

In this study I used emailed questionnaires as a data collection tool. Therefore, face-to-face interviews of the participants were not possible, which would have afforded an opportunity to connect with the participant on a more personal level and notice nonverbal cues. Additionally, I did not have opportunity to probe for clarification or more in-depth detail. Hence, the nature of the data used limited the findings of this study.

As demonstrated by Lomangino (2016), allegiance and confirmation biases in research can significantly skew a researcher's interpretation of the data. Allegiance bias refers to a tendency to deliver findings that align with the researchers' own professional or world views; while confirmation bias is the proclivity to support data that agrees with one's prevailing beliefs over data that opposes those beliefs (Lomangino, 2016). I made every effort to develop questions in the questionnaire that minimized bias, and I purposively set aside any preconceived expectations concerning the outcomes of this study.

Another limitation was time. The participants I selected were leaders of COEs designated in the year 2016. I chose this timeframe because wound center leaders would be able to better recall their recent actions and strategies in leadership. Qualitative case studies require considerable effort due to the time it takes to conduct, transcribe, and analyze the interview results. In this study I planned ample time for accurate completion and analysis of the questionnaire data.

Significance of Study

This research may fill a gap in understanding by specifically focusing on leadership strategies cultivating cultures of excellence in outpatient chronic wound centers. This study is unique because it addressed the under-explored topic of leadership strategies in fostering wound COEs. As the nations' population ages in record totals (Anderson et al., 2015; Attieh et al., 2014; Wholey et al., 2014), the focus of health care leaders in the United States is on chronic disease management while bettering quality outcomes (Sonnino, 2016). Past research demonstrated effective leadership can improve patient outcomes and reduce costs across a range of health systems (Phillips, Stalter, Dolansky, & Lopez, 2016; Siracusa et al., 2014; Smith, 2015; St. Pierre et al., 2014; Wholey et al., 2014). The results of this study may provide essential insights into leadership strategies that can be incorporated into chronic wound centers to promote patient-centered cultures of excellence. Results from this research should aid health care organizations, disease-specific treatment centers, and outpatient wound care centers in recognizing leader strategies that produce cultures of excellence with the objectives of healing and preventing future wounds, increasing patient health-related quality of life, and reducing health care costs.

Health care consumers and leaders advance social change by demanding innovative processes that tackle healthcare inequities; this research may contribute to positive social change by imparting strategies to improve quality of patient care as consumers and leaders of health care. Improved quality and organizational performance in health care systems contributes to the social welfare of people and communities.

Improved quality and organizational performance in outpatient chronic wound centers may improve the health of the population. Improving the health of the population results in decreased mortality and morbidity. Assurance of effectual, patient-centered health care for the wound care population may improve human conditions and have a positive social impact. Wound center leaders who focus on a patient-centered culture of excellence contribute constructively to the social health of individuals and populations by speaking to the broader health care determinants of population health in relation to chronic disease (Institute for Healthcare Improvement, 2017a).

Summary and Transition

Data demonstrates the number of chronic wounds in the United States is escalating (Powers et al., 2016; Yim et al., 2014). In 2014 the NIH reported over 5 million Americans suffered annually with chronic wounds (National Institutes of Health, 2014). Nonhealing wounds are costly to treat, often result in increased patient mortality and morbidity, and pose a significant burden to patients, medical providers, and the global health care system (Augustin et al., 2015; Carter, 2014; Ennis et al., 2017; Kirsner, & Vivas, 2015; Piccin et al., 2016; Powers et al., 2016; Shannon et al., 2013; Upton, Upton, & Alexander, 2015; Yim et al., 2014). A need existed to know more about what wound care leaders perceived as essential elements in influencing a culture of quality, and what strategies leaders employed to foster a COE in the outpatient chronic wound care setting.

In this qualitative single case study, I explored leadership strategies that contributed to the development of a wound COE. Premises linked to this study included

the concepts of patient-centeredness, features of the COE model, and the FRLT. Qualitative studies investigating the strategies wound center leaders use to foster COEs are lacking, and this study may aid in providing effective leadership strategies to address the chronic wound problem. I perform a comprehensive review of the literature to address this gap in Chapter 2.

Chapter 2: Literature Review

The problem that I addressed in this study was: what strategies do leaders utilize in outpatient chronic wound centers to foster a culture of excellence? Annually, more than five million people live with chronic wounds (National Institutes of Health, 2014; Yim et al., 2014). Growing elderly and diabetic populations contribute to a projected increase (Everett & Mathioudakis, 2018; Powers et al., 2016; Yim et al., 2014). Chronic wounds have a 2% prevalence rate in the United States, and range in cost from $25 to $50 billion a year (Carter, 2014; Ennis et al., 2017; Jung et al., 2016; Matrix Health Services, LLC, 2014). Nonhealing wounds contribute to increased medical costs, decreased quality of life, and increased patient mortality and morbidity (Everett & Mathioudakis, 2018; Powers et al., 2016; Upton et al., 2015).

The purpose of this qualitative case study was to examine strategies wound center leaders used to promote COEs in chronic wound treatment. Through this investigation, I endeavored to gain a greater knowledge of the tactics exercised by wound center leaders to improve quality outcomes that promoted a culture of excellence. I developed the research on the concepts of patient-centered care, COE metrics, and the FRLT. Current literature demonstrated leader strategy was vital in: (a) fostering patient-centered care (Disch et al., 2016; Douma, 2015), (b) promoting a culture of excellence (Gerwitz, 2016; Goff et al., 2015; Murray, Sundin, & Cope, 2018), and (c) reducing costs across a span of health institutions (Phillips et al., 2016; Siracusa et al., 2014; Smith, 2015; St. Pierre et al., 2014; Wholey et al., 2014). Literature showed the importance of successful leadership skills in promoting a culture of long-term excellence with the aim of improved fiscal and

clinical outcomes for patients suffering with a chronic disorder (Oschman, 2017; Siracusa et al., 2014; Studer et al., 2014); yet, there remained a need for further inquiry into how these concepts could specifically benefit chronic wound care centers.

I employed the concepts of patient-centeredness, disease specific COEs, and the FRLT model to guide this study throughout Chapter 2: The literature review focused on these three concepts. Chapter 2 includes an exhaustive review of current research literature in health care to portray what approaches, if any, could establish how leaders of wound care COEs develop and execute strategies to foster cultures of quality and excellence. I examined literature that demonstrated how patient-centeredness adds quality and value across the health system. I also explored disease-specific COEs to examine how they drive increased patient outcomes while decreasing health care costs. Furthermore, I investigated literature that demonstrated leader's strategies used to promote quality improvement, and reviewed literature that exhibited effectiveness of the application of the FRLT in various health care environments. Chapter 2 includes an account of the literature search strategy, conceptual framework, review of the literature related to the key concepts, and closes with a summary and conclusion of the findings in the literature review.

Literature Search Strategy

Central foci for the study included health care leadership strategies viewed through the FRLT lens, COEs, and patient-centeredness. I conducted an extensive electronic review of the literature to perform an in-depth examination of leadership strategies, cultures of excellence, patient-centeredness, and the FRLT. In this study I used

peer-reviewed journals, organizational documents, government websites, and reports. I framed the main topic of wound center leadership strategies within three key research areas (see Figure 1): (a) centers of excellence, (b) patient-centeredness, and (c) full range leadership theory. Figure 1, the strategic model for performing the literature review contains the broad subjects covered in the literature review.

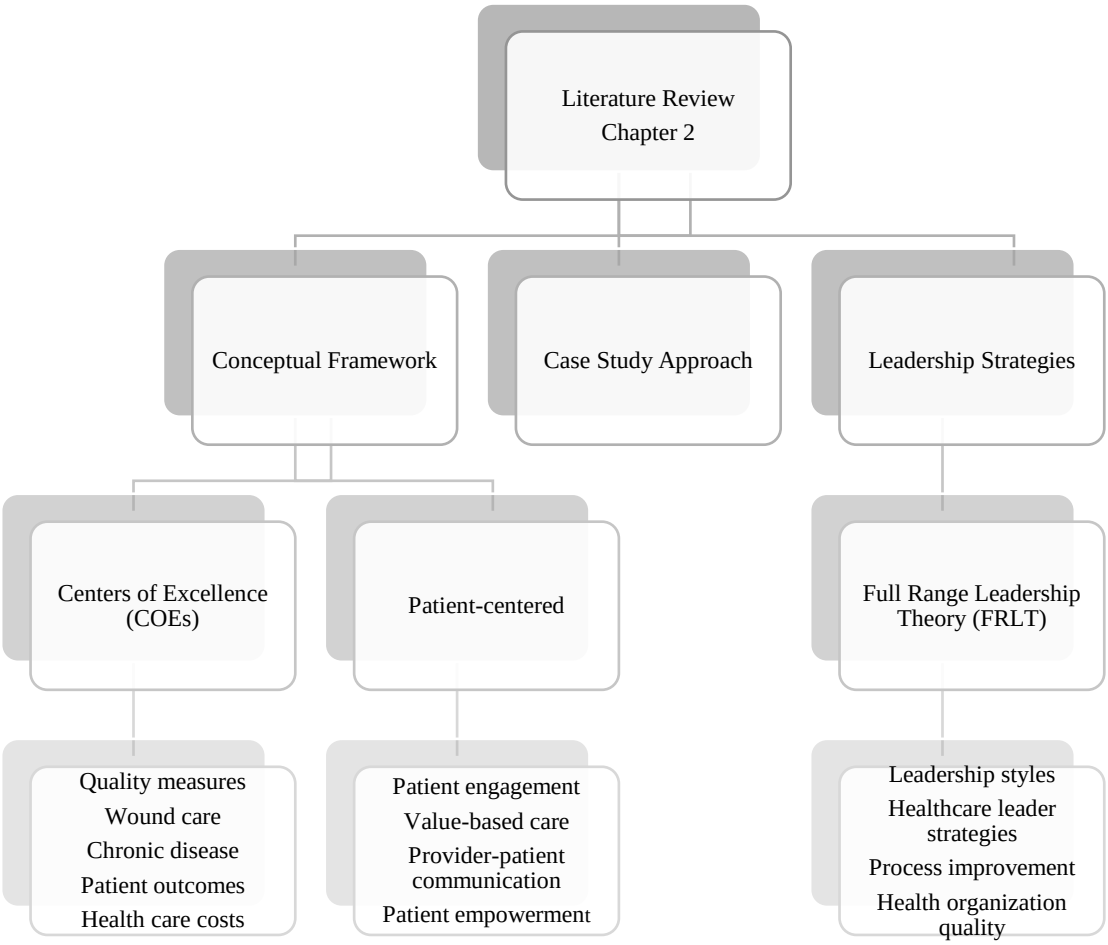

Figure 1. Strategic model for performing literature review. The concept map displays the key research components to examine and describe the study.

In addition to the central foci, I developed an aggregation of key terms and phrases from the central terms used throughout the literature review. These included: *culture of excellence and leader strategies, organizational quality improvement and health care costs, health care leadership strategies and process improvement, provider-patient communication, quality measures and value-based care, health care decision-making strategies, leadership and quality metrics, full range leadership and health care, full range leadership and quality improvement, centers of excellence (COE) and health care costs, wound care, non-healing or chronic wounds and outcomes, organizational leadership and chronic disease, chronic disease management and patient-centeredness, value-based care and patient shared decision-making, chronic wounds and quality metrics, health leader or leadership strategies and health care excellence, qualitative case study and health care leader strategies*, and *strategic planning and health care quality and outcomes*. A search of key terminology related to the comprehensive body of literature presented in this chapter included seminal works as early as 1990, and contemporary peer-reviewed scholarly literature as recent as 2018. Of the 243 references, 212 (88%) were from peer-reviewed journals, 31 were from government and organizational websites, and 232 (95%) were from current sources published in the last 5 years (2013-2018). I selected databases from the subject areas of business and management, health sciences, nursing, health policy, administration, and security. The primary databases that I used at Walden University Library for this literature search were: ABI/INFORM, Academic Search Complete, Business Source Complete, CINAHL Plus with Full Text, Education Research Complete, Education Source, ERIC, Expanded

Academic ASAP, MEDLINE with Full Text, Ovid Nursing Journals Full Text, Project Muse**,** ProQuest Central, PsycINFO, SAGE Journals, Science Direct, SocINDEX with Full Text, and Thoreau. Other databases I used included PLOS, Science Citation Index, Springer, and Supplemental Index. Because all key search terms and phrases were multidisciplinary I searched within each of the databases. Search engines used included: EBSCO Host, Google Scholar, Medscape, and PubMed. I conducted forward and reverse citation searches using citation chaining to find relevant articles. Various websites used to complete the literature review included: Agency for Healthcare Research and Quality, American College of Wound Healing and Tissue Repair, Angiogenesis Foundation, American Medical Association, Centers for Disease Control and Prevention, Centers for Medicare & Medicaid Services, Comprehensive Healthcare Solutions, Inc., Institute for Healthcare Improvement, National Institutes of Health, Wiley Online Library, and World Health Organization.

While exploring research on COEs, much of the generated information focused on COE definitions and outcomes in other disease specific programs and not chronic wound care. Although these other programs were not the focus of this study, it was imperative to explore available literature to address what was currently known about disease-specific COEs. In cases where there was little current research, I expanded the search to include articles published prior to 2013.

Leadership is an ongoing research topic in the health care setting, especially in organizational change related to quality improvement: I discovered numerous journals with potentially informative articles when performing the database search. To condense

the number of articles found in the databases to evaluate for relevancy, my process consisted of placing each key search term into each database, then refining the search by using term limiters. To narrow down unrelated articles, I excluded terms such as *education and universities, hospital based and palliative, HIV, rehabilitation, electronic and e health, acute wounds and inpatient, dermatology and cancer, cardiac and heart, hemoglobin or platelet, psychopathy, and industry* from the searches as these terms were not applicable to this study. I selected articles relevant to this study, and the remaining articles that did not align with the research topic I did not consider suitable for this study. Data drilling assisted with eliminating irrelevant articles and data that did not add value to the study.

Conceptual Framework

Kumar and Antonenko (2014) proposed that a conceptual framework, thoughtfully constructed from existing literature related to the research problem, underpins all aspects of a study. The conceptual framework in this study connected theory and method to elucidate the study's problem and purpose. The conceptual framework provided a lens for me to systematically examine the elements of wound care COEs, patient-centeredness, and the strategies that leaders of these centers used to promote a culture of excellence. In this study, I explored leadership strategies that promote the concepts of COEs and patient-centered care within outpatient chronic wound care centers.

COE designation is based on a comprehensive array of evidence-based criteria. Mehrotra et al. (2013) remarked that COEs incorporate evidence-based elements such as

explicit program structure, standardized processes, established clinical quality indicators, and submission of data to outcomes tracking database. Specific to chronic wounds, Dowsett et al. (2014) stated that a multidisciplinary approach in a specialized center resulted in increased healing rates and decreased recurrence rates.

Worldwide, as the demographics of the population shift, the demand for health care resources increases and chronic conditions become more widespread, patient expectancies increase, and health technology becomes more advanced (Woods et al., 2018). To improve the quality of care received many public and commercial health insurers required or recommended that patients receive care at COEs (Mehrotra et al., 2013).

In response to the Affordable Care Act (ACA), organizations such as the Agency for Healthcare Research and Quality (AHRQ), and the Centers for Medicare & Medicaid Services (CMS) adopted policies to cover certain health conditions only when performed at a COE (Agency for Healthcare Research and Quality, 2016; Centers for Medicare & Medicaid Services, 2016a; Centers for Medicare & Medicaid Services, Medicaid, n.d.). Health care delivery organizations focused on quality of care and value of care in response to the ACA (Comprehensive Healthcare Solutions, Inc., 2017; Ebbevi et al., 2016; Sedki, Mendez, Bruer, & Levine, 2015). In response, the Healthcare Financial Management Association recommended four value centered features to drive reform: (a) the presence of a collaborative, innovative, and accountable culture; (b) the ability to analyze and link quality and financial data; (c) a performance improvement program to increase quality outcomes and cost-effectiveness; and (d) integrated health systems to

predict and manage risk throughout the patient population (Porche, 2015). Making improvements required that health care leaders at all levels be engaged in amending behavior and culture by establishing the vision, forming the rules, and building systems that created excellence (Elrod & Fortenberry, 2017; Institute for Healthcare Improvement, 2017c).

The U.S. Food and Drug Administration (FDA) demonstrated a trend toward patient-centeredness by implementing an initiative to provide a venue for patient-centered involvement in the evaluation process of medical devices (Salcido, 2016). The FDA offered a listening post for consumer's experiences with health care and quality-of-life innovations by changing the narrative from talking *to* patients, to a narrative of talking *with* patients. The FDA integrated patients' perspectives by developing initiatives and research, which showed how the lived experiences of consumers were precursors to innovations used to manage disease or improve quality of life (Salcido, 2016). Patient-centeredness, a foundational element of integrated care, emphasized a comprehensive approach by putting patients at the center of health care (Greenfield et al., 2014; van der Eijk et al., 2015). Communication is a key component of patient-centered care (Concannon et al., 2014; Ishikawa, Hashimoto, & Kiuchi, 2013), and improves outcomes such as patient satisfaction, treatment adherence, psychosocial adaptation, and overall health status. Perfetto, Oehrlein, Boutin, Reid, and Gascho (2017) cited six domains of a patient-centered value model: (a) patient partnership, (b) transparency to patients, (c) diversity of populations, (d) patient inclusiveness, (e) patient-centered data sources, and (f) patient-oriented outcomes.

In 2015, CMS (CMS, 2016b) announced plans to increase value and patient-centered care to patients by rewarding Medicare providers for health care quality as opposed to health care quantity. Specific targets included linking 30% of fee-for-service Medicare payments, by the end of 2016, to quality or value via other payment models, such as Accountable Care Organizations (ACO) or bundled payment arrangements and linking 50% of payments to these models by the end of 2018. According to CMS (2016b), value-based programs supported a three-part goal of improved care for individuals, improved health for populations, and lowered costs. Coordination between the Department of Health and Human Services (HHS), private payers, employers, providers, and consumers will facilitate the transition of health care payments quicker from fee-for-service payments to alternative payment models.

Martin, McCormack, Fitzsimons, and Spirig (2014) cited effective leadership as vital for delivery of high quality health care, which was patient centered, evidence based, and outcomes driven. Martin et al. (2014) further remarked that effectual leadership improved safety and quality of patient care, as well as efficient fiscal management. Managing change in healthcare delivery requires leadership that inspires a shared vision (Martin, McCormack, Fitzsimons, & Spirig, 2014). Menaker (2016) identified transformational leadership as a behavior that provided direction and engaged the entire system toward excellence in health care performance.

Bass's original leadership theory encompassed two transactional and four transformational components (Antonakis, Avolio, & Sivasubramaniam, 2003). Bass and his colleague Avolio argued that a change in basic assumptions could change how leaders

inspire followers to surpass self-interest for the greater good to improve organizational performance. Bass and Avolio further expanded upon the original theory and incorporated nine elements signifying behaviors of transformational, transactional, and laissez-faire leadership (Antonakis et al., 2003; Witges & Scanlan, 2014). Avolio and Bass (1995) suggested comparable concepts and behaviors linked with leadership were universal and could be relevant in a broad range of settings. Bass (1996) contended that the elements of transformational and transactional leadership, evident in the FRLT model, sometimes necessitated adjustments and refinement across cultures; yet, still exhibited considerable universality. Bass (1997) conducted further research and demonstrated the universal application of the FRLT as a lens to assess effective leadership behaviors. Avolio and Bass's full range leadership model provided a foundation for the dynamics of effective leader strategies used to promote a culture of excellence in chronic wound care centers.

This study benefits from the conceptual framework by capturing the beliefs and strategic behaviors of leaders of chronic wound centers as those concepts relate to the elements of COEs and the components of patient-centeredness. Past research demonstrated the value of COEs in improved outcomes across a broad span of health environments (Dimick, Nicholas, Ryan, Thumma, & Birkmeyer, 2015; Mehrotra & Dimick, 2015; Michalek, 2014; Porche, 2015; Price et al., 2014; Pugh et al., 2014). Caring for the individual is at the core of healthcare, and Wolf (2017) claimed that health care leaders must engage in patient-centered activities and listen to the voices of all stakeholders; moreover, the perceptions of the patient, family members, and the

community was vital in delivering effective, high quality care. Previous studies exhibited patient-centeredness as crucial in the transformation of health care and management of chronic diseases (DuGoff, Dy, Giovannetti, Leff, & Boyd, 2013; Thomas, Iyer, & Collins, 2014; van der Heide, Snoeijs, Schellevis, & Rijken, 2016). Researchers demonstrated that increased access to care, quality, respect, and transparency were fundamental to patient-centered care (Alkema, 2016; Daaleman, Shea, Halladay, & Reed, 2014; Dubbin, Chang, & Shim, 2013; Goldman et al., 2015). The ACWHTR (2015) conducted a study focused specifically on the development of a patient-centered outcomes framework that promoted patient-centered care in chronic wound treatment: the goal was to determine what mattered most to patients. The ACWHTR identified key perspectives categorized by patient, caregiver, and clinician perspectives. For the patient, COEs staffed with wound care specialists provided all chronic wound care. From a caregiver's perspective, the involvement of a wound care COE was mandatory, as well as access to innovative wound supplies, therapies, and technologies. Clinicians voiced the need for an established network of interdisciplinary wound-specific healing centers and expanded evidence-based practices via federally funded chronic wound research (ACWHTR, 2015). Everett and Mathioudakis (2018) further demonstrated best practices in the management of chronic diabetic ulcers occurred through a multidisciplinary wound care clinic.

Literature Review Related to Key Concepts

In this qualitative single case study, I explored leadership strategies from the perspective of leaders of wound COEs. The literature review encompassed the key

concepts underpinning this study which were: utilization of disease specific COEs in quality improvement, patient centeredness as a core component of quality health, leadership, and quality healthcare. I utilized the FRLT as a lens to examine leader strategies that promote cultures of excellence in outpatient chronic wound care centers.

Centers of Excellence (COEs)

COEs exist throughout the United States across a diversity of disciplines. The U.S. Veterans Health Administration (VHA) developed COEs to better the health of veterans diagnosed with epilepsy. Kelly et al. (2015) conducted a quantitative comparative study of four COEs with 10 non-COEs; the primary research question was: Do epilepsy COEs excel in patient outcomes compared to epilepsy non-COEs? In the study, Kelly et al. identified six variables: (a) the independent variable was the unit (COE or non-COE), (b) dependent variables were number of emergency room (ER) visits, hospital admissions, number of prescribed drugs, and adverse side effects related to prolonged prescription use (abnormal Calcium and Vitamin D levels). Kelly et al. concluded from the data

- ER visits decreased for COE patients,
- hospitalizations for COE patients increased,
- no significant difference occurred in number of prescribed medicines between the units,
- non-COEs demonstrated higher abnormal Vitamin D results, and
- no significant difference occurred in Calcium levels between units.

According to Kelly et al., COEs demonstrated a greater ability for cost containment in high-cost epilepsy procedures. Study results suggested a potential for health policies mandating higher utilization of epilepsy COEs, and for implementation of COEs in other health disciplines. COEs produced better outcomes than comparable organizations not designated as such. Kelly et al. cited key reasons why companies instituted a COE: control of operational costs, improved value, and increased consumer satisfaction. Enhanced productivity via effective cost-controlled health care improved prospects for health care funding. Kelly et al. conjectured that health care COEs aspired to increase the effectiveness of clinical procedures, decrease health care associated risks, and improve patient outcomes. One anticipated positive outcome of COEs was the advent of more effectual clinical protocols for the rest of the health care industry. Kelly et al. stated COEs in health care endeavored to develop approaches that increased effectiveness of clinical practices, improved patient outcomes, and decreased health risks.

Sammer (2015) described key elements present in the National Council for Behavioral Health COE programs. The five elements were: effortless access to care, comprehensive care approach, culture of patient engagement and wellness, excellent outcomes, and value based. Behavioral health organizations employed these elements to benchmark against industry standards (Sammer, 2015). COEs within the behavioral health field focused on implementing and sustaining change to position themselves favorably within the healthcare environment. Specific COE goals identified by Sammer included improved patient and staff safety, improved discharge processes, overall quality improvement, and decreased seclusion and restraint of patients. Sammer asserted COEs

attracted more potential health care partners because the centers not only focused on patient health management but also on specific and measurable outcome metrics. According to Sammer, COEs provided comprehensive care for chronic conditions through the integrated services of behavioral and medical health care. Patient-centered quality improvements within behavioral COEs included improved patient service, health consumer input, and shared decision making (Sammer, 2015). The elements of behavioral COEs demonstrated excellence standards present in other disease specific COEs.

Several investigators conducted quantitative studies which examined the effectiveness of COEs in producing improved patient outcomes. Beginning in 2006, CMS and numerous private health insurers urged patients to seek care at COEs. Dimick, Nicholas, Ryan, Thumma, and Birkmeyer (2015), Gidengil et al. (2014), and Mehrotra et al. (2013) utilized secondary data from hospital discharge data and insurance claims. The studies examined the effectiveness of established quality measures in bariatric surgery, spine surgery and pediatric COEs. Dimick et al. (2015) and Mehrotra et al. recounted that many health payers required patients to receive care at COEs because they received a higher quality of care; for example, CMS adopted a policy to only reimburse for bariatric surgery when performed at a COE. Historically COEs earned their designation based on comprehensive evidence-based criteria. Evidence-based criteria included number of encounters, continual provider training, accessibility of electronic physician order entry, performance on key quality indicators, case management, and patient-nursing ratios (Mehrotra et al., 2013). Dimick et al. and Mehrotra et al. compared the outcomes and costs for specific surgical procedures at hospitals. Dimick et al. conducted a pre-post

implementation study; Mehrotra et al. compared outcomes of COEs to non-COE hospitals. Data from Mehrotra et al.'s research established that spine COEs did not have decreased complication rates, less 30-day readmission rates, or lower 90-day costs compared to non-COE hospitals. The strength of the study performed by Mehrotra et al. relied on a large national sample; Mehrotra et al. sampled one out of six commercially insured U.S. citizens across 43 states who underwent spine surgery; yet, the study was not without limitations. Mehrotra et al. used only inpatient claims data from commercially insured patients; therefore, results were not generalizable to Medicare or Medicaid patients. Mehrotra et al. recommended further empirical evaluation of whether COEs delivered better patient outcomes and lowered costs of care than non-COE programs. Accordingly, Dimick et al. demonstrated there was no significant difference in complication and reoperation rates pre-and post-implementation of the CMS restricting policy: further recommendations for research included reassessment of evidenced-based COE criteria, examination of procedure mixes in COEs versus non-COEs, and assessment of longer term outcomes such as patient satisfaction and comorbidity resolutions. Both studies emphasized the need for robust and evidenced-based criteria for establishment of COE metrics.

Gidengil et al. (2014) stressed the need for centralized development and testing of Medicaid and Children's Health Insurance Program (CHIP) COE metrics. CMS and the AHRQ addressed this need by jointly funded seven pediatric COEs that developed new quality indicators, and improved existing indicators (Gidengil et al., 2014). Medicaid and CHIP faced the challenge of a lack of standardized measures state to state; Gidengil et al.

mentioned that the lack of standardized metrics resulted in inconsistent measures which made the assessment of accountability, value-based purchasing, and quality improvement difficult on the state and national levels. Both Gidengil et al. and Mehrotra et al. (2013) accentuated the need for robust COE designation criteria and standardized outcome metrics. These studies depicted key factors that leaders perceived as essential in fostering and maintaining cultures of excellence.

Quality improvement requires consistent valid metrics and continuous monitoring processes. Negreanu et al. (2014) reported that in the last 10 years global efforts helped improve quality of care in inflammatory bowel disease (IBD) patients. Evidence based guidelines and IBD COEs provided better quality of care; yet, a lack of universal metrics existed (Negreanu et al., 2014). Negreanu et al. reviewed past and current studies worldwide that addressed the lack of established quality guidelines to determine relevancy in practice in Romania. Additionally, Negreanu et al. reviewed studies conducted in the United States that identified the need for specialized multidisciplinary approaches in IBD. Under the IBD 2020 initiative a Romanian task force for IBD evaluated and proposed a wide-ranging set of quality metrics. The metrics included program structure, processes, and outcomes that defined and evaluated IBD COEs in Romania. Likewise, the American Gastroenterology Association summoned a taskforce which specified 11 standard quality measures for IBD COEs. Negreanu et al.'s review of international research literature resulted in an initiative which identified a set of patient-centered quality metrics: The taskforce used these metrics to evaluate and certify IBD

COEs in Romania. The study by Negreanu et al. demonstrated a need for leaders to identify key factors that promoted and maintained cultures of excellence.

The escalation of chronic diseases and the significant impact they will exert on the delivery of health services will require engagement across the health system. The hospital, nursing services, disease-specific centers, patient's home, and the field of research must engage. Elrod and Fortenberry (2017) described three stages necessary to develop a COE: vision and validation, design and development, and completion and commercialization. Centers of excellence provide remarkably high expanses of expertise and resources focused on specific service lines which deliver a comprehensive interdisciplinary approach (Elrod & Fortenberry, 2017). This article focused specifically on establishing a COE establishment protocol. The three stages offered a comprehensive approach to establishing a COE; yet, implementation strategies were not specific toward establishing a wound COE.

Wound specific COEs. Sustainable pressure ulcer prevention is challenging. Creehan et al. (2016) presented a framework for Centers of Pressure Ulcer Prevention Excellence and discussed the proposed processes, structures, and measured outcomes. Fifty-five pressure ulcer experts convened at a national summit in 2014 and helped develop a framework that described elements of a COE for pressure ulcer prevention (PUP). The CMS implemented non-payment policies in 2008 for hospital acquired pressure ulcers (HAPU), and in 2014 instituted a pay for performance policy that penalized hospitals for high HAPU rates (Creehan et al., 2016). Subsequently, hospitals implemented evidence-based guidelines for HAPU prevention that exhibited higher

reliability and validity. The Donabedian Model provided the conceptual framework of the study conducted by Creehan et al. The model derived information about quality of care from three groups: structure, process, and outcomes. A focus group identified primary assumptions related to current HAPU quality improvement initiatives and prioritized them into a preliminary framework (Creehan et al., 2016). Creehan et al. noted that excellence programs overcame barriers to care and patient safety by incorporating transformational leadership, structural empowerment, and standardized professional practice. Additional requirements for excellence included utilization of evidence-based practices, innovations, and improvement processes. Evidence-based processes defined and measured outcomes. Creehan et al. conjectured that consistent definitions and calculations for pressure ulcer outcomes, including incidence, prevalence, and facility-acquired rates were critical for reporting outcomes data. Therefore, clearly defined frameworks structured upon evidence-based criteria were essential to establish outcomes and metrics for organizations seeking designation as a COE in PUP. This study illustrated the leadership strategies geared toward structure, processes, and outcomes to establish a COE.

Chronic wounds are a growing global problem: increased wound care requirements demand more available resources. Dowsett et al. (2014) conducted a quantitative survey of eight areas across the United Kingdom (UK) to determine a baseline of existing wound management practice. Survey data compared to previous research demonstrated the following results: (a) nurses provided 86.7% of the wound care, (b) venous leg ulcers were the most prevalent wound type, (c) most of the wounds

treated were less than 3 months in duration, (d) nearly 74% of wound care was performed in the patient's home, (e) the average for wound dressing changes was twice a week, and (f) nearly 8% of clinicians were unsure if infection was present. The study by Dowsett et al., identified challenges associated with fragmented approaches to wound care. Like the United States, health experts in the UK projected an exponential increase in chronic wounds among the elderly, and in individuals diagnosed with diabetes (Attieh et al., 2014; Centers for Disease Control and Prevention, 2016; Dowsett et al., 2014; Wholey et al., 2014). Dowsett et al. indicated wound care personnel and expenditures were unlikely to keep pace with increased demand. Dowsett et al. proposed these approaches to address the challenges: (a) implementation of wound specific treatment centers, (b) increased focus on patient-centered practices, (c) prevention of wound infection and reoccurrence via a formal care pathway, and (d) use of an integrated multidisciplinary approach to wound care services that employed standardized processes and quantifiable metrics. According to Dowsett et al., strategies that focused on specialized care delivery, innovative technology, patient-centeredness, and integrated care provided viable solutions to the chronic wound problem in the UK. Dowsett et al. discussed leadership strategies used to promote quality improvement in a wound COE.

Care provided by chronic wound COEs centered on evidence-based or gold standard care. Graves, Finlayson, Gibb, O'Reilly, and Edwards (2014) discussed research comparing two models of health services for patients with chronic leg ulcers. Graves et al. (2014) demonstrated substantial cost reductions occurred for wound care performed in a specialized wound clinic. Graves et al. conducted the study in Brisbane, Australia;

although, the specialty wound clinics were not identified as COEs, the metrics assessed closely reflected metrics required for designated wound COEs in the United States. Comparable COE metrics evaluated included: days to heal, healing rate, utilization of evidence-based clinical practice guidelines, adherence to weekly visits, quality of life outcomes, and incorporation of a multidisciplinary health care team. Graves et al. collected data retrospectively, 12 months prior to admission to the study, and prospectively for 6 months after admission to the study. Graves et al. used surveys, chart audits, and observational data. The study indicated significant costs savings directly attributed to earlier and increased wound healing outcomes and reduced wound reoccurrences. Limitations of this study were: the quality of the retrospective data was not known, prospective data was observational rather than experimental, and longer-term data would have provided a more accurate assessment of treatment outcomes. However, preliminary evidence suggested that gold standard care, provided in a specialized wound center, reduced costs and increased healing of chronic leg wounds (Graves, Finlayson, Gibb, O'Reilly, & Edwards, 2014).

Wound care is a complex clinical practice that relies on innovative treatment processes to improve outcomes. According to Harding (2015), the vast economic and social impact of chronic wounds demanded increased global attention. Harding identified financial pressures to decrease costs and improve efficiency as drivers of innovation. In Wales, the Wound Healing Research Unit (WHRU) sought to standardize treatment processes and economic strategies for the chronic wound population: the WHRU incorporated a comprehensive interdisciplinary approach to improve care delivery to

individuals suffering with chronic wounds (Harding, 2015). Harding cited the need for cost control and innovative wound treatments in England to include: effective and prompt diagnosis, suitable treatment, efficient processes to prevent complications, and prevention of wound related hospital admissions. Harding likened the burden of chronic wounds in the United States to the UK in costs and complexity: The mean cost to heal a wound in the United States in 2012 was more than $3900, and the mean number of comorbid conditions per chronic wound patient in the United States was 1.8. Harding validated the current global health challenges associated with chronic wounds and posited there were opportunities for innovation; furthermore, a need existed for process, social, and technical improvement. Optimal healing of chronic wounds required an integrative, focused approach that utilized best practices and provided standardized metrics to track outcomes.

Key performance indicators. Standards for COE eligibility include evidence-based and patient-centered criteria. Metrics used to determine COE eligibility in outpatient chronic wound care centers include patient satisfaction, healing rate, outliers, and median days to heal (Comprehensive Healthcare Solutions, Inc., 2017; Healogics, Inc., 2017a; RestorixHealth, 2017; Wound Care Advantage, 2017). Wound management companies require month to month averaging of all indicators: these indicators must meet criteria for a specified time range of consecutive months (Healogics, Inc., 2017b; RestorixHealth, 2017).

Measurable outcomes must be patient-centered, clearly defined, and preferably tracked via an electronic database. Gould et al. (2015) discussed chronic wound healing in the elderly population and denoted the prevalence of comorbid conditions in chronic

wound patients. These patients experienced profound diminished quality of life and they needed multifactorial clinical approaches to facilitate healing. Gould et al. demonstrated a need to monitor health indicators related to diabetes, vascular insufficiency, nutrition, advanced age, infection, and medications. Gould et al. noted variations in data collection, definition, measurement, and treatment of wounds in the elderly as hindrances to timely and effective healing. Optimal wound healing occurred when quality metrics, such as healing rate, were clearly defined and monitored in a standardized process. Gould et al. suggested a well-designed electronic medical record that tracked measurement of healing variables throughout the continuum of care would improve wound healing rates. Formal wound care specialty programs, such as wound COEs that promoted standardized metrics, could augment wound research and expand multidisciplinary educational opportunities (Gould et al., 2015).

Patient satisfaction is a key performance metric in the provision of high quality health care. Augustin et al. (2015) documented that patient reported outcomes, such as patient satisfaction, were mandatory for validation of increased quality in wound care. Low satisfaction rates, according to Augustin et al., indicated treatment failure, lack of effective patient-provider communication, and/or the absence of established patient-centered goals. Augustin et al. stated that improved patient outcomes occurred when clinicians observed the following patient protocols: (a) identified the personal needs of patient related to chronic wounds, (b) reviewed previous wound care treatment benefits with patient, (c) established realistic patient-centered treatment goals and time frames, (d) monitored treatment satisfaction regularly, and (e) proactively addressed barriers to

treatment adherence. The review conducted by Augustin et al. illustrated the necessity of patient-centered performance metrics in successful chronic wound management.

Providers could make better treatment decisions if they knew in advance a wound was less likely to heal with standardized care. Outliers aid in the prediction of healing times. Jung et al. (2016) cited previous research completed in 2003 by Margolis and colleagues regarding prognostic models developed for venous ulcers and diabetic neuropathic foot ulcers: Margolis and colleagues sampled data from thousands of patients throughout geographically diverse outpatient chronic wound centers. Jung et al. further discussed a trial study, conducted by Kurd and colleagues in 2009, which demonstrated the predictive information from these models enabled providers to improve healing rates. Subsequently, Jung et al. conducted a quantitative study and used data mining coupled with the research of Margolis and Kurd; afterwards, they developed a predictive model for wound healing. Jung et al.'s study contributed to the standardization of wound outliers. Outliers were wounds not healed within 14 weeks of treatment in an outpatient chronic wound center. The incorporation of an outlier rate, as a performance metric, has the potential to change the course of clinical treatment. Jung et al. advocated using the outlier rate as a prognostic tool to improve wound care: this permitted early recognition of wound severity and lessened the potential for delayed wound healing. One limitation of the study by Jung et al. was the need to track performance on patient cases to prevent changes in practices, patient populations, and other deleterious factors. Despite the limitations, the prognostic model afforded better data to improve wound treatment strategies. One of the key performance indicators used in wound COEs is the outlier rate.

COEs track and monitor performance metrics against established benchmarks and evidence-based standards. Jung and Shah (2015) conducted a case study in which they employed diverse data to calculate delayed wound healing in outpatient chronic wound care centers. Jung and Shah indicated that weekly patient assessments allowed for appropriate adjustments to care. During each assessment the researchers keyed etiological and quantitative depictions of wounds into a national electronic database. The intent was to forecast if a designated wound would be an outlier with respect to length of healing time. Based upon clinical experts at Healogics, a wound management company, delayed wound healing was after 14 weeks (Jung & Shah, 2015). The dataset consisted of 1,182,751 time-dated wound assessments performed at 68 Healogics outpatient wound care centers spread across 26 states. Each wound evaluation consisted of quantitative data which included: (a) length, width, depth and wound area, (b) categorical narratives of wound type, (c) anatomical site, (d) evidence of redness of skin, and (e) associated ICD9 codes. The dataset consisted of 59,958 patients with weekly wound assessments performed in 2009 through 2013; Jung and Shah quantitatively evaluated data using predictive modeling (Jung & Shah, 2015). The study demonstrated the potential clinical usefulness of outliers as a predictive model for delayed wound healing; thus, given accurate predictive evidence, providers determined additional treatment modalities for their chronic wound patients such as home health care, advanced wound dressings, hyperbaric oxygen therapy, and negative pressure wound therapy (Jung & Shah, 2015).

Several studies demonstrated the utility of the median as a predictive model to determine wound healing. The median is the integer in the middle of a specified set of

numbers arranged in order of increasing value. Within a set of integers, the median is the number located in the middle with numbers arranged from lowest to highest. Numerous quantitative studies demonstrated the value of the median time to heal in chronic wounds (Ennis, Hoffman, Gurtner, Kirsner, & Gordon, 2017; Fife, Eckert, & Carter, 2018; Horn, Fife, Smout, Barrett, & Thomson, 2013; Langer, Bhandari, Rajagopalan, & Mukherjee, 2015; and Marston, Tang, Kirsner, & Ennis, 2016). Horn et al. (2013) developed a broad wound stratification technique for patients that predicted healing probability. According to Horn et al., CMS recognized the benefit of analyzing real-time data to aid research in chronic wound care. Furthermore, the use of electronic health records provided a means to mine data for clinical outcomes, which was a model endorsed by the Institute of Medicine (Horn et al., 2013). Horn et al. defined healing outcome using descriptive statistics which analyzed the frequencies of patient, wound, and outcome measures. The data included continuous measures of average, median, quartiles, and the amount of variation of each of the components. The median was significant because it described the behavior of the complete set of integers. Likewise, Fife et al. (2018) noted that CMS's transition to a reimbursement system based on quality rather than volume mandated the reporting of quality metrics. CMS required providers to report positive outcomes on six quality measures, one of which must be a practice- related outcome measure, such as time-to-heal (given as a mean or median).

Armstrong, Boulton, and Bus (2017) assessed 785 million outpatient visits, completed between 2007 and 2013, by individuals with diabetes in the United States. Armstrong et al. suggested statistical predictors of foot ulcer reoccurrence, using

evidence-based interventions, could advance comprehensive strategies for proactive management. The researchers used the statistical median to determine risk ratios of participants and the median duration of their wounds. Armstrong et al. conducted their statistical analysis on 785 million outpatient visits by patients with diabetes; they calculated the median recurrence and remission rates.

Langer et al. (2015) carried out a prospective clinical study over a period of 2 years and evaluated the use of negative pressure wound therapy in the healing of chronic wounds. The length of time for healthy granulation tissue and full epithelialization to occur without drainage determined the endpoint of the study. Langer et al. relied upon median days to heal and averaged wound volume reductions to determine the endpoint of the study.

Marsten et al. (2016) posited there should be continual and consistent documentation to accurately perform wound assessments of venous ulcers. The investigators evaluated wound history, reoccurrence, and characteristics using standardized measures to determine the wound location, size, origination, presence of drainage, surrounding skin integrity, and pain level. Marsten et al. evaluated the rate of wound healing by using the statistical mean to determine whether treatment was optimal. Marsten et al. reassessed interventions for wound bed preparation when the ulcer did not heal at the expected rate. Using median days to heal, Marsten et al. showed the longer the duration of the ulcer the more difficult it was to heal.

Patient-centeredness

NIH recognized patient-centeredness as an effective gauge of high-quality health care delivery and defined two central features for the provision of patient-centered care: being open to patient needs and integrating the patient's experiences and perspective in decision-making and health care planning (National Institutes of Health, 2017). The triple aim demonstrated optimization of health for individuals and populations and reflected the global health care trend toward increased patient-centeredness (Mery, Majumder, Brown, & Dobrow, 2017). The triple aim framework, cited by Mery, Majumder, Brown, and Dobrow (2017), is an integral component in health care quality improvement initiatives. The Institute for Healthcare Improvement (2017b) promoted the triple aim in 2007 as a framework that guided three goals: increased patient satisfaction and quality of care, improved health of populations, and lowered health care costs per capita. Mery et al. (2017) performed a systematic review of literature from 2008 to 2014, which identified how the triple aim related to health care improvement initiatives. Mery et al. stated that health providers and policy makers received the triple aim well because the concept was simple and concise. The original intent of the concept was to direct improvement initiatives at the organizational or community level (Mery et al., 2017). The systematic review revealed that the patient-centered aspect of the triple aim gained global influence and prompted health organizations and providers to critically analyze their current improvement processes (Mery et al., 2017). Initial goals of the triple aim centered around individual patient improvement initiatives and care processes. Subsequent aims extended the population perspective to include all health improvement programs, including single

organizations and local health entities. The variations of triple aim definitions used at the system and global levels limited this study. Health systems worldwide differed in structure: The triple aim defined goals globally. The triple aim applied broad inferences to every health care system; thus, health systems outside the United States used differing terminology that was incongruent with the triple aims' original intent. Despite the differing definitions, this article demonstrated the value of leaders using patient-centered strategies in health improvement initiatives.

Patient-centered care is not a contemporary concept. Tanenbaum (2015) cited the advent of patient-centered care in the late 1960's; work conducted by British psychotherapist Enid Balint, suggested patient-centeredness be used by primary care providers as a form of treatment in emotionally ill patients. This approach placed the needs of the patient and their perceptions at the forefront of their health care. Tanenbaum further described the history and context of patient-centeredness in the United States health care system and defined four models of patient-centered care: (1) a bio-psychosocial patient approach which encompassed the psychological, social, and biological aspects of each patient, (2) patients versus providers, (3) person-centered medicine, and (4) health care consumers/providers/government versus the health system. These models involved three distinct features, (a) epistemological alignments, (b) realistic applications, and (c) health policy tools. Tanenbaum recounted the pros and cons of existing models of patient-centered care regarding their mission and role in health care reform. Tanenbaum (2015) proposed four questions which validated patient-centered care: "Is this care a means to an end or an end in itself? Are patients here subjects or

objects? Are patients here individuals or aggregates? How do we know what patients want and need?" (p. 274). Each of Tanenbaum's models provided avenues toward health care reform which: (a) challenged lucrative biomedical science, (b) restrained the powerful medical profession, (c) redesigned a prosperous health care market, and (d) opposed predominant utilization of evidence-based medicine when not considered with individual patient needs. In each model, a revitalized focus on patients offered balance to the unrestrained behavior of other players.

A need exists to actively involve patients and their families in identifying health goals, determining interventions compatible with their lifestyles, and developing patient-centered metrics to assess how effective those interventions were according to the patient. Disch et al. (2016) probed six health care leaders to share their perceptions of the future of health care and challenges associated with reform. The leaders consisted of 2 physicians, 2 nurses, and 2 patient advocates: investigators asked their perspectives regarding future health system transformations, future technology to enhance care delivery, changing nurse roles, and how value-based care would influence oncology care. All six leaders interviewed identified increased patient centered care, value-based processes, safer and more accessible health care programs, and enhanced integrated care as critical components necessary in health system transformation. Overwhelmingly, the six interviewees pinpointed electronic health records, the use of data mining, and aggregated patient data as vital technological needs. The leaders agreed that nursing roles would need to shift to meet future demands of patient-centered and value-based care. Additionally, nurses would need to steer initiatives that improved health outcomes and

health promotion to fill gaps in care delivery. All interviewed leaders mentioned value-based health care centered on the person, and patient defined outcomes in cancer treatment decision-making as needed changes under the new value proposition. This article referenced components of COEs such as: enhanced access to care, comprehensive care approach, increased patient engagement and wellness, measurable and standardized outcomes, and a value-based approach.

It is fundamental for a health care delivery system to successfully coordinate care, be patient-centered, and be culturally sensitive to patients. Pina et al. (2015) presented a framework that described key variances across a broad range of health care delivery organizations. According to Pina et al., the intent was to accelerate understanding of the move toward a system-oriented method while maintaining a patient-centered focus. Pina et al. noted that the proposed framework could improve the current fragmented delivery of health care. Key features of effective care delivery structures included: efficient access to information, active leadership, accountability and transparency, patient access to care, integrated care, and ongoing innovation. Uniform methods can compare, describe, measure, and evaluate health delivery system transformations. Pina et al. cited several initiatives that promoted a universal categorization of health care delivery characteristics to improve communication and transparency amidst health care reform: This standardization could improve the quality of care and decision making for health consumers, providers, payers, policymakers, scientists, and other stakeholders. In 2001, the Institute of Medicine moved away from a provider and payment centered paradigm to a patient-centered model (Pina et al., 2015). Accordingly, the AHRQ formed the

Effective Health Care Stakeholders Group (SG), and the Delivery Systems Committee (DSC), a subdivision of the SG. The DSC involved seven representatives including health providers, policymakers, patient advocates, and scientists. In this model patient-centeredness remained a vital component of health care. Pina et al. summarized AHRQ's response to the challenges of standardizing nomenclature for a complicated and fragmented health delivery system with the following: (a) the SG drafted a restructured framework that defined healthcare delivery systems into six domains with 26 elements, (b) the domains included capacity, organizational structure, finances, patients, culture, care processes, and infrastructure, and (c) elements within each domain were chosen as qualities apt to further an organization's ability to achieve its mission. According to Pina et al., the importance of quality of care resulted in an increased focus on patient-centeredness that guided the defining and measurement of the construct. This framework may provide for a more logical description of the changes that occur in delivery system improvement for individuals in the United States.

Patient-centered approaches involve a wide range of disciplines. The FDA formed the Patient Engagement Advisory Committee which focused on including patients, families, and care partners' perspectives in all phases of medical product development (Hunter, O'Callaghan, & Califf, 2015). Salcido (2016) emphasized the fundamental responsibility of the FDA was to ensure patient-centeredness by communicating with and involving consumers in the development of health and medical devices, therapeutic drugs, and wound care products. Terry and Patrick-Lake (2015) cited the FDA's engagement in a venture with the Medical Device Innovation Consortium that created a

patient-centered benefit-risk assessment process; increased communication, regarding patient's preferences about clinical benefits versus risks, reflected better patient-centered outcomes as products came to market.

The Veterans Health Administration (VHA) declared patient-centered coordination of care and communication were critical aspects in cancer care: leaders implemented patient-centered communication and subsequently conducted an assessment through patient self-report to improve the quality of cancer care and other health services in the VHA (Singh, Arora, Mazor, & Street, 2015). Shafipour, Moosazadeh, Jannati, & Shoushi (2017) conducted a study that demonstrated patient-centeredness reduced the anxiety of family members of patients in hospital intensive care units; moreover, the processes centered on the needs of the patient and family and lessened anxiety of the patient and family.

Patient-centered multidisciplinary approaches contribute to improved quality of health (Everett & Mathioudakis, 2018; Sauerwein & True, 2016). Everett and Mathioudakis (2018) cited that complications of diabetic foot ulcers result in substantial morbidity and mortality. Approximated mortality rates related with those ulcers were 5% in the first year and 42% within 5 years. A multidisciplinary approach to wound care facilitates best practices in the management of diabetic ulcers (Everett & Mathioudakis, 2018). Globally, most professional guidelines advocate referral to a multidisciplinary wound care center for the management of diabetic foot wounds (National Institute for Health and Care Excellence, 2015).

Sauerwein and True (2016) discussed the need for standardization in diabetes prevention and care within Air Force medical facilities within the United States. Although Diabetes Centers of Excellence (DCOE) existed in the military health system, this study identified deficiencies which stressed a need for improvement. Improvement initiatives included the utilization of a three-tiered approach: (a) enhanced translational research, (b) clinical excellence, and (c) increased outreach and training (Sauerwein & True, 2016). After the implementation of initiatives, patients referred to Air Force DCOEs demonstrated significant improvement in hemoglobin A1c levels after only one visit. DCOEs demonstrated high quality specialty level care, and the patient-centered multidisciplinary approach contributed to improved health of the overall population (Sauerwein & True, 2016).

Patient-centeredness emphasizes a comprehensive approach that focuses on an individual's quality of life. Chronic venous leg wounds (venous stasis) exhibited a significant negative impact on health-related quality of life. Hopman, Vandenkerkhof, Carley, and Harrison (2016) noted a considerable interest in the health-related quality of life (HRQOL) in people affected with venous leg ulcerations. Individuals with leg ulcers had diminished quality of life like that of other chronic diseases, such as diabetes and heart failure. Hopman et al. (2016) conducted a quantitative longitudinal study which identified factors linked with changes in health-related quality of life in individuals living with chronic venous stasis. Historically, treatment focused solely on wound care and not the person holistically. The factors related to decreased HRQOL included pain, ulcer duration, mobility problems, anxiety and depression, problems with daily activities, and

problems with self-care (Hopman, Vandenkerkhof, Carley, & Harrison, 2016). This study used SPSS to analyze data: Hopman et al. analyzed physical and mental changes from baseline to healing using paired sample *t*-tests. Additionally, the researchers used Pearson Chi-square tests and independent *t*-tests to determine correlation of categorical data with the outcomes. According to Hopman et al., these methods provided a means to determine statistical significance of the changes in the physical and mental components. A key strength of this study was the utilization of longitudinal data collected from a large community population, and the use of recognized internationally validated standardized tools. One limitation was the use of a generic quality of life instrument as opposed to a disease specific quality of life instrument. The study conducted by Hopman et al. demonstrated a need for a patient-centered approach in the treatment of chronic venous leg ulcers. Health care leaders could improve outcomes for venous stasis patients by providing a more comprehensive and holistic treatment approach.

A patient-centered approach facilitates patient adherence to recommended treatment. Rafii, Fatemi, Danielson, Johansson, and Modanloo (2014) conducted a concept analysis of literature related to patient compliance. Rafii et al. (2014) conducted a comprehensive methodical search of the literature that focused on definitions and measurement of compliance. Rafii et al. noted that the term *compliance* initially described how individuals with chronic conditions acted in accordance with treatment recommendations. Later, the terms adherence and concordance replaced compliance: the three terms are interchangeable. This study primarily focused on the meaning and measurement of patient compliance: the research presented significant information that

related to patient-centeredness as a critical component in patient compliance. Rafii et al. suggested the term *adherence* portrayed the growing complexity of medical care by describing the extent to which patients follow provider recommendations for medical treatment. Rafii et al. remarked that most researchers preferred the term adherence over compliance because adherence indicated active participation in a prescribed treatment, increased cooperation, and increased effort to maintain healthier behaviors. According to Rafii et al., treatment associated factors can influence compliance, such as: nature of treatment, convenience of administration, duration of therapy, cost of treatment, transportation, and complexity or effectiveness of treatment. Adherence improved when patients defined their expectancies of health and treatment. Moreover, motivated patients satisfied with treatment plans, and who received effective patient/provider communications, demonstrated increased adherence to treatment plans. Rafii et al. cited past research which determined that health care professionals who exhibited patient-centered attributes significantly influenced adherence. Patient-centered attributes included: effective communication methods, demonstration of respect, emotional support, collaborative treatment approach, clinical expertise, enhancement of patient-centered therapy, and interdisciplinary teamwork with other health care professionals. Historically, the concept of adherence referred to the behaviors of patients. Rafii et al. indicated that current research focused on developing empirical measures of compliance which established the extent of the patient's behavior coinciding with recommended treatment. The overarching health goal centered on compliance which led to positive behavior changes, and maintenance of health activities that incorporated patient-centered factors

into the patients' daily life. By defining compliance, Rafii et al. provided insight into adherence of chronically ill patients with prescribed treatment. Patient-centered approaches facilitated patient compliance with treatment recommendations.

Patient-centeredness is a central element of integrated health care. Greenfield et al. (2014) performed a phenomenological qualitative study that examined patient perspectives on patient-centeredness in integrated care. The study aimed to enhance key components of patient-centered care as echoed from the participants in the study. Greenfield et al. identified six themes of person-centeredness from the participant's narratives, which were: naming, holism, heed, caring, continuity of care, and agency and empowerment. Participants desired recognition as a named, unique, and respected individual. Participants wanted holistic treatment in a manner that recognized emotional needs as well as medical needs. Participants wanted providers to attentively listen to and give thorough heed to them. Members desired authentic and compassionate care. Members preferred the same provider each time because they felt it developed a trusted relationship. Lastly, participants wanted to be involved and in control of their care. Patient-centeredness reflected a culture of excellence by recognizing respectful, holistic, attentive, compassionate, trusted, and empowered care of the person. A purposeful, non-randomized sampling method limited the results of this study; yet, in this study I identified components of patient-centeredness demonstrated in other literature (Alkema, 2016; Brown, 2013; Cosgrove et al., 2013; Daaleman et al., 2014; Dubbin et al., 2013; Goldman et al., 2015; Hunter et al., 2015; Ishikawa et al., 2013; Mudiyanse, 2016; van der Eijk et al., 2015).

Value-based care. In 2015, CMS announced plans to increase value and patient-centered care to patients by rewarding Medicare providers for health care quality as opposed to health care quantity (Centers for Medicare & Medicaid [CMS], 2016b; Centers for Medicare & Medicaid Services, 2017). Specific targets included (a) linking 30 percent of fee-for-service Medicare payments to quality or value measures by the end of 2016, (b) using other payment models such as ACOs or bundled payment arrangements, and (c) linking 50 percent of payments to these models by the end of 2018. According to CMS (2016b), value-based programs supported a three-part goal of improved care for individuals, improved health for populations, and lowered costs. Coordination between HHS, private payers, employers, providers, and consumers will facilitate the transition of health care payments quicker from fee-for-service payments to alternative payment models. Additionally, the AHRQ (2018) cited the need for committed health care leaders who utilize evidence-based practices, employ effective communication techniques, demonstrate transparency across all venues, and drive patient engagement. Salcido (2015) suggested that chronic wound centers flourished for the same rationale other chronic care programs increased; the elderly population in the U.S. increased, and chronic disease, including comorbidities associated with impaired wound healing, escalated. Patients with nonhealing wounds were at an increased risk of amputation and infection; which negatively impacted their quality of life (Jung et al., 2016).

The increased volume in chronic wound centers correlated with the ACA's institution of patient safety values, healthcare accessibility, accountability and

affordability requirements. The standards and practices of wound care evolved to include integrative multi-professional teams working across health care systems. With the focus on optimized population health and better managed chronic disease care, the ACA provided a unique opportunity to transform the existing health system into an integrated system centered on delivering value-based care and generating population health (Halfon et al., 2014).

Wound center COEs aim to provide value-based care. Hillary, Justin, Bharat, and Jitendra (2016) demonstrated that value-based care, structured around patient's medical needs, exemplified best practice in healthcare. Hillary et al. (2016) identified six elements that produced value in health care: (a) health care systems were centered on patient needs, (b) meaningful and sustainable outcomes for patients were measured, (c) bundled costs based on a patient's cycle of care instead of fee for service provided value through accountability and competition, (d) care was integrated across the entire health care system, occurred in the most cost-effective facilities, and health care providers communicated as a team with one another, (e) the geographic reach of health care networks need to expand, and (f) a patient friendly universal IT platform needs to be developed. The authors mentioned that current problems with health care included excessive costs and low quality of care. Hillary et al. posited health costs and care deficiencies decreased when: health care organizations became value focused, integrated health care services, measured patient outcomes, and implemented bundled procedure costs. High quality health care should achieve excellent outcomes at minimal cost without sacrificing quality. The six elements of value-based care cited by Hillary et al.

are fundamental in wound center COEs. According to Hillary et al. value-based care improved lives because providers were more familiar with the health conditions they worked with daily. Because specialized clinicians provide wound care, every aspect of wound care in COEs is associated with value; thus, patient outcomes will be better, costs will be lower, and integrated care ensures continuity and coordination of care.

Individuals afflicted with chronic wounds often exhibit other comorbidities and their health care needs require a patient-centered approach (Dowsett et al., 2014; Upton et al., 2015). In a qualitative study, Elf et al. (2017) examined the value-based approach and its implications for patients with chronic conditions: the goal was to determine if increased patient-centeredness created increased demands on the health care system. The trend toward value-based health care intended to reduce costs while creating value for the patient. Elf et al. cited the overall objective of a value-based approach was higher-quality health care, better patient safety, and cost effectiveness; yet, the use of patient-defined outcome measurements and the need for integrated health care services presented challenges for individuals living with chronic conditions. Patient-centered care according to Elf et al. implied care should be a shared decision and established on individual perceptions and goals. Value-based ideology aimed for a service that reduced costs and generated patient value; yet, the researchers questioned if this held true for patients with long term complex illnesses. Elf et al. noted that in patient-centered and value-based approaches the patient's and families' perspective determine the value of outcomes rather than process measures; moreover, in chronic conditions outcomes should include measurements of the patient's overall quality of life. Elf et al. cited challenges which

included: identification of individual patient needs, establishment of suitable outcome measures for demonstrating the value of the health service received, and who to include in the outcome assessment. These challenges were particularly applicable for chronic wound patients who often suffer with comorbidities, rely on a caregiver's support, and require weekly wound care treatment. Elf et al. stated that quality measures supported collaboration and integration of health services across the continuum of care; thus, generating incentives for providers to share responsibility for patients. Such measurements are evident in wound care COEs; throughout the continuum of care individual or composite measures of health outcomes define the terms of healing rates, median days to heal; patient satisfaction outcomes, and how long the patient's wound remains healed. The outcomes measured in the wound COEs (Upton et al., 2015), as well as research conducted by Elf et al. proved relevant to improving health-services delivery.

Value-based payment methods incentivize providers to decrease their rate of treatment complications. The study performed by Nwachukwu, Dy, Burket, Padgett, and Lyman (2015) examined the impact of travel distance on orthopedic complications to a COE after surgery. Orthopedic COEs were known to provide high quality, value-based integrated care. Nwachukwu et al. (2015) conducted a quantitative retrospective review of complications data as part of a quality improvement process: investigators collected data from patients who received a total joint arthroplasty (TJA) between January 2008 and December 2011. Nwachukwu et al. used simple logistic regression to determine any relationships between travel distance and the odds of developing a complication while controlling for patient characteristics of gender, age, body mass index, ambulatory status,

and Medicare or Medicaid status. Since health care reform progressed toward value-based payment and an excellence emphasis, Nwachukwu et al. questioned if increased travel distance negated care received at COEs. Results of the study indicated no association between travel distance and orthopedic complications after TJA. Nwachukwu et al. concluded that TJA COEs were viable value-based models of care. The strength of the study was the use of rigorously gathered prospective data, organized by an institutional registry, and directed by skilled orthopedists and outcomes researchers, who repeatedly verified patient demographic and complication data. Nwachukwu et al.'s review of 39,000 cases over four years demonstrated COEs provided high quality care and economies of scale.

The changing health care environment imparts opportunities for committed providers to deliver expert care at a decreased cost. Chazal, Casale, and Martin (2016) discussed how fiscal pressures associated with health care costs, quality issues, developing medical technology, and improvements in quality measures contributed to a rapidly changing health care environment. In 2015 the passage of the Medicare Access and CHIP Reauthorization Act (MACRA) demonstrated several components of change (Chazal et al., 2016). MACRA proposed to steer the United States in the direction of a quality-based provider payment system that focused on value. Chazal et al. posited the foundation of MACRA was the triple aim of bettered outcomes, decreased costs, and improved health of populations. The triple aim was subsequently incorporated into the strategic plans of the American College of Cardiology (ACC): the primary intent was to deliver patient-centered, value-based health care to the population. Leaders within the

ACC strategically engaged with CMS and other governmental agencies and ensured that MACRA regulations were practicable for providers and were in the best interest of value-added care. While the authors focused on Cardiology, they suggested that provider groups could utilize technology to: strengthen the role of interdisciplinary teams, manage the patient population more proficiently, produce better outcomes, and lessen costs. These payment incentives, focused on value, were applicable across the health system, including outpatient wound centers. Leadership strategically focused on the triple aim tenets could effectively improve quality and move an organization toward a culture of excellence.

Leadership Fostering Quality Health Care

Health care organizations need strategic leadership to guide them toward long-term operational and clinical excellence. Menaker (2016) cited the following leadership strategies for long-term organizational excellence: establish a vision, develop relationships, set priorities, resolve problems, demonstrate initiative, achieve excellence, and manage change. Rapid change in the health care industry resulted in increased leadership challenges to improve the effectiveness and efficiency of health care practices. Menaker posited health organizations needed leaders who had competencies and strategies to successfully guide health organizations through challenging times. Leaders cultivated a vision to set the direction; connected individuals by a shared vision, and inspired people to overcome barriers. Menaker offered insight into strategies a leader might use to promote quality improvement toward establishing a COE.

The complexity of current healthcare environments requires strong, strategic, and comprehensive leadership. Sonnino (2016) addressed the need for health care leaders to develop effective skills to succeed in today's changing health care environment. Sonnino followed the evolution of leadership concepts from the authoritarian model, where the leader had total command and required performance from followers; to a collaborative style, where the leader developed a vision and empowered followers to achieve the goals. Sonnino noted there was a lack of comprehensive leadership development programs and recommended the following remedies: development of early career leadership programs that ensured leader succession, training programs that addressed traditional healthcare areas of clinical practice, research, and education to give the leader a comprehensive understanding of their role, and implementation of more widely accessible leader development programs. Sonnino identified the most prevalent styles of leadership as transactional, transformational, and servant: citing the utility of each in various health care environments, Sonnino suggested effective health care leaders incorporated skills from several leadership styles. Sonnino cited a need for structured, all-inclusive leadership development programs as a global requisite for health care leaders. Significant competencies integral in health care leadership programs included: financial competencies, professional development, evolving issues and strategic planning, conflict management, and, cultural and ethical considerations. Although many specialty leadership programs existed, Sonnino stressed the need for more national level programs that incorporated interdisciplinary and comprehensive approaches to leader development. Sonnino cited that past research demonstrated evidence that leadership development

programs correlated to better organizational and personal performance. Sequential leadership training would build upon existing competencies to develop more highly skilled and strategic leaders.

Mintrom (2014) conducted a quasi-experimental study using pre-and post-intervention student surveys; Mintrom examined data for changed behavior and evaluated using multiple regression analysis to demonstrate specific teaching methods that generated cultures of excellence among graduate students. Mintrom suggested skilled leaders who used effective instruction could teach the ideology of excellence. While Mintrom's study was a quantitative approach and focused on an academic environment, the study's results demonstrated the utility of effective leadership and education that fostered cultures of excellence. Mintrom established that an organizational culture of excellence inspired by effective leadership resulted in positive patterns of perception, thoughts, beliefs, and behaviors that became habit. Mintrom's study could be applied across disciplines to illustrate how effective leaders inspire behaviors that produce superior outcomes.

Strategic leadership plays a key role in organizational change aimed toward quality improvement. Hawkins, Glenn, Oswald, and Conway (2013) examined leadership approaches at Henry Ford Health System (HFHS) in Detroit that reinforced standards of excellence through focused coaching and development. Health care leaders launched a performance improvement framework that accentuated policies and procedures review, incorporated innovative communications systems, and modified performance strategies to inspire widespread organizational responsiveness. Hawkins et al. (2013) recounted that as

a team, leaders and their staff participated in training focused on the values and behaviors of a vigorous, high-performing organization. Based on Malcolm Baldrige National Quality Award criteria, Hawkins et al. identified seven strategic operational areas: people, consumer satisfaction, safety and quality, access to care, research and education, community, and costs. The Malcolm Baldrige National Quality Award, instituted in 1987 by the United States Congress, promoted awareness of quality management and acknowledge businesses that successfully implemented quality management approaches (American Society for Quality, 2018). Hawkins et al. reported transformational and transactional leadership behaviors moved organizations toward excellence. Hawkins et al. cited those behaviors as (1) effective listening and communication, (2) mentoring and teaching others, (3) inspiring, (4) promoting innovation, (5) being approachable, (6) recognizing and rewarding successes of others, and (7) being accountable for results. The combination of transformational and transactional leadership styles, according to Hawkins et al., effectively fostered a patient-centered approach at HFHS through improved delivery of high-quality health care that was equitable, integrated, reliable, and efficient. Leaders at HFHS strove for excellence in every encounter by improving health through clinical excellence, innovation, research and education. HFHS pursued optimized health and well-being for all individuals they served. Leaders cited strategies that fostered excellence: increased cultural awareness, efficient staffing, establishment of stretch goals that required behavior changes, and creation of environments conducive for innovation (Hawkins et al., 2013).

Effective and collaborative leadership facilitates achievement of COE status. Price et al. (2014) demonstrated transformational leadership inspired innovation and collaboration throughout the Academy of Nutrition and Dietetics (Academy). The Quality Management Committee formed a Workgroup in 2009 tasked with developing quality criteria that created a patient-centered environment: in 2014 the Workgroup approved and implemented Standards of Excellence. Four Standards of Excellence, developed by the Academy's Quality Management Committee, served as a self-assessment tool for leaders to strategically guide their programs toward designation as a COE. Price et al. identified the four Standards as: quality of leadership, organizational quality, quality of practice, and quality outcomes. The Workgroup evaluated numerous national programs of excellence and identified quality metrics for the Academy's Standards of Excellence. The group evaluated national programs which included the American Nurses Credentialing Center Magnet Recognition Program, and the Malcolm Baldridge National Quality Award. Price et al. defined transformational leadership and strategic management as vital in guiding nutrition and dietetic organizations toward designation of COE. Price et al. mentioned that leaders strategically used quality indicators to attain the level of excellence.

In 2008, to address the rising problem of epilepsy among Veterans, the VHA implemented 16 central epilepsy COEs. Other VHA facilities that lacked specialty programs could refer to the COE within their region. This functioned as a hub and spoke structure (Pugh et al., 2014). Pugh et al. (2014) conducted a mixed-methods, four-year comparative case study aimed to evaluate epilepsy COE structure effectiveness. Pugh et

al. determined pre-and post-access to care and quality, explained relationships between changes in processes of care, structure, and Relational Coordination (RC), and established differences in care that linked to levels of RC. Pugh et al. defined RC as a task-oriented model of communication that was integral in implementation science. Researchers randomly sampled a purposeful study population of Veterans with epilepsy from each geographic COE. Pugh et al. abstracted quantitative data from patient charts and treatment files. Additionally, Pugh et al. obtained qualitative data via participant surveys, semistructured interviews, archived documents, and leadership meeting observations. The authors hypothesized that the RC would significantly influence quality of care in VHA epilepsy COEs. Pugh et al. examined leadership strategies that addressed patient satisfaction, communication techniques, organization of care, staff and patient education, and quality improvement initiatives. In the COE model of care delivery, Pugh et al. asserted that quality of care and access to care were dependent upon an integrated approach that utilized strategic leadership methods and effective communication between interdisciplinary team members. Pugh et al. demonstrated robust communication was an important leadership strategy in improved quality of care within VHA epilepsy COEs; they conjectured their findings had broad implications for health care delivery and reform.

Strategic leadership can mitigate fragmented patient care and inefficient utilization of resources. Santos-Moreno et al. (2015) conducted a systematic literature search and examined the role of COEs in the treatment of patients with rheumatoid arthritis (RA). RA was a prevalent and costly disease that necessitated a comprehensive

care approach. Santos-Moreno et al. noted that the Pan American Health Organization (PAHO) historically delivered inadequate care to patients with chronic disease due to poor organizational management. A detailed search of the literature demonstrated numerous issues that prevented effective RA care: delayed diagnoses, staffing shortages, poor communication, inadequate and inefficient use of supplies, and inconsistent treatment processes (Santos-Moreno et al., 2015). Diminished access to care, poor technical quality, and inefficient resource utilization attributed to poor leadership, which resulted in fragmented and inferior patient care. COEs were programs that produced high quality outcomes and utilized appropriate and minimal resources. According to Santos-Moreno et al., leaders of COEs were responsible for delivering patient-centered processes that resulted in continuous improvement and efficient use of resources. Santos-Moreno et al. demonstrated the need for effective leader strategies that integrated innovation, intervention, compliance to standards, and continual quality assessment within RA COEs.

Health leaders need to be committed to implementing quality improvement measures and fostering a quality improvement culture. A qualitative study completed by Davis et al. (2014), examined a quality improvement project implemented in 10 public health agencies overseen by the National Association of County and City Health Officials (NACCHO). Davis et al. cited previous research that described leadership strategies used to empower employees to make change toward quality improvement. The strategies Davis et al. identified included: (a) leaders incorporated and trained more staff in quality improvement initiatives, (b) quality improvement became culture through a repeated and focused process, (c) leaders took active roles, and (d) leaders used detailed frameworks

supported by performance data. Davis et al. conducted in-depth interviews from the 10 case studies and examined the data to determine the degree of quality improvement development at each site. The study results demonstrated a critical need for leadership committed to quality improvement: sustained quality improvement required consistent and committed leadership. Leaders who implemented a formal quality improvement process fostered cultures that effectively managed change, as opposed to those leaders that conducted informal improvement processes. Leaders fostered sustainable cultures of quality improvement by: being committed to improvement, valuing innovation, aligning improvement practices with strategic goals and organizational vision, inspiring and motivating others, displaying enthusiasm, and employing evidence-based decision making. The use of a purposeful sample, which did not provide a broad representation of health care organizations, limited the study. Other limitations included: lack of causation, the study occurred over a brief time span, and the study only explored agencies with similar features. The study by Davis et al. validated much of the previous research and supported the usefulness of the NACCHO framework for quality improvement.

Leadership commitment and support is essential to generate quality patient outcomes with reduced costs. Douma (2015) assessed a quality framework designed to align quality and safety programs across academic and hospital venues. Leaders at all levels across the venues fostered environments that supported sustainable change and continuous improvement. Douma identified five components for transforming and sustaining improvement:

- Consumer engagement

- Integrated health care program
- Transparent leadership
- Person-centered culture
- Medical education improvement

The establishment of a collaborative safety and quality committee provided opportunity to improve alignment and integration of care models, processes, and structures between the medical school and hospital. Senior leaders from the hospital and medical school developed a robust improvement collaborative that promoted an open and transparent culture. All health staff treated each other and their patients with respect and focused specifically on the patient's interests: patients and families actively engaged in their health care (Douma, 2015). The study by Douma spoke to the role of leaders in achieving exceptional outcomes through transformational strategies. Through transformational behavior, leaders cultivated cultures of respect, and improved operational and fiscal efficiency.

The value of leadership in facilitating organizational change is well documented (Agency for Healthcare Research and Quality, 2018; Ament et al., 2014; Bradd, Travaglia, & Hayen, 2017; Ellis & Abbott, 2013; Fearing, Barwick, & Kimber, 2014; Gerwitz, 2016; Goff et al., 2015; McCormack et al., 2015; Secanell et al., 2014; Shabot, Monroe, Inurria, Garbade, & France, 2013; Studer et al., 2014). Two articles demonstrated the influence of leader engagement in quality improvement. Using a qualitative study, Goff et al. (2015) examined health leaders' perceptions regarding quality measures reported by CMS. Results of open-ended interviews demonstrated that

leaders differed in their opinions of the utility and validity of CMS quality measurements to stimulate improvement. CMS aimed to improve patient outcomes by stimulating quality improvement on the local level and encouraging health consumers to choose higher quality care; yet, most health leaders surveyed responded that the measures were not useful. Leader engagement is a requisite for quality improvement initiatives; yet, participant responses demonstrated that leaders did not feel involved in the development of the measures (Goff et al., 2015). Leaders expressed concerns about the public reporting methods, as well as the validity, value, and objectivity of the measures. Conversely, positive views of public reporting included beliefs that transparency in reporting created awareness and impelled change. In general, those surveyed felt that the CMS quality metrics did not represent patient care and patient-centered outcomes. Goff et al. surveyed health leaders to determine their readiness to be engaged in quality change: the leaders recommended several necessary amendments. The amendments included: (a) more collaboration among health agencies to reduce duplication, (b) regularly updated metrics to ensure continuous pursuit of excellence, (c) develop quality measures that gauge community health, and (d) focus more on physician incentives in delivering value-based care. This qualitative study presented leaders' perceptions regarding the utility of CMS metrics. In this study Goff et al. identified leader engagement as a driver in overcoming barriers to quality improvement.

In the second article, Studer et al. (2014) established the importance of leader engagement to foster a culture that created staff engagement and support. Employee engagement was a priority because it directly affected financial, clinical, and patient

experience outcomes. The Studer Group, a health care performance improvement company, defined three key elements of engagement, which they referred to as Straight A Leadership. These elements were: alignment (leader's goals and measures supported effective organizational outcomes); action (leaders ensured everyone took the correct actions precisely and quickly); and, accountability (transparent organizational processes kept all individuals accountable). Studer et al. demonstrated links between leader engagement and improved patient safety, engagement and increased financial outcomes, and engagement and better-quality clinical outcomes: strong leadership skills facilitated engagement. The pursuit of a culture of excellence required skilled leaders who effectively engaged their followers.

Full range leadership theory. Grill, Pousette, Nielsen, Grytnes, and Törner (2017) conducted a quantitative study to evaluate the influence of the FRLT on safety issues in the Swedish and Danish construction industry. The FRLT developed by Avolio and Bass (1995) consisted of transformation, transactional, management by exception, and laissez faire leadership styles. Grill et al. (2017) summarized four transformational facets of the FRLT: (1) intellectual inspiration (leaders questioned assumptions, and promoted employees' problem-solving abilities); (2) personalized respect (leaders exhibited concern for personal and professional development of employees and listened to employees' issues; (3) motivational inspirational (leaders stimulated employee optimism and interest toward goals, and communicated inspired visions), and (4) idealized influence (leaders developed employees' trust through positive role modeling). Transactional components of the FRLT consisted of a contingent reward approach and

active management-by-exception. Grill et al. described the passive/avoidant components of the FRLT as passive management-by-exception and laissez-faire. Historically, transformational and active transactional leadership styles were related to improved safety outcomes in diverse settings, while passive/avoidant leadership demonstrated a negative influence on safety outcomes (Grill, Pousette, Nielsen, Grytnes, & Törner, 2017). Grill et al. sent questionnaire surveys to randomly selected construction workers in Denmark and Sweden: 811 participants responded. Participants rated leadership behaviors of their first line formal leaders. The researchers utilized the MLQ to measure transformational and transactional leadership components and used SPSS to perform a mixed-model regression analyses with random intercepts. Grill et al. measured six out of eight FRLT features: they did not assess management-by-exception (passive) or idealized influence. Grill et al. did not fully assess the FRLT because previous studies had demonstrated conceptual and empirical connections between idealized influence and inspirational motivation, and between management-by-exception (passive) and laissez-faire approaches. Grill et al. concluded it was improbable that the effects of idealized influence and passive management-by-exception diverged from the effects of inspirational motivation and laissez-faire approaches on safety outcomes identified in their study. One strength of the study was that the outcomes reinforced earlier studies that linked effectual leadership to improved job-related safety. Grill et al. concluded that the transformational and transactional leadership approaches of the FRLT encouraged safety in the construction industries of Denmark and Sweden; while, laissez-faire leadership produced an adverse correlation to safety. While the research conducted by Grill et al.,

focused on safety in the construction industry, the resultant outcomes were generalizable to other industries, such as health care. Safety is vital in a patient-centered approach and underscores the importance of value-based care.

Effectual leadership improves the quality and outcomes of health care service delivery. Bradd, Travaglia, and Hayen (2017) performed a comprehensive literature review intended to identify past research regarding leadership of allied health professionals. Bradd et al. (2017) reviewed over 1600 relevant articles and selected 70 for preliminary review, and seven studies for in-depth review. The reviews included qualitative and quantitative studies. Bradd et al. defined allied health professionals as key team members who facilitated improved patient outcomes. A database review conducted during a span of 10 months, identified two focal areas of leadership: leadership styles associated with patient outcomes, and leadership growth programs (Bradd et al., 2017). Bradd et al. stated the complexity of health care delivery necessitated multi-faceted leadership approaches that continually adjust to be effective: transformational leadership facilitated high quality patient-centered care; while, transactional leadership facilitated compliance to organizational processes by contingent rewards. According to Bradd et al., leadership capability and capacity of allied health care professionals were vital elements in effective health care reform. Bradd et al. identified the FRLT and transformational leadership theory as predominate theoretical frameworks in the studies. The studies demonstrated a positive correlation between FRLT behaviors and improved outcomes. Limitations of this study were: the meaning of allied health varied geographically, and the reviews did not include grey literature. Bradd et al. recommended improvement in

that leadership capacity of allied health leaders. Strong leadership fostered staff engagement, and improved clinical and organizational outcomes; thus, a need existed to verify effectiveness of leadership programs that cultivated transformational leaders.

The full range leadership model encompasses the transformational and transactional leadership styles. Within the transactional style, three subtypes exist; management by exception (active or passive), contingent reward, and laissez-faire. Arnold, Connelly, Walsh, and Martin Ginis (2015) examined the relationship between leader styles and emotional regulation strategies and burnout. While this quantitative study primarily focused on work related stress and burnout, Arnold et al. (2015) provided useful insight into leader strategies used within each leader style of the FRLT. Arnold et al. measured leadership dimensions using the Multifactor Leadership Questionnaire. Arnold et al. suggested that transformational leaders were apt to possess a wealth of resources, such as staff support and superior performance: transformational leaders amended their personal feelings to achieve the good of the group. Leaders who employed management by exception, whether passive or active, did not contribute to negative job attitudes nor negatively impair staff well-being: this finding was inconsistent with past research. Arnold et al. theorized the data results occurred due to longitudinal measurement of the variables and the level of leader experience that the study participants possessed. Laissez-faire leaders demonstrated fewer personal resources which contributed to emotional depletion and disengagement in the workplace. The inference of the study was, that in general, transformational style leaders exerted more positive influences on followers than did transactional style leaders (Arnold, Connelly,

Walsh, & Martin Ginis, 2015); however, transactional leadership behavior, specifically contingent reward, was associated with effective management of social and emotional skills. According to Arnold et al., a contingent reward approach increased job satisfaction by exerting a positive influence on followers.

Health care organizations rely on skilled leaders who can effectively sustain healthy work environments and elevate patient outcomes. Witges and Scanlan (2014) discussed the integration of the FRLT perspective into leadership development programs for nurse managers working within healthcare organizations. Historically, new nurse managers tended to utilize transactional leadership styles; the FRLT implied transactional features contributed to transformational outcomes (Witges & Scanlan, 2014). The FRLT is comprised of transformational and transactional leadership components, and laissez-faire leadership. Witges and Scanlan defined the transformational leadership components as inspirational motivation, intellectual stimulation, individual consideration, and idealized influence: transactional components were management by exception (passive), management by exception (active), and contingent reward. Laissez-faire leadership demonstrated a lack of, or absence of leadership (Witges & Scanlen, 2014). According to Witges and Scanlan, nurse leaders needed a comprehensive theoretical perception of leadership to execute actions that promoted positive work settings that contributed to improved patient outcomes. The FRLT conjectured that a leader would display behaviors within the three domains of transformational, transactional, and laissez-faire leadership; however, strong leaders primarily exhibited an ideal mix of transformational and transactional styles. Witges and Scanlan conjectured an ideal blend of the two leadership

styles would result in the following: (a) enhanced readiness of staff to exert extra effort, (b) increased satisfaction with leader, (c) increased leader trust and effectiveness due to clearly articulated contingent rewards, and (d) effective demonstration of elevated levels of influence, inspirational motivation, intellectual staff stimulation, and individual consideration between leader and followers. The study conducted by Witges and Scanlan demonstrated a value for health organizations to integrate the FRLT perspective into leadership developmental plans.

Summary and Conclusions

More than 5 million people a year suffer with chronic wounds (National Institutes of Health, 2014; Yim et al., 2014): the growing elderly and diabetic populations contribute to this expected increase (Powers et al., 2016; Yim et al., 2014). Chronic wounds exhibited a 2% prevalence rate in the U.S, and cost nearly $50 billion a year (Carter, 2014; Jung et al., 2016). Non-healing wounds contributed to increased medical costs, decreased quality of life, and increased patient mortality and morbidity (Ennis et al., 2017; Powers et al., 2016; Upton et al., 2015).

The elements of this study's conceptual framework provided a lens to systematically examine literature related to wound care COEs, patient-centeredness, and how leaders strategically guided organizations toward a culture of excellence. I reviewed literature related to leader strategies that promoted the concepts of COEs and patient-centered care. COEs provided a means to concentrate and integrate experts within a specific health area. The literature demonstrated that organizations such as the AHRQ, CMS, FDA, and VHA drive quality and cost transparency (Agency for Healthcare

Research and Quality, 2016; Agency for Healthcare Research and Quality, 2018; CMS, 2016b). Initiatives such as the triple aim, ACA, and the Malcolm Baldrige National Quality Award promoted quality metrics and value through programs that enhanced patient access to care, provider accountability, cost management, and improved outcomes (American Society for Quality, 2018; Mery et al., 2017; Porche, 2015; Salcido, 2016).

The components of COEs varied slightly in focus across different health disciplines, but all COEs incorporated evidence-based standards, measurable and reportable metrics, continuous quality improvement processes, patient-centered approaches, value-based care, and dynamic leadership behaviors. What was known about leadership strategies needed to foster COEs was that strong leadership skills were indispensable in driving organizational change that resulted in quality improvement. Leaders in health care systems make determinations that guarantee their organizations function successfully (Alhaddi, 2015; Ament et al., 2014; Davis et al., 2014). When health care organizations seek COE status, there is a requisite for leaders to make determinations that can strategically foster and sustain a culture of excellence.

I discovered throughout the literature reviewed that the elements of the FRLT successively achieved quality improvement goals and inspired organizational change toward excellence; yet, it was not known what factors leaders of outpatient wound centers in the United States perceived as essential to foster and maintain cultures of excellence. Additionally, there was no current literature found that explored leadership strategies that promoted quality measures toward establishing outpatient wound COEs in the United

States. I identified a gap in the literature concerning key factors and leadership strategies that fostered cultures of excellence in outpatient chronic wound centers.

This study fills the gap in literature by examining what leaders of outpatient chronic wound COEs perceive as key factors and strategies to foster and maintain cultures of excellence. Literature demonstrated the utilization of the FRLT by leaders in various health disciplines, however, I did not find any literature that applied the concepts of FRLT to leaders of outpatient chronic wound COEs. This study adds knowledge in the discipline of chronic wound COEs, by exploring key elements and leadership strategies that contribute to the development and sustainment of a culture of excellence.

In Chapter 3, I discuss the methodology for this qualitative case study and why I selected this approach over other approaches. I discuss the research design and rationale, the role of the researcher, methodology to include participant selection and recruitment strategies, instrumentation, data was collection and analysis, issues of trustworthiness, and ethical concerns related to study participants and data collection.

Chapter 3: Research Method

The purpose of this study was to explore strategies wound center leaders utilize to promote COEs in chronic wound treatment. In this study, I used a qualitative approach with a case study inquiry. I endeavored to provide an enhanced knowledge of the strategies employed by wound center leaders to improve quality outcomes that promote a culture of excellence. In this study I examined leadership strategies used in wound COEs to improve quality and patient-centered care. This chapter contains the case study methodological context, the role of the researcher, the participant selection logic, data collection and analysis plan, issues of trustworthiness, and ethical considerations of this study.

Research Design and Rationale

I aimed to identify and select individuals who were leaders of wound care COEs, within the same company, during the calendar year 2016. In this study I examined the leadership strategies used and the factors leaders perceived as key in fostering and maintaining cultures of excellence. I used two research questions to guide this study:

RQ1: What do leaders of wound care COEs perceive as principal factors in fostering and maintaining cultures of excellence?

RQ2: What leadership strategies do wound care center leaders use, and how do they promote quality improvement toward establishing a COE?

The central concepts of this study included patient-centered care as defined by the ACWHTR (2015), Cosgrove et al. (2013), Scholl et al. (2014), and Zill et al. (2015); and the disease-specific COE paradigm described by Eastman (2016), Kelly et al. (2015),

Mehrotra et al. (2013), and Santos-Moreno et al. (2015). Cosgrove et al. (2013) defined patient centeredness as a focal precept of health care delivery that centered patient care around health care consumers' needs, situations, preferences, and welfare. A patient-centered approach improved patient experiences and outcomes because the concept increased patient satisfaction, improved quality of care, bettered the health of populations, and decreased health care services utilization and costs (Hijazi et al., 2018; Institute for Healthcare Improvement, 2017b; Mery et al., 2017; Santana et al., 2018). Scholl et al. (2014) further defined the concept of patient-centered care by integrating 15 comprehensive features into (a) principles, (b) enablers, and (c) activities: Scholl et al. mapped these elements on three healthcare levels; micro, meso, and, macro level. By integrating and mapping the 15 features, Scholl et al. globally aligned their definition with the International College of Person-centered Medicine (2017), which defined patient-centered care as care of the person, for the person, by the person, and with the person. Zill et al. added that patient-centeredness is a core foundation of high quality health care.

COEs provide higher quality care at reduced costs (Kelly et al., 2015; Mehrotra et al., 2013; Santos-Moreno et al., 2015). Kelly et al. (2015) affirmed that health care COEs sought to increase the effectiveness of clinical procedures, decrease health care associated risks, and improve patient outcomes. COEs attain their designation based on comprehensive evidence-based criteria, including; volume of encounters, provider education, utilization of electronic physician order entry, performance on key quality indicators, case management, and patient-nurse ratios (Mehrotra et al., 2013; Nickitas &

Mensik, 2015). Moreover, COEs aim to achieve high quality health outcomes from suitable and minimal use of resources (Santos-Moreno et al., 2015).

Effective leadership strategies further patient-centeredness and move a center toward excellence. In this study I used the FRLT to recognize effective leader styles that fostered cultures of excellence. The FRLT is comprised of nine elements and encompasses behaviors of transformational, transactional, and laissez-faire leadership. Witges and Scanlan (2014) suggested that transactional components within the FRLT facilitated transformational outcomes. According to Loughead (2017), effective leaders would display a broad diversity of leadership behaviors; by fully understanding the elements of the FRLT, leaders can use transactional actions as a basis for attaining transformational leadership habits. Whether through the contingent reward or the transformational leadership style of the FRLT success required follower motivation (Raziq et al., 2018).

I used qualitative research to capture leader' views, mindsets, behaviors, and perceptions. Hoang-Kim et al. (2014) asserted that the qualitative tradition can strengthen research context insufficiently understood or unclear; and can permit in-depth analysis of interactions by listening to the voices of contributors (Hoang-Kim et al., 2014). Qualitative research permits researchers to examine participants in their natural environment to achieve a better perception of the factors influencing their situation (Yin, 2013). I applied the qualitative research approach because this method afforded a means to address the research questions: detailed information collected from participants could add to the body of knowledge regarding effective leadership strategies in a disease-

specific COE. A quantitative method was not suitable for this study because the quantitative research method tests a theory or hypothesis and requires numerical and statistical data (Foley & Timonen, 2015; Silber et al., 2014): I did not test a theory or hypothesis, nor was numerical data collected for statistical analysis. The mixed methods approach was not applicable for this study because mixed method studies use text and statistical analysis (Goldman et al., 2015; Pokorná & Leaper, (2015). In this research I focused on the perceptions and experiences of the contributors; thus, neither the quantitative nor mixed methods approach was appropriate for this study because both use statistical data.

The main qualitative inquiries are case study, ethnography, grounded theory, narrative, and phenomenology. A single, exploratory case study was the most suitable design for this study. Case study exploration, as defined by Hoang-Kim et al. (2014), is an in-depth study of a system utilizing diverse data collection resources, where the researcher arranges the system within a broader context or setting. The intent of case study methodology is to answer the "how" and "why" of a phenomenon. A qualitative case study design enables researchers to comprehensively examine real life environments for a specific phenomenon (Cronin, 2014). Case studies assist examination of long-term, associated events, as opposed to discontinuous events (Yin, 2013). I used a case study approach because I aimed to explore why or how an existing experience or phenomenon transpired. Yin (2013) noted that if the researcher addressed the *why* or *how*, there would be inconsequential impact or less bias from the researcher. I relied upon responses to semistructured open-ended questions from leaders of wound care COEs who work within

the same company. Yin (2013) advocated the use of a case study design when the researcher cannot manipulate the behavior of participants in the study, and when the intent is to explore contextual conditions that are relevant to the phenomenon under study. Yin also encouraged the use of documents and records to further inform case studies. I examined relevant public documents to further inform this study. During data collection I did not include nor examine any proprietary company materials or documents that pertained to the participants' experiences. In this study I aspired to better understand how wound center leaders implement strategies to foster COEs; and why leaders of wound care COEs perceive certain factors as important in fostering and maintaining cultures of excellence. The case study design permitted an in-depth exploration of a single leadership phenomenon (Mariotto, Zanni, & de Moraes, 2014). I considered the case study method the best approach in this instance. I applied a case study approach to better explore and describe in-depth leadership strategies that addressed the problem and answered the research questions.

A further reason the case study method was the ideal approach for this study is that numerous researchers effectively used this approach in the past to examine various healthcare leadership phenomena. Higgins et al. (2014) used the case study methodology to successfully examine how specific factors influenced medical provider's ability to perform leadership roles. Moreover, Higgins et al. effectively explored why these factors were important to the providers' leadership role. Jung and Shah (2015) employed a case study approach to demonstrate how data collection aided the calculation of outliers relevant to delayed wound healing. Jung and Shah also explored why outliers were

potentially useful in advancing wound healing. In another case study, Elf et al. (2017) examined why a value-based approach to patient care might place greater demands on the healthcare system and increase fragmentation of care. Further exploration by Elf et al. demonstrated how healthcare systems collaborated beyond organizational boundaries to develop patient-centered measures that avoided healthcare fragmentation.

Other qualitative designs I considered were: ethnography, narrative, phenomenology, and, grounded theory. Ethnographic inquiry was not suitable for this study because according to Eika et al. (2015) investigators use ethnography to examine a culture of individuals to obtain detailed perspectives of their customs, behaviors, and lifestyles. I did not use narrative inquiry because narrative research involves biographic accounts from individuals. Hoang-Kim et al. (2014) elucidated that narrative inquiries capture participants' lived experiences through narrated self-reflection and autobiographies. Phenomenological inquiry helps the researcher elucidate the human experience from the beliefs of those experiencing the phenomenon (Ezeobele et al., 2014); therefore, for this study, the phenomenological design was less fitting. I did not consider grounded theory inquiry because my goal was not to discover or build a theory According to Foley and Timonen (2015) a grounded theory approach assists the researcher in building a theory. I used the case study design for this study because I focused on one health care company; furthermore, according to Cronin (2014) the case study approach allows for in-depth focus on the context of the research within the boundary of a health care organization.

Role of Researcher

The role of the researcher is to gather and evaluate data, accurately relate findings, preserve confidentiality of participants in the study, separate personal beliefs, perceptions, and morals (Cornelius, 2014), and conduct research that adheres to ethical boundaries. According to Erlingsson and Brysiewicz (2013), the qualitative researcher is the research instrument, and is an integral part of the study. My role as the researcher in this study included collecting, organizing, and analyzing data. I served as an instrument of data collection, conducted participant recruitment, emailed participant questionnaires, and analyzed findings to perform this study.

In this study I explored the factors and strategies wound care COE leaders perceived as important in promoting and maintaining COE status and how those factors and strategies might assist other leaders in the development of wound care COEs. At the time of the study, I worked in the same company as the research participants and functioned in the role of leader of a wound care COE. I did not include my work site in the study. As a leader of a wound care COE for the past 10 years, I was familiar with the operational and clinical practices promoted in wound care programs across the nation that operated within the company of the participants under study. I had no personal or ongoing professional relationship with the participants, nor had any supervisory relationship with the participants. While the likelihood of experiencing a previous encounter with some of the prospective participants in the unit of analysis, during business or professional activities might have existed, I did not possess any managing relationships comprising positions of authority with the prospective participants.

Umeokafor (2015) posited that acknowledging and detaching from potential relationships during the study aids in controlling any emerging biases and personal responses; therefore, I avoided relationships with participants in the study. A possibility for manipulation may exist when participants and the researcher have comparable roles and responsibilities in their place of work (McDermid, Peters, Jackson, & Daly, 2014). I observed the Belmont principles to control any personal bias. The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research created the Belmont Report for the protection of human subjects of research. Researcher bias may be managed when the researcher observes the Belmont principles of respect for persons, beneficence, and justice (U.S. Department of Health and Human Services, Office for Human Research Protections, 2016). In this study I maintained professionalism within the confines of the Belmont principles to protect the rights of the research participants. When a researcher is a constituent of the company studied, the researcher may be engaged in the company's intricacies and possess a sense of mindfulness and understanding of the company (McDermid et al., 2014); thus, my experience as a leader of a wound COE proved beneficial to this qualitative study. I was a leader of a COE within the same company as the research participants: I had applied experience and knowledge that helped identify leadership styles that could improve outcomes, not only in other wound care centers, but across other health disciplines which may make the information meaningful to all involved stakeholders.

Data collected through questionnaires ought to expose study participants' reality within their culture, and be unhindered by researcher bias (Haahr, Norlyk, & Hall, 2014).

I used bracketing to elucidate my prior experience and knowledge about the phenomenon. Sorsa, Kiikkala, and Åstedt-Kurki (2015) described bracketing as a process that researchers apply to help fully disclose their background, or to intentionally use their personal history as a research tool. Bracketing is a practice through which the researcher defers or sets aside bias, notions, perceptions, thoughts, and recognized theory or beliefs to explore the research phenomenon under another impartial lens and collect data as revealed (Sorsa, Kiikkala, & Astedt-Kurki, 2015). It is imperative for the researcher to understand how intrusion of one's personal beliefs could influence the research data collection and analysis. I took every precautionary process to report the research findings through the lenses of the study participants.

Another process that helps researchers remain cognizant of their feelings and prejudice on the subject matter is epoché. Epoché is a process in which the researcher is mindful of biases or prejudices (Houghton, Casey, Shaw, & Murphy, 2013). Abma and Stake (2014) recommended that the researcher implement an outsider view to remove any bias that might hinder the study: because I was affiliated with the case under study I adopted an outsider viewpoint during the data collection process of the study. Moreover, I retained a bias-free position during this study because I possessed over 10 years of leadership experience in a wound care COE.

The way questions are worded affect participant responses. I included the use of semistructured, open-ended questions sent via email as a safeguard against bias. I did not offer incentives for participation in this study. Recognizing there might be unknown complexities and particularities of the case in advance, I looked for emergent issues

during the study. Abma and Stake (2014) described unexpected, compelling problems that emerge during the research study as emic issues; and anticipated issues, or those brought into the study, as etic issues: these may serve as an initial conceptual structure for the study. Researchers apply etic concerns; whereas, emic concerns emerge or develop (Abma & Stake, 2014). Epoché and bracketing are conscious processes permitting the researcher to set aside firsthand experiences or beliefs concerning the issue under study, and to facilitate new knowledge concerning the study phenomenon (Abma & Stake, 2014; Houghton et al., 2013; Sorsa et al., 2015). Because I had firsthand experience I used bracketing and epoché to avoid making assumptions and judgments about the phenomenon.

Methodology

I used a qualitative case study design. Yin (2013) described the case study as an empirical inquiry, which examines an existing phenomenon in-depth and within its real-life setting; furthermore, boundaries between the phenomenon and context are not well-defined. The case study inquiry manages circumstances in which the number of variables under study significantly exceed the data points or cases, due in part to the complexity and contextual nature of the cases (Yin, 2013). I confirmed a case study approach as a viable choice among the other methodological options because this approach gave me the ability to deal with complexity and contextual conditions. This approach allowed me to conduct an in-depth exploration of a single case by examining the operational perceptions and leadership strategies of leaders of wound care COEs employed within the same company. I collected data using semistructured, open-ended questions. I performed a

comprehensive data collection approach by using a case study database. The database included: (a) computer generated random number lists; (b) Appendices A and B; (c) participant invitation spreadsheet; (d) completed email questionnaires; (e) informed consent form; (f) letter of cooperation from the study company, (g) a letter of invitation; (h) participant tracking log; and (i) researcher notes, public documents, scanned articles, codebook, data queries and preliminary analyses. Baskarada (2014) encouraged use of a researcher case study database, which enables researchers to develop an audit trail from initial data collection through final conclusions.

Participant Selection Logic

I randomly and selected participants due to their role as leader of a wound care COE within the same company for the calendar year 2016. I used StatTrek, a random number generator (StatTrek, 2017), to randomly select participants for this study. Purposeful selection of the participants permitted me to invite individuals who possessed experience with the phenomenon of fostering a culture of excellence. Erlingsson and Brysiewicz (2013) stated that purposeful sampling provides the researcher with participants who are well acquainted with the phenomena studied. I emailed a letter of invitation to each randomly selected wound center leader. I used each individual leader of a wound care COE as the unit of analysis. The study participants worked in different geographic locations across the United States which required email data collection arrangements. In this study, participants had a minimum of 2 consecutive years of experience in an outpatient wound care COE at the study company. Participants functioned in leader roles, which involved leadership decisions and implementation of

strategies regarding quality and improvement, within a wound care COE. Throughout several wound care organizations, the requirements for designation as a COE require meeting or exceeding established quality metrics for a minimum consecutive period (Comprehensive Healthcare Solutions, Inc., 2017; Healogics, Inc., 2017a; Healogics, Inc., 2017b; RestorixHealth, 2017). Participants for this study demonstrated they met the criteria if they had been a leader in a COE within the study company for two consecutive years. Wound management companies typically publicize recipients of wound COE awards and may list the quality requirements (Healogics, Inc., 2017a; RestorixHealth, 2017; VOHRA Wound Physicians, n.d.; "Wound Care Earns," 2016; "Wound Center Earns Excellence," 2016; Woundtech, 2017).

Following Institutional Review Board (IRB) approval from Walden University to conduct the study, I contacted potential contributors for participation in the study via email from the researcher's Walden email address. In the initial contact I afforded each participant a clear account of the purpose of the study, the estimated time commitment for study participation; a formal invitation to participate, and an informed consent form with a requirement to review, acknowledge, and return consent by email to the researcher. Due to diverse geographic wound center locations I used email as the primary method of communication. During the initial contact with the study participants, I provided the following: (a) clear explanation concerning the purpose and scope of the study, (b) copy of participation invitation, (c) informed consent form; and (d) an estimate of the time commitment required to participate in the study. During this time, I replied to

any questions about the purpose of the study, reviewed participant confidentiality, and discussed any prospective conflicts of interest.

Sample size. There are no explicit imperatives when determining a suitable sample size in qualitative case study research, but there are practical guidelines. Sample size in a qualitative case study approach is determined by the time allocated, existing resources, and the aim of the study. Boddy (2016) remarked that the determination of an appropriate sample size in qualitative research depends on the context and scientific paradigm of the study. A representative sample should accurately represent the population studied. Marshall, Cardon, Poddar, and Fontenot (2013) recommended a range of 20-30 interviews for grounded research and 15-30 interviews for case studies; additionally, Boddy iterated any qualitative study sample size greater than 30 in-depth interviews is cumbersome to manage and evaluate.

Latham (2013), and Waern, Kaiser, and Renberg (2016) illustrated the suitability of utilizing a predetermined sample size of 30 and seeking saturation before closing the data collection. Boddy (2016) and Marshall et al. (2013) suggested data saturation is useful in terms of determining sample size in qualitative research. Data saturation is the point at which no new material or themes emerge in the data from additional interviews or cases. Fusch and Ness (2015) stated sufficient data saturation results in quality research and provides robust content validity. The objective of a study ought to include what determines data saturation (Fusch & Ness, 2015). Data saturation occurs when there is sufficient information to duplicate the study, the ability to attain additional information is no longer probable, and when further coding is no longer practical (Fusch & Ness,

2015). Approximating the number of participants needed in a study to attain saturation relies on several factors, including: data quality, scope of the research, nature of the issue, the quantity of relevant information acquired from each participant, and the number of interviews per participant (Morse, 2015). During calendar year 2016 in the company under study 173 wound centers achieved COE status. In this study I used a predetermined sample size of 30 participants; I sought data saturation before closing data collection, and I verified findings as I examined each case.

Instrumentation

I was the primary data collection instrument for this study. I assessed several leadership instrument tools for potential inclusion in this study, including the Multifactor Leadership Questionnaire (MLQ) developed by Avolio and Bass (2004); Transformational Leadership Behavior Inventory (TLI) developed by Podsakoff, MacKenzie, Moorman, and Fetter (1990); and the Leadership Practices Inventory (LPI) tool developed by Posner and Kouzes (1994). However, none of the reviewed instruments were specifically applicable for this study. Past research literature demonstrated the effective use of researcher designed questions in conducting qualitative data procurement (Dollins, Krust Bray, & Gadbury-Amyot, 2013; Krukowski, Conley, Sterling, & Rainville, 2016; Moran et al., 2016). I developed questions based on a review of the literature and my experience as leader of a wound COE. I developed questions aimed to answer the research questions of what leaders of wound care COEs perceived as principal factors in fostering and maintaining cultures of excellence, and what leadership strategies wound care center leaders used to promote quality improvement toward establishing a

COE. Participants were free to answer the semistructured, open-ended questions as they desired.

Questionnaires. The primary source of data for this case study was a researcher produced semistructured, open-ended questionnaire completed via email. The most important data source in case study design is the interview because it allows for direct focus on research questions through the perspectives of participants (Yin, 2013). Because of the geographical diversity of the study participants, I collected data using an emailed questionnaire rather than conducting interviews. The Questionnaire Protocol (Appendix A) provided the process and a checklist. The protocol permitted adequate examination of the problem by providing the issues and topics compiled from the research questions and conceptual framework. The questionnaire protocol listed all the individual questions sequentially in a structured open-ended format. The semistructured framework permitted flexibility for participant responses and provided a high degree of applicability to the topic while remaining receptive to the participant (McIntosh & Morse, 2015). The semistructured, researcher-designed collection tool guided the questionnaires and allowed for participant accounts regarding their experiences with leadership strategies used to promote cultures of quality and excellence in wound COEs.

The advantages of a semistructured questionnaire for this study included: (a) improved accessibility to participants who lived in different geographical locations, (b) sole communication that eliminated the challenges associated with visual cues, and (c) increased efficiency in terms of time and labor. As indicated in the conceptual framework, the research focused on leadership strategies that effectively produce cultures

of excellence in the outpatient chronic wound care setting. In this study I explored the strategies used by wound care center leaders to promote a culture of excellence through the contextual lens of FRLT, patient-centeredness, and the COE model. I developed the conceptual framework based upon the integrative model of patient-centered care (Scholl et al., 2014; Zill et al., 2015), the disease-oriented COE model (Eastman, 2016; Kelly et al., 2015; Mehrotra et al., 2013; Santos-Moreno et al., 2015), and Avolio and Bass's FRLT. The FRLT proposes leaders exhibit behaviors within the three perspectives of transformational, transactional, and laissez-faire leadership (Avolio & Bass, 1995; Witges & Scanlan, 2014): this provides health leaders a channel to transform organizational behavior and culture by advancing processes that engage the entire organization in the effort (Institute for Healthcare Improvement, 2017c). Given the broad geographic range of the participants, email response questionnaires served as the primary data collection source. I provided each participant with the questionnaire to complete via email and asked they return the completed questionnaire within 5 business days of receipt.

Documentation. I examined publicly available documents as they related to the study to further validate participants' findings. I used documentation that supported the research questions. Baškarada (2014) mentioned that the use of multiple sources of evidence improves construct validity by providing multiple measures of the same phenomenon. The strengths of documentation are: permanency for reviewing, level of specificity, and increased data availability (Yin, 2013). Relevant documentation may include documents, archival records, direct observations, and physical relics (Baskarada, 2014). The documents I obtained for this study included email communications, list of

COE award winners, publicly available organizational ethics and compliance documents, and newspaper articles. The documents supported understanding of measurable metrics for COE designation, identified 2016 COE wound centers, and provided clarification of data as necessary. There were challenges with accessing a broad range of documentation that would have been helpful as evidence: this was due to the proprietary nature of most company documents. I included notes, memos, and a journal as researcher-generated data: these assisted with illuminating additional insight into the questionnaire responses and general case study experiences.

Content validity. The validity of qualitative research indicates the degree to which findings accurately represent the phenomenon explored (Yates & Leggett, 2016). I established content validity by respondent validity which afforded the participants the chance to review the data before submission. I engaged multiple methods of data collection such as researcher notes, memos, and journal entries to further establish content validity through data triangulation.

Recruitment, Participation, and Data Collection

After IRB approval from Walden University, I commenced participant recruitment. I recruited participants for the study from a list of wound centers that achieved COE status in calendar year 2016; this was a publicly available document provided by the study company, and all participants worked for the study company. I randomly selected participants via a computerized random number generator; I sent emails to leaders to establish their willingness to participate in the study. I gathered participant email addresses from the company directory and assigned each leader, who

agreed to participate, a unique alpha numeric identifier (P1, P2, P3, etc.) upon submission of their completed questionnaire. I recruited 30 randomly and purposefully selected participants for the study. The frequency of the data collection event occurred over one span of time until I recruited 30 participants. If I did not recruit 30 participants initially I randomly selected additional leaders from the 2016 COE awards list until I reached the sufficient number of participants. Data collection occurred from November 29, 2017 to April 13, 2018. Participants not meeting the inclusion criteria received an email notification of their exclusion, a thankful acknowledgment for their reply to the invitation letter, and an explanation of why they did not meet inclusion criteria. Data collection did not involve any patient details. I de-identified all participant information and used alpha numeric identifiers for participant anonymity. I utilized a participant tracking tool (Appendix C) to record data collection. For the data collection process, I used the Questionnaire Protocol (Appendix A). I collected data through individual email questionnaires. Semistructured, open-ended questions helped elicit meaning from wound care COE leaders regarding their experience with leadership strategies that promote a culture of quality and excellence within the outpatient wound center. I estimated 45 to 60 minutes as the expected time for each participant to complete the emailed questionnaire. McIntosh and Morse (2015) commented that semistructured interviews allow for subjective responses from individuals about an experience or phenomenon they have undergone. McIntosh and Morse further iterated that researchers use a detailed semistructured guide when there is adequate objective knowledge about the experience, but subjective knowledge is deficient. In this study the questionnaire protocol functioned

as a standardized guide for data collection. I employed extensive notetaking and journaling throughout the study. I projected a period of four months for the completion from recruitment to data collection.

Participants exited the study through a series of steps. I thanked participants for their time and participation in the research and mentioned that their participation aided me in completing my study. I acknowledged participants via email when their primary role in the study ended. My acknowledgement to the participants of completion of the questionnaires signified the completion of data collection.

Data Analysis Plan

In this qualitative case study, I explored leader perceptions and leadership strategies as they related to fostering and maintaining a culture of quality and excellence in the wound center. I examined data to answer two research questions: (1) What do leaders of wound care COEs perceive as principal factors in fostering and maintaining cultures of excellence; and (2) What leadership strategies do wound care center leaders use, and how do they promote quality improvement toward establishing a COE. Qualitative data is subjective in nature and includes an exploration of participant thoughts and beliefs, and an understanding of a specific phenomenon (Baskarada, 2014). I mitigated bias by using standardized questions for each participant. I gave participants the same questions, in the same order. I consciously avoided any personal researcher bias during analysis of information.

During analysis I drew conclusions from data by relying on theoretical and conceptual propositions, using systematic techniques, exploring any opposing

explanations, and abstracting concepts from each unit of analysis (Baskarada, 2014). I explored the research questions systematically: (a) I collected data via email questionnaires and documents, (b) I enacted data triangulation, (e) I coded textual data manually and then analyzed using NVivo 11 software (QSR International, n.d.), (f) I reviewed emerging information for each case for data saturation, and (g) after data analysis I formatted each case into a Word document.

Discrepant cases can precede unanticipated findings which may reinforce theory. Before completing the final document, researchers should look for discrepancies in participants' views or "negative cases" to reinforce their arguments (Anney, 2014). I sought for discrepant cases in the study; I did not find any apparent discrepant participant views or negative cases, nor did I identify any contradictions. Anney (2014) noted that validating negative cases improves the credibility of the study. I performed data analysis following the steps shown in Figure 2, summary model for data analysis plan.

Issues of Trustworthiness

I addressed issues of trustworthiness by managing the credibility, transferability, dependability, and confirmability of the study. Enhanced credibility and trustworthiness of the data occurs using a standardized approach to data collection (Anney, 2014; Baškarda, 2014; Kornbluh, 2015). Pinsky (2015) reinforced the value of an interview protocol to ensure consistency during the different interviews. I used a Questionnaire Protocol (Appendix A) to ensure a standardized format in the email questionnaires during data collection and for subsequent reflexive journal notes. I created an audit trail to

provide an account of research activities and decisions to show how I collected, recorded, and analyzed data. Anderson (2017) stressed the necessity of an audit trail to demonstrate

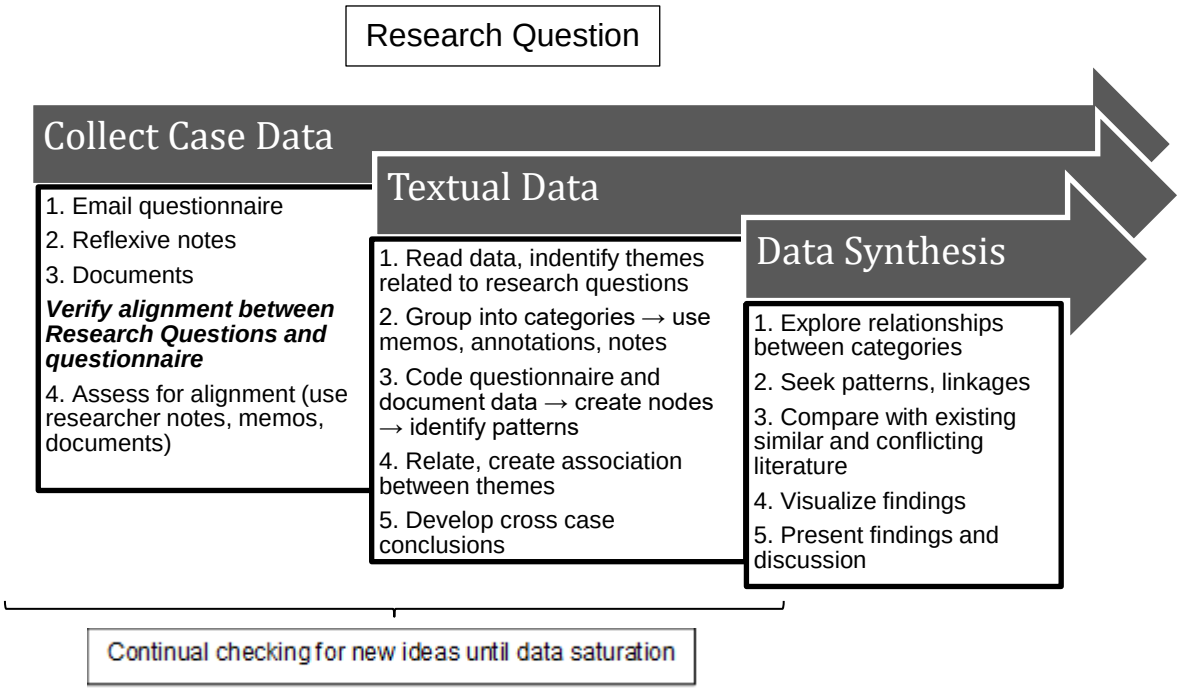

Figure 2. Summary model for data analysis plan. Adapted from "Data analysis in qualitative research: A brief guide to using NVIVO," by L.P. Wong, 2008, *Malaysian Family Physician, 3*(1), p. 15.

thoughtful identification and application of research strategies in the study. I constructed and utilized a Case Study Protocol (Appendix B) prior to data collection which contained the survey instrument, procedures, and general guidelines.

Credibility determines if the research findings denote believable information derived from the participants' original data and is an accurate construal of the participants' original views (Anney, 2014). Credibility strategies used in this study included triangulation, reflexivity, standardized questionnaires, saturation, and peer debriefing. I achieved triangulation using reflexivity and diverse sources of data that

included email questionnaires, news articles, and documents. The recognized subjectivity of qualitative research necessitates discussion of the research process and findings according to the views and contextual lens of the researcher (Anderson, 2017). In this study, I used a reflexive journal to reflect on, thoughtfully interpret, and plan data collection. I used standardized questionnaires containing semistructured questions, a questionnaire protocol, and a case study protocol to develop standardized processes. I sought data saturation throughout a data set that encompassed a thick, rich array of concepts and complex themes. I achieved saturation in this study when no additional information or evidence emerged from the data, or when further data analysis added very little to the overall framework. Anderson (2017) and Anney (2014) remarked that feedback from the researcher's dissertation committee aids the researcher in enhancing the quality of the inquiry findings. I presented the findings of this study to my dissertation committee for feedback.

Transferability refers to the extent to which the findings of a qualitative study transfer to other settings with other respondents (Anney, 2014). I achieved transferability in this study using rich, thick descriptive data and purposive sampling. I included rich and extensive contextual and methodological details in the report. I elucidated all research processes from data collection to the final report, which aided replication of the study by other researchers. I provided an in-depth description which conveyed a sense of participants and their environment. I used sufficient data to support meticulous interpretation of in-depth concepts and findings as a basis for potential application to other individuals, settings, and contexts. Purposeful sampling allowed for the selection of

individuals grounded on specific aims associated with answering the research questions of this study.

I used an audit trail and data triangulation to demonstrate dependability. The audit trail accounted for all the research decisions and activities. According to Anderson (2017) an audit trail describes and documents all steps and decisions made in the research process. I included the following documents in the audit trail: raw data, questionnaire review notes, memos, news articles, and documents. Through use of multiple sources of evidence such as email questionnaires, researcher reflexive journal, publicly available documents, and websites I completed data triangulation.

Confirmability establishes that data and analyses of findings originate from the data (Anney, 2014). I established confirmability using purposeful random sampling, and a reflexive journal. I documented all events that occurred during data collection and analysis, and all personal reflections related to the study. An audit trail and data triangulation added to the confirmability of this study.

Ethical Procedures

Due to the character of qualitative studies the interaction between the researcher and participant can be ethically challenging (Sanjari, Bahramnezhad, Khoshnava Fomani, Shoghi, & Ali Cheraghi, 2014). The relationship between the researcher and participant in a qualitative study produces various ethical concerns. Sanjari, Bahramnezhad, Khoshnava Fomani, Shoghi, and Ali Cheraghi (2014) cited that qualitative researchers encounter problems such as respect for privacy, formation of honest and open exchanges, and misrepresentations. Qualitative research, known as human science research, answers

the *how* and *why* of human behaviors, experiences, and beliefs. The researcher must protect the rights of human subjects when conducting any research that includes human subjects. The Belmont Report instituted ethical principles for the conduct of human science research, which included respect for persons, beneficence, and justice (U.S. Department of Health and Human Services, Office for Human Research Protections, 2016). Researchers must comply with provisions listed in the Belmont Report when performing human science study which include: informed consent, assessment of risks and benefits, and selection of subjects. Throughout this study I committed to preserving data confidentiality and conducting ethical research. I completed the National Institutes of Health (NIH) training course, “Protecting Human Research Participants," (February 15, 2017; Certification Number: 2326615). Prior to data collection I submitted the Walden University Institutional Review Board (IRB) application and gained approval before inviting participants to the study.

For this study I conducted the research in my own company at sites other than my own; I did not include my site in the study. I obtained a letter of cooperation from the study company. Prospective participants received a letter of invitation which provided an introduction and brief overview of the study. The researcher did not wield any authority over any of the participants in the study. Each participant selected consented to an Informed Consent document prior to participation which provided: (a) a brief description of the study, (b) background information, (c) voluntary and non-compensatory nature of study, (d) risks and benefits of being in the study, (e) confidentiality of participant responses and privacy measures, and (f) contact and questions information. I selected

participants for the study who were over 18 years of age. I informed participants of their rights as a voluntary participant, the right to decline participation, and the right to withdraw at any time from the study. I conducted ethical recruitment according to the approved IRB (11-29-17-0543340, expiration November 28, 2018) granted by Walden University.

Prior to data collection, I assessed potential risks that concerned physical, legal, psychological, or socio-economic harm to participants. Throughout the data collection process, I utilized a password-protected electronic file storage method accessible only to me. I immediately saved email data in a Word format in my electronic research database. I used a password-protected computer hard drive as the primary source of electronic data storage: password protected Cloud storage and a portable USB drive served as backup storage. Paper documents, flash drives, and other sources of hard data remain secured in a fire-proof locked storage cabinet for a period of 5 years. After 5 years, I will destroy data using a secure disposal service such as Shred One (Blau, 2016) and permanently delete electronic data from all hard drives and portable USB drives.

I addressed protection for confidential data, storage methods, and completed study dissemination in the informed consent document. Procedures to address ethical challenges included: (a) utilization of alpha numeric identifiers for participant confidentiality, (b) data collection occurred at sites other than the researcher's, (c) alignment among research questions, planned analyses, and data collection methods, and (d) data remains stored securely for at least 5 years upon completion of dissertation.

Summary and Transition

In Chapter 3, I described the use of a qualitative case study to explore what leaders of wound COEs perceived as principal factors in fostering cultures of excellence and what leadership strategies wound center leaders used, and how they promoted quality improvement toward establishing a COE. This chapter presented each aspect of the research method: (a) research design and rationale, (b) role of the researcher, (c) methodology, (d) participant selection logic, (e) instrumentation, (f) recruitment, participation, and data collection procedures, (g) data analysis plan, (h) issues of trustworthiness, and (i) ethical procedures. I clearly described my steps and plans relevant to the study. A qualitative research design helped focus data on the perceptions of wound center leaders regarding factors and strategies that effectively promote and move a wound center toward excellence. I collected data using semistructured questionnaires, publicly available documents, news articles, and websites pertinent to the study. I described methods suitable for answering the research questions. I analyzed each unit of analysis independently for emerging themes and searched for beliefs and experiences shared by other participants. In Chapter 4, I explained the findings from the data collection and described evidence of trustworthiness. Chapter 5 discusses how the data collected may be helpful to leaders of wound centers and other health care services to make strategic leadership decisions to promote cultures of quality and excellence toward establishing disease specific COEs.

Chapter 4: Results

Introduction

The purpose of this qualitative case study was to explore strategies wound center leaders utilized to promote COEs in chronic wound treatment. There was a need to know more about what wound care leaders perceived as essential elements in influencing a culture of quality and excellence. I used two research questions to guide this study:

RQ1: What do leaders of wound care COEs perceive as principal factors in fostering and maintaining cultures of excellence?

RQ2: What leadership strategies do wound care center leaders use, and how do they promote quality improvement toward establishing a COE?

Chapter 4 includes information regarding the research setting, participant demographics, data collection, and data analysis. I discussed evidence of trustworthiness by examining credibility, dependability, confirmability, and transferability of the study. I present the results of questionnaire responses from leaders of wound COEs and discuss as they relate to the research questions. The chapter concludes with a summary of the study results.

Setting

All participants in the study functioned as wound COE leaders within the same wound care company during calendar year 2016. Research participants worked in various geographical locations across the United States. I conducted all communication using email.

Demographics

A total of 42 individuals agreed to participate in the study. Of the 42 consenting individuals, 31 individuals completed and returned the study questionnaire. All 31 participants were leaders of wound COEs within the same company during calendar year 2016 and had a minimum of 2 consecutive years of experience in a wound COE. Participants were from 23 different states across the United States. The sample consisted of 20 female participants and 11 male participants. Most participants held master's degrees (55%), 11 participants (35%) had bachelor's degrees, one participant (3.3%) had an associate degree, one (3.3%) participant had a doctorate degree, and one (3.3%) did not hold a degree.

Data Collection

I invited potential participants from a 2016 company list of 173 wound COEs. Using a random number generator, I collected data over a span of 19 weeks until I acquired 30 participants. I collected data from 31 participants via emailed questionnaires. A participant tracking tool provided a trail of each participant contact, consent, and completion of study questionnaire. After attaining the planned sample size of 30 questionnaires, I received a later questionnaire that I included in the study. I saved completed questionnaires as a Word document in my electronic case study database.

Data Analysis

Data analysis began with verifying the research questions alignment to the questionnaire as shown in Table 1. I used researcher notes, memos, and company

documents to verify alignment. Initial code creation occurred at the beginning and throughout data collection to identify patterns and themes.

Table 1

Research Question Alignment to Questionnaire

Research Question (RQ)	Questionnaire Questions (Q)
RQ1: What do leaders of wound care COEs perceive as principal factors in fostering and maintaining cultures of excellence?	Q1 – Perceived strategies for organizational improvement Q2 – Perceived necessary for implementation Q4 – Organizational practices to sustain excellence Q5 – Measurable metrics Q6 – How you establish improvement opportunities Q9 – Proactive or preventive strategies most effective Q10 – Additional comments
RQ2: What leadership strategies do wound care center leaders use, and how do they promote quality improvement toward establishing a COE?	Q3 – Leadership styles and strategies utilized Q4 – Organizational practices to sustain excellence Q5 – Measurable metrics Q6 – How you establish improvement opportunities Q7 – Processes to assess quality improvement Q8 – How do you correct quality issues Q10 – Additional comments

During data collection I used a standardized process to evaluate development of repeat patterns and themes. During the initial reading of participant questionnaires, I observed recurring themes. I analyzed participant responses manually using thematic data analysis. In similar fashion to the methods of McConalogue, Kinn, Mulligan, and McNeil (2017) data analysis entailed three steps: familiarization with questionnaire responses for each question, development of explanatory codes for each question response to construct a coding framework, and categorization of codes into themes. To sustain an inductive

method, I utilized NVivo 11 Pro for Windows, a computer assisted qualitative data analysis program, for data storage and further analysis (QSR International, n.d.).

Thematic Data Analysis

I read each questionnaire several times for accuracy and to gain knowledge of the participants' responses. I manually developed initial codes and wrote the codes in a journal. I used open coding to create a description that I reviewed multiple times. I reviewed each response to each question for emergent themes. Using NVivo 11, I analyzed questionnaires to further determine codes and themes. I used word frequency analyses and word clouds to illustrate the number of times the words occurred in answers to the questions. I created categories and then arranged data into subcategories. I organized data into a group that showed comparison amongst them. I read the participant responses multiple times to form themes constructed on categories. I merged same categories from each questionnaire to ensure an unbiased perspective of COE leaders' perceptions as described by each leader.

Using NVivo after the initial manual findings provided a means to identify emergent themes. I adjusted coding categories to present the most relevant data. Relating and correlating the data within the constructs of the FRLT, the conceptual framework of COEs, and patient-centeredness assisted me in answering the study's research questions. The themes I identified contributed to the development of a rich, thick understanding of the perceptions of wound center leaders and the strategies they used to promote cultures of excellence.

Codes

I used open coding to look for distinct concepts and categories in the data. During the coding process I eliminated irrelevant codes, combined similar codes, and furthered refined and described the codes. The codes occurred throughout the participants' responses in the questionnaire and were of importance to answering the study's two research questions. Use of these codes and the emergent themes from the data allowed for an accurate and exhaustive analysis of the participant's responses to each question on the questionnaire. The predominant codes that emerged from the data were: (a) effective leadership, (b) focus on quality, (c) effective communication, (d) use of quality metrics, (e) positive work environment, (f) patient-centered, (g) routine meetings, (h) action plans, (i) teamwork, (j) set expectations and goals, (k) right staff, database reports, (l) education, (m) staff accountability, (n) buy in, (o) operational metrics, and (p) continuous monitoring.

Table 2 presents the most frequent codes developed and used in the data analysis. All participants provided responses that were either coded under focus on quality, effective communication, use of quality metrics, or patient-centered. For example, concerning effective communication, P10 stated "I believe communication is the number one reason morale and processes break down." Referring to use of quality metrics, P15 declared, "Continuous review of key performance indicators, patient satisfaction, and employee satisfaction. When issues are identified performing a root cause analysis, and implementing PDCA (Plan, Do, Check, Adjust or Adopt)." Likewise, referring to focus on quality, P31 stated that "Review of data, specifically outcomes, patient satisfaction,

medical record audits, trends noticed by staff, event reports (if any)" were integral in establishing opportunities for quality improvement. And, regarding patient-centered, P12 avowed, "Lastly, if you put the patient first, everything else will take care of itself." To the best of my knowledge, no discrepant cases emerged through data analysis.

Table 2

Frequent Codes Used in the Study and Their Occurrence by Participant

Code name	Number of participants	Number of times coded
Effective leadership	30	143
Focus on quality	30	136
Effective communication	28	112
Use of quality metrics	28	84
Positive work environment	27	82
Patient-centered	29	72
Routine meetings	23	52
Action plans	16	42
Teamwork	21	38
Set expectations and goals	19	33
Right staff	13	29
Database reports	28	28
Education	13	24
Staff accountability	13	16
Buy in	12	15
Operational metrics	12	15
Continuous monitoring	8	15
Team engagement	8	13
Engaged employees	10	12
Servant leader	6	9
Employee satisfaction	8	8
Address issue immediately	7	8
Sharing of work	4	8
Ownership	6	7
Positive relationships	3	6
Lead by example	6	6
Feedback	6	6
No micro managing	4	5

Evidence of Trustworthiness

Credibility

To attain credibility, I recruited participants who had experience managing wound care COEs. Credibility strategies used in this study included triangulation, reflexivity, standardized questionnaires, saturation, and peer debriefing. I achieved triangulation using reflexivity and various sources of data that included email questionnaires, news articles, and documents. The recognized subjectivity of qualitative research necessitates that the research process and findings echo the views and reflect the contextual lens of the researcher (Anderson, 2017). In this study I presented findings based on the participants' beliefs and experiences knowingly influenced by my personal bias. A reflexive journal provided me a means to reflect on, thoughtfully interpret, and plan data collection. I applied standardized techniques using standardized questionnaires containing semistructured questions, a questionnaire protocol, and a case study protocol. I sought data saturation throughout a data set that encompassed a thick, rich array of concepts and complex themes. I observed data saturation in this study when no additional information or evidence emerged from the data: I reached data saturation during questionnaire 28 when no new codes emerged during the final few questionnaires. I presented the findings of this study to my dissertation committee for feedback.

Transferability

I achieved transferability in this study using rich, thick descriptive data and purposive sampling. I described the study methodology, instrumentation, and data collection process in Chapter 3. In Chapter 3, I explained all research processes which

would aid replication of the study by other researchers. I assumed that random, purposeful selection of wound COE leaders from across the United States, within the same company, would provide a wider range of workplace perspectives in different geographical settings. This allows for transferability of the study. I used purposeful sampling to recruit individuals based on specific aims correlated to answering the research questions of this study.

Dependability

I used an audit trail and data triangulation to demonstrate dependability. Houghton, Casey, Shaw, and Murphy (2013) stated that a case study database serves as an audit trail: in this study a case study database accounted for all my research decisions and activities. According to Anderson (2017) and Houghton et al. (2013), an audit trail describes and documents all steps in the research process. NVivo enhanced the rigor of this study by providing a comprehensive trail of analyses during data analysis. I used query functions in NVivo to inspect findings in an unbiased manner. Documents in the audit trail included raw data, questionnaire review notes, memos, NVivo queries, news articles, and documents. I achieved data triangulation by using multiple sources of evidence such as email questionnaires, a reflexive journal, publicly available documents, and websites.

Confirmability

Confirmability centers on establishing that data and analyses of findings originate from the data (Anney, 2014). I established confirmability using purposeful random sampling and a reflexive journal. I documented all events that occurred during data

collection and analysis and all personal reflections relating to the study. An audit trail and data triangulation added to the confirmability of this study.

Results

In this study I organized the findings into themes that emerged from participants' responses to questions on the questionnaire. Table 3 shows the alignment of each participant question with the study's research questions, and the themes identified from participant responses to each question on the questionnaire. I present the results of the study by emergent themes and their relevance to each research question. The themes that emerged from the data analysis included communication, patient centered, leadership, quality, work environment, and teamwork.

Research Question 1

RQ1: What do leaders of wound care COEs perceive as principal factors in fostering and maintaining cultures of excellence? Themes that emerged from this question were: communication, patient-centered, leadership, quality, work environment, and teamwork.

Theme 1: Communication. Most participants (28 of 31) described communication as vital in fostering a culture of excellence. The following participants' responses to questions (Q) on the questionnaire helped answer RQ1. Participant responses to Q1and Q2 on the research questionnaire mentioned communication as a factor in fostering and maintaining a culture of excellence. Participants P21, P24, and P26 cited open and honest communication as necessary to "move toward a potential solution", and to establish "open lines of communication".

Table 3

Participant Questions, Research Questions, and Themes Identified

Participant Question (Q)	Research Question (RQ) alignment	Themes
1. What strategies do you believe specifically contribute to improved organizational performance in supporting a culture of quality and excellence in your wound center?	RQ1	Communication Patient centered Leadership Quality
2. What do you perceive as necessary for successful implementation of these strategies?	RQ1	Leadership Work environment Communication
3. What leadership styles or strategies have you utilized to foster a culture of quality and excellence within your wound center?	RQ2	Leadership Teamwork Communication Work environment
4. What practices does your organization identify as critical to sustaining a culture of quality and excellence? For instance, a process or behavior you desire to see staff do repeatedly without thinking.	RQ1, RQ2	Patient centered Communication Quality Work environment Teamwork
5. What measurable metrics do you rely upon to foster a culture of excellence?	RQ1, RQ2	Quality Patient centered Work environment
6. How do you establish where opportunities exist for quality improvement in your wound center?	RQ1, RQ2	Communication Quality
7. What processes exist to gather and assess quality improvement information in your wound center?	RQ2	Communication Quality
8. How do you address and correct quality improvement issues that may impede the development of a culture of excellence in your wound center?	RQ2	Leadership Communication Quality Teamwork
9. What proactive or preventive strategies do you find most effective in supporting a culture of quality and excellence in your wound center? By prevention, I am referring to the actions you take after a quality issue has been discovered and how you preclude it from occurring again.	RQ1	Quality Communication
10. What other information could you provide on fostering a culture of excellence within your wound center that might be helpful in completing this study?	RQ1, RQ2	Communication Teamwork Leadership Work environment

Participant responses to Q4 and Q9 described communication as a specific practice to sustain a culture of excellence. P25 stated, "We follow AIDET (Acknowledge, Introduce, Duration, Explanation and Thank you) at our hospital. My team uses it often to foster that culture of communicating, being informative and have that caring relationship."

Asserting that "communication is key", P22 stated **"**When I have to have one of those **'**Why did you**'** conversations, I outline what the expectation was, what my perception/my feeling was about their actions and ask them to help me understand their viewpoint of what happened. This reinforces our trust and then we can reinvest in prevention.**"** Additionally, P19 said **"**The ideal is to have the right people on your staff, treat them with respect which includes keeping them informed, and maintaining a dialogue where everyone is free to express their opinion and offer suggestions.**"** Participants' responses to Q6 mentioned feedback from the patient, staff, and providers was necessary for quality improvement. Three participants mentioned employee and patient feedback as communication opportunities for quality improvement in their wound care centers. Three respondents mentioned feedback and communication from physicians and staff; most notably P19 who stated, "During our monthly Panel Physician meetings and our weekly Leadership meetings, an open dialogue is encouraged so that each member of the staff is comfortable in conveying areas for improvement." Eleven participants responding to Q10 mentioned open lines of communication, proactive communication, and feedback as necessary to foster a culture of excellence.

Theme 2: Patient-centered. Most respondents (29 of 31) mentioned patient-

centeredness as an important aspect in sustaining a culture of quality and excellence. Several participant responses to Q1 demonstrated a significant focus on the patient being a priority: P16 said "creating a culture where the patients are the top priority"; P20 stated "We focus on healing patients and what is best for them and are empathetic to our patient's circumstances."; and P23 declared " ensuring that when a particular metric is achieved, that a patient life and wellness is behind this measure. We are not trying to achieve a number, we are trying to achieve a quality outcome for our patients".

Putting it into perspective, P26 echoed this sentiment:

> The most important attribute is to have a team of individuals that care about the patients we treat and each other. "Patients first," needs to have meaning and something that remains a part of everyone's daily activities; from the time a patient registers, throughout the clinic process and when they check out. A patient does not need the burden of problems or situations going on within our clinic: short staffed, running behind, a staff member having a bad day, etc. The patient wants to know our sole purpose is to work with them and provide solutions that will attribute to his or her wound healing, keeping in mind their situation, and improving their wellbeing.

Participants' responses to Q4 and Q5 centered on practices and measurable metrics that contributed toward sustaining a culture of excellence. P6 expressed that "Individualized care while also following evidence based systematic approach to care" was important; while eight respondents cited a variety of processes and practices they used to promote patient centered care.

Theme 3: Leadership. As demonstrated by the participants responses, effective leadership plays a vital role in improved quality and organizational performance. Thirty participant responses to Q1, Q2, Q3, Q8, and Q10 referenced a component of effective leadership. Five participants mentioned leader transparency, while six participants mentioned leading by example. P27 said "Leadership team must lead by example" and there must be "leadership transparency." P29 stated "The Program Director, Clinical Coordinator and Medical Director all lead by example." Four participants named Servant leadership as a strategic leadership style, and four participants mentioned they did not use micro managing to accomplish their objectives. Relevant to RQ1, participants perceived robust leadership as a principal factor in fostering and maintaining a culture of excellence.

Specific leadership styles utilized by the study's participants were: transactional, democratic, participative, transformational, and servant. Other participants cited the use of coaching, mentoring, collaborating, inspiring, and motivating as leadership strategies. Whether through the contingent reward or the transformational leadership style, participants deemed follower motivation as necessary for success.

Theme 4: Quality. Thirty of 31 participants mentioned quality as essential for supporting a culture of excellence. Participants cited key performance indicators (KPIs) as vital metrics in assessing quality. Participant responses to Q1 included: "Quality and patient satisfaction are top priorities and communicated to staff"; "A leadership team that focuses upon quality, communicates consistently with staff about quality metrics, refers to KPI's frequently when engaged in a clinical decision-making process."; and "We

belong to a hospital system that focuses heavily upon quality and safety."

Two participants responded to Q4 by asserting they concentrated on being a High Reliability Organization. Both participants indicated they always focused on quality and patient safety. P2 answered Q4 by declaring "They all know that quality and patient satisfaction are our top priorities and part of our Standards of Excellence."

P9 noted the importance for leadership and staff to fully understand the functions of each performance indicator and how to use each effectively:

> KPIs of heal rate, median days to heal, outliers, patient satisfaction. The understanding behind the metrics is what makes the difference. The leaders need to understand what data flows into the metrics and how different options affects the result. In-depth analysis and review on a consistent basis is critical. Staff must be educated on options to ensure that the most appropriate selections are being made. Trends must also be tracked. It is not enough to simply look at the numbers.

Seventeen participants responded to Q6 and Q9 and mentioned reviewing, tracking, and proactively monitoring quality indicators. "Proactively – monitoring results and looking for trends" was mentioned by P21; and, P10 stated "Consistent monitoring of our quality metrics alert us when we need to improve on a specific measure." All participants perceived that clinical quality was a measurable component of performance utilized to evaluate changes and quality in services delivered. Furthermore, most participants (30 of 31) felt evidence-based medicine and knowing how to use quality metrics to provide better care was integral in developing a culture of excellence.

Theme 5: Work environment. Participant responses to Q4, Q5, and Q10 provided information for RQ1. Twenty participants mentioned a positive workplace environment as being critical to sustaining a culture of quality and excellence. P30 expressed, "I always promote a positive atmosphere between our staff and Physicians. I believe if the staff is happy and enjoys their work, the patients will also benefit." Three participants mentioned they celebrated successes and rewarded staff for demanding work: leaders bought lunch or gave quality achievement bonuses. A general opinion emerged that employee satisfaction impacts patient well-being. P20 contended, "I firmly believe that if the employees are taken care [of] and their needs are met then that will be reflective in the service they render to their patients."

Participants identified trust, communication, feeling respected and valued, and sharing a common goal as influencers in creating a positive work environment. P14 asserted "Developing a trusting team is important to a culture of excellence. When there is trust between staff then they can share when a mistake has happened and not try to cover it up." P29 said, "Everyone one in here cares about the other and there is no drama. We just work hard and get it done."

Six participants mentioned the use of employee engagement surveys to improve staff satisfaction. P20 stated, "I do not know if it is quantifiable but developing a positive work environment has created a culture of success. We rely on employee satisfaction surveys and Press Ganey surveys to gauge our satisfaction in the center." Participants cited that leader engagement fostered a culture that created staff engagement and support.

Theme 6: Teamwork. Some participants (21 of 31) felt a team approach to health

care promoted excellence because clinical employees function in an environment where their actions and decisions influence other members. Twenty-one participants cited teamwork as an integral aspect of a quality environment. Responses included: “great success is only achieved through team work”; “If you surround yourself with the very best people and promote interdependence to the team, the team as whole becomes more successful than any individual”; “every team member is essential to the care of the patient and they need to feel that”; and “Together the team needs to create a shared vision of what that culture of excellence looks like.”

Patients often depend on multiple providers for care. Several participants identified the need for wound center providers to adopt a team-based approach to deliver the safest, highest quality of care. One participant declared, “Between the physicians and the nursing staff they work well together and insure our patients are taken care of.” Patients, team members, and the organization benefited from teamwork.

Team members need to understand each other's roles and communicate effectively to develop a high functioning team (31.3%). Participants referenced teamwork as a key factor for promoting job satisfaction and work engagement. Higher levels of performance occurred by permitting team members to synchronize duties and decide collaboratively how to achieve work objectives; P11 said “Leadership is always willing and able to jump in and help (based on scope of practice). Staff is empowered to make decisions in the best interest of the patient.” Twenty-seven participants believed effective teamwork facilitated a safe and patient-centered environment and elevated patient satisfaction. P1 recounted:

> Weekly we go over our pipeline of patients to see how we can improve their healing process. We discuss difficult patients and how we can best serve them. This is an opportunity for our physicians to work as a team with the nurse manager to provide innovative ideas to best help our patients heal.

P26 said, "We take our Press Ganey scores and comments seriously. If the staff and patients are dissatisfied it will be difficult to provide quality care. Quality care is measurable, yet, most importantly is the perception of our patients."

Research Question 2

RQ2: What leadership strategies do wound care center leaders use, and how do they promote quality improvement toward establishing a COE? Themes of communication, patient centered, leadership, quality, work environment, and teamwork emerged from the participants responses to RQ2 .

Theme 1: Communication. I examined the theme of communication as relating to RQ2 and explored participant responses to Q3, Q4, Q6, Q7, Q8, and Q10. Most participants (28 of 31) mentioned effective communication as a necessary leadership strategy to foster a culture of excellence. Ten participants employed monthly staff meetings as a strategy to develop effective communication. P12 stated, "Not only in our monthly meetings, but in staff meetings we ae [sic] able to engage in healthy dialogue to enact changes where needed"; and P25 said "I discuss with team in monthly staff meeting our successes and our opportunities for improvement."

Five participants discussed "rounding" as a strategy exercised to improve quality toward establishing a COE. Lockhart (2017) described rounding as the practice of

visiting patients, healthcare team members, and health leaders in patient care areas consistently to engage in meaningful dialogues regarding care, or work processes, and to gather suggestions for improvements. Participants noted three types of rounding: leaders rounding on staff, rounding on patients, and rounding as a team. The participant responses suggested that leader rounding on staff facilitated the development of staff engagement and rounding on patients improved patient views of quality care and increased patient satisfaction.

Theme 2: Patient-centered. Two questions provided information on how a patient-centered approach promoted quality in a wound COE. Eighteen participants responded to Q4 by mentioning the patient as their primary focus. The AIDET framework, described by four participants, was critical to sustaining a culture of excellence. P12 said, "AIDET – Acknowledge, Introduce, Duration, Explanation, Thank You; When we greet our patients, introduce ourselves so they know who we are, offer timeframes in which their care should take place to decrease anxiety, explain what their treatment plan is, and offer a thank you at the end goes a long way. Taking this approach also makes the patient feel comfortable to further engage in dialogue and voice any concerns they may have without fear that they are being rushed or just another number."

Communication was a key component of patient-centered care and improved outcomes such as patient satisfaction, treatment adherence, and emotional well-being. Placing a personal emphasis on the patient, P27 responded to Q5 recounting, "Celebrate healing with a healing tree, for patients, in the clinic." Additionally, P22 mentioned, "Of course we monitor COD metrics, but also ensure they aren't just numbers but people. We

talk about outliers by name and not percentage, for example." Another participant responded with "We take our Press Ganey scores and comments seriously. If the staff and patients are dissatisfied it will be difficult to provide quality care. Quality care is measurable, yet most importantly is the perception of our patients."

Theme 3: Leadership. Participant responses to Q3, Q8, and Q10 provided information for RQ2. Leadership styles and strategies varied across the 30 participants' responses. Participants utilized five specific leadership styles: participative, transactional, democratic, transformation, and servant. Six participants employed a form of Servant leadership. Five participants mentioned *leading by example* as a strategy to promote quality improvement. It was important to five participants to be able to inspire or motivate their employees. Four participants discouraged the use of micro-managing, and P3 said:

> I don't have a management "style "per se but I think I do not micromanage my team. I expect folks to be adults and do their jobs and for the most part that's what happens. I do hold everyone, myself included accountable if we miss the mark. I feel that if we are underperforming in an area that is it my responsibility to get us back on track.

Transformational leadership engages leaders to recognize a demand for change and motivate followers to embrace the vision for change by emotional engagement, charisma, or individual deliberation (Bass, 1996). P20 professed, "I believe in the Principle Centered Paradigm developed by Steven R. Covey and would think that I have a transformational leadership style." P6 stated, "Transformational leadership style- Lead

with Vision. I aim to lead by example: Educate, Trust, Verify. Goal is to support professional growth in staff by inspiring/motivating them with a strong shared purpose"

Transactional leadership and passive-avoidant approaches are other facets of the FRLT. P23 noted, "To that end, a combination of transactional and democratic leadership styles are utilized, but in a very organic manner." I did not identify a passive-avoidant leadership style in any of the participants responses.

Theme 4: Quality. Participant responses relating to quality that answered RQ2 were: Q4, Q5, Q6, Q7, Q8, and Q9. In 30 of the participants' responses I observed a focus on quality. Participants' responses to Q4 included: the use of chart audits, using an evidence based systematic approach to care, completing medical surveillance reviews, and conducting action plans when needed.

Q5 on the study questionnaire asked: *What measurable metrics do you rely upon to foster a culture of excellence?* Assessing patient satisfaction was the number one indicator cited by participants (25 of 31) in promoting a culture of excellence. Twenty-four participants felt that increased patient motivation and satisfaction improved treatment adherence to plans. P19 said:

> As important to the staff as healing rates and days to heal are the patient satisfaction scores. My staff is fixated on ensuring that the patient has a positive experience employing their excellent clinical skills and a sense of humor that puts the patient at ease.

Twenty-three participants reported using the heal rate, 20 participants used median days to heal, and 18 participants used outlier rates to monitor quality. Three

participants monitored weekly visits and cancellation rates. In responding to Q6, Q7, and Q8 most participants (28 of 31) reported using their company database to proactively monitor and track key performance indicators.

Participants' responses to Q9 emphasized the use of consistent quality monitoring processes. P1 stated, "We have an MSR (Patient Care Plan which we go over at initial and every 30 days) process. This helps set bench marks to meet the . . . Matrix for healing using the 9 essential steps of healing process." Another participant declared, "We monitor on a weekly basis and if it starts to slide do a root cause analysis to see why."

Theme 5: Work environment. Participant responses to Q3, Q4, Q5, and Q10 provided understanding for RQ2. Participants responded that one of their leadership strategies in developing a wound COE was to create a positive work environment. Six respondents to Q3 and Q4 felt that celebrations, rewards, and recognition were important in cultivating a positive environment. Terms used to describe a positive work environment included happy, enthusiastic, encouraging, positive, friendly, engaged, and a sense of pride. In answer to Q5, six participants said they relied on employee satisfaction and employee engagement surveys to improve the workplace environment. Describing the essence of a positive work environment P29 responded to Q10:

> We value all staff members opinions and encourage input from all. Because the leaders are respectful to the staff, the staff in turn gives it back. They know we are all here to make it the best it can be and we all care first and foremost about our patients. Everyone in here knows how dedicated their managers are to them and the patients so they tend to go the extra mile in return. Everyone one in here cares

about the other and there is no drama. We just work hard and get it done.

Theme 6: Teamwork. Participant responses to Q3, Q4, Q8, and Q10 offered insight into RQ2. In response to Q3 and Q4, seven participants cited teamwork as a strategy or practice to sustain a culture of quality. P20 said, "We encourage everyone to take ownership and no one is greater than the whole and great success is only achieved through team work and a positive work environment." Phrases used to answer Q8 included *brainstorming collaboratively, arriving at a mutually agreeable decision,* and *getting the team involved in the solution*. The words of one participant demonstrated teamwork in action, "Once an issue is evident, I first look at the process in which the breakdown has occurred. A collaborative effort to come up with solutions to change the impedance begins and coaching is implored once a solution is found." Describing the essence of teamwork P25 said:

> You are not always right, just because you are the director. It takes the entire team to make it work. As the leader, you must believe and have the passion that we are here to heal others. Energize the team with you own enthusiasm to be the best. The outcomes will come with that attitude and perseverance. Together, everyone can achieve the Center of Excellence.

Summary

In Chapter 4, I provided a comprehensive overview of the procedures used to recruit participants, gather, manage, and analyze data collected from leaders of chronic wound care centers of excellence. I randomly selected participants based on purposeful sampling. Responses from semistructured questionnaires, containing open ended

questions, conveyed the perceptions of the principal factors and strategies used by wound center leaders to promote cultures of quality and excellence. All participants in this study were leaders of COEs. I used emergent themes to answer the research questions and I described their correlation and alignment to the theoretical and conceptual frameworks of the study. In Chapter 4 I established six themes: (1) Communication, (2) Patient-Centered, (3) Leadership, (4) Quality, (5) Work Environment, and (6) Teamwork. I did not find any discrepancies in the literature or findings during the study.

I answered two research questions. RQ1: What do leaders of wound care COEs perceive as principal factors in fostering and maintaining cultures of excellence? Each participant expressed the need for effective leadership and frequent communication for sustaining cultures of excellence. Participants also related that teamwork and a positive work environment helped clinic personnel provide patient-centered quality care. RQ2: What leadership strategies do wound center leaders use, and how do they promote quality improvement toward establishing a COE? All participants mentioned some form of leadership style or strategy that enhanced quality improvement and promoted the establishment of a wound COE. Likewise, all participants extensively monitored quality metrics to ensure a culture of excellence. Collaborative teamwork and effective communication styles helped create a positive work environment. Overwhelmingly, each participant recounted the utilization of structured and consistent processes to move their center toward a culture of quality and excellence.

Chapter 5 connects the results of the study with interpretation of the findings to the existing literature, theory, and conceptual framework. Chapter 5 also highlights the

limitations and recommendations for further research and describes implications for creating positive social change. Chapter 5 concludes with a brief statement that portrays the essence of the study.

Chapter 5

Introduction

The purpose of this qualitative case study was to explore COE leaders' perceptions regarding factors that foster a culture of excellence, and what strategies they used to promote quality improvement and excellence within the chronic wound center. I performed this study to address a gap in research: I discovered much literature regarding leadership styles and behaviors of health care leaders used to promote quality improvement across various health systems; yet, I did not find any research regarding leadership behaviors and strategies used by wound center leaders to foster centers of excellence in chronic wound care. Lack of information on leaders' perceptions regarding the factors that foster a culture of excellence, and the strategies used to promote quality improvement in the chronic wound center, led me to develop the research questions that guided this study:

RQ1: What do leaders of wound care COEs perceive as principal factors in fostering and maintaining cultures of excellence?

RQ2: What leadership strategies do wound care center leaders use, and how do they promote quality improvement toward establishing a COE?

Six key themes related to the research questions emerged from the analysis of the questionnaire data: communication, patient-centered, leadership, quality, work environment, and teamwork. The key findings in this study revealed that fostering and maintaining a culture of quality and excellence in the chronic wound center requires leaders to exercise a consistent and comprehensive effort. While effective leadership

styles and behaviors were necessary to achieve this, I discovered that the adherence to a consistent and comprehensive approach was equally important.

Interpretation of Findings

I centered the interpretation of the findings for this study on the concepts of patient centered care and the model of disease-oriented COEs; additionally, I utilized the FRLT as a lens to examine leadership styles and behaviors. Key tenets of patient-centered care include: patients fully participate in decisions about their medical care, health providers are open to patient needs, and the patient's experiences and perspectives fit into the decision-making and health care planning (ACWHTR, 2015). Principal elements of a disease-specific COE are: superior performance on evidence-based quality metrics (Sauerwein & True, 2016); higher quality care at reduced costs (Kelly et al., 2015; Santos-Moreno et al., 2015); and increased effectiveness of clinical practices, improved patient outcomes, and reduced health risks (Dowsett, Bielby, & Searle, 2014; Kelly et al., 2015). The FRLT consist of nine elements denoting three broad sets of behaviors of transformational, transactional, and laissez-faire leadership (Avolio & Bass, 1995; Avolio & Bass, 2004). The FRLT suggests leaders demonstrate behaviors within these three perspectives (Witges & Scanlan, 2014), thus, providing them with a means to transform organizational behavior and culture by cultivating processes that engage the whole organization in the improvement effort (Institute for Healthcare Improvement, 2017c).

Leaders Perceived Principal Factors

RQ1 was: What do leaders of wound care COEs perceive as principal factors in fostering and maintaining cultures of excellence? The major findings I found in relation

to this question were that consistent communication, patient centeredness, effective leadership, and a focus on quality were key factors in fostering and maintaining a culture of excellence. Most participants (28 of 31) mentioned consistent or effective communication, 29 of 31 leaders cited patient-centeredness, all participants referred to leadership style or strategies, and 30 of 31 leaders cited quality as essential in the development of a COE.

Communication. Effective communication is a necessary skill for health care leaders. Hawkins et al. (2013) cited that leaders need to employ effective listening and communication; Concannon et al. (2014) discussed communication as a key component of patient-centered care; and Ishikawa et al. (2013) declared skillful communication improves outcomes such as patient satisfaction, treatment adherence, psychosocial adaptation, and overall health status.

In this study, wound center leaders accomplished effective communication several ways: during meetings (mentioned by 21 participants), via feedback (cited by seven participants), and purposeful rounding (cited by nine participants). Recent literature supports the effectiveness of these communication methods. McSherry and Pearce (2016) asserted organizational improvement occurred by inspiring and empowering individuals through effectual communication; Murray, Sundin, and Cope (2018) posited that developing a positive culture requires the alignment of quality and effective leadership communication. Hotko (2018) emphasized the use of relationship-building questions during rounding to develop communication at all organizational levels because they validate leaders care about their staff as individuals. Hugill, Sullivan, and Ezpeleta (2017)

suggested that leader rounding on staff facilitated the development of staff engagement and rounding on patients improved patient views of quality care and increased patient satisfaction. When performed regularly and with intention, leadership rounding is a robust evidence-based approach to increasing safety and improving employee and patient satisfaction (Lockhart, 2017).

Patient-centered. Literature discussed in Chapter 2 confirmed the significance of a patient centered approach to improved quality and increased patient experience. Mery et al. (2107) identified patient-centeredness as a principal component of the triple aim health care improvement concept. The patient-centered element of the triple aim prompted health organizations to critically analyze their current improvement processes (Mery et al., 2017). The triple aim's patient-centered concept aligned with the findings of this study in that wound center leaders cited patient-centered care as a key factor in fostering and maintaining a culture of excellence. Specifically, P31 stated:

> I think the most important things are: 1) to lead by example, if you put your patients first in all that you do, the staff will; 2) hold staff accountable; 3) Teamwork and collaboration, every team member is essential to the care of the patient and they need to feel that.

Another participant articulated, "Ultimately, the patient is our number one priority. Without them there would be no reason for what we do or why we do it. In my experience, teams that understand this generally excel with regards to quality performance."

A wide range of literature in Chapter 2 demonstrated the importance of patient-centered care. Disch et al. (2016) reported health leaders identified increased patient-centered care as a critical component necessary in health system transformation. In 2001 the Institute of Medicine moved toward a patient-centered model (Pina et al., 2015), and advocated patient-centeredness as a vital component of health care. Accordingly, Pina et al. (2015) noted that the importance of improved quality of care resulted in a focus on patient-centeredness. Additionally, the FDA formed the Patient Engagement Advisory Committee (Hunter et al., 2015), which ensured patient-centeredness through communication and consumer involvement in the development of health and medical devices, therapeutic drugs, and wound care products (Salcido, 2016). Terry and Patrick-Lake (2015) cited the FDA's engagement in the creation of a patient-centered benefit-risk assessment process reflected better patient-centered outcomes as products came on the market.

New research by Shippee, Shippee, Mobley, Fernstrom, and Britt (2018) demonstrated the importance of patient-centered care to improve quality outcomes. Shippee et al. conjectured patient experience is most important among patients with chronic illness. Patients with chronic diseases experience increased medical visits, and often exhibit decreased adherence to long-term treatment plans, which can negatively affect quality outcomes. Thus, it is crucial that health care teams understand and communicate with patients around their goals. The research by Shippee at al. validated the importance that wound center leaders in this study placed upon patient-centeredness in developing a culture of quality and excellence in the chronic wound care center. The

findings in this study confirmed the current and past literature regarding the vital role of patient-centeredness in improved quality outcomes: most leaders in this study deemed that a patient-centered approach was vital in fostering and maintaining a wound COE.

Leadership. The complexity of current healthcare environments requires strong, strategic, and comprehensive leadership (Sonnino, 2016). Past literature demonstrated the need for effective leadership styles in moving an organization toward a culture of quality. Mintrom (2014) established that an organizational culture of excellence inspired by effective leadership resulted in positive patterns of perception, thoughts, beliefs, and behaviors that became habit. In this study every leader participant discussed leadership strategies or styles as a principal factor in driving quality and excellence. In this study, frequently mentioned leadership strategies included: (a) hire the right staff, (b) promote teamwork, (c) create buy-in and employee engagement, (d) set clear goals and expectations, (e) endorse accountability and ownership, (f) create an enjoyable work environment, (g) encourage continuing education, and (h) advance a shared vision of excellence. It has been well documented that employee satisfaction impacts patient well-being. Team relationships affect the workplace environment and directly impact patient care and job satisfaction (Dahlke, Stahlke, & Coatsworth-Puspoky, 2018). Poor communication and gossip among associates creates a negative workplace environment (Dahlke et al., 2018). In accordance P20 remarked, “Misery loves company and we kick misery out at the door” and “I do not know if it is quantifiable but developing a positive work environment has created a culture of success.” One participant succinctly described the essence of effective leadership:

> The Program Director, Clinical Coordinator and Medical Director all lead by example. We all have high standards and make our expectations of excellent customer service and quality very clear at the interview process, upon hiring and every day we provide coaching as needed to ensure our staff is providing the best care to our patients and to each other. We continuously focus on being a team and no one is more or less important than the other.

Menaker (2016) cited key leadership strategies for long-term organizational excellence like the findings in this study. Menaker cited the following leader strategies: establish a vision**,** connect individuals by a shared vision, develop relationships, set priorities, resolve problems, demonstrate initiative, achieve excellence, and manage change. In harmony with Menaker's observations, P8 declared:

> Together the team needs to create a shared vision of what that culture of excellence looks like. Once that shared vision is defined, leaders then need to foster an open, honest, non-punitive environment where creativity can flourish, and constructive feedback is embraced.

Strategic leadership guides health care organizations toward long-term operational and clinical excellence (Menaker, 2016): Menaker's observations regarding effective leadership strategies support the findings in this study.

Focus on quality. All participants mentioned the use of measurable quality metrics such as key performance indicators or other quality measures (employee engagement surveys, patient safety assessments, chart audits, visit ratios, cancellation rates) as necessary to cultivate a culture of wound care excellence. According to

Sauerwein and True (2016), superior performance on evidence-based quality metrics is a requirement for COE designation. Mehrotra et al. (2013) remarked that COEs incorporate evidence-based elements such as explicit program structure, standardized processes, established clinical quality indicators, and submission of data to outcomes tracking database. Furthermore, COEs earned their designation based on comprehensive evidence-based criteria, such as performance on key quality indicators (Mehrotra et al., 2013). The move toward actions, metrics, improved quality, and increased safety standards facilitated excellence and provided value-based care (Avci, 2017; Nickitas & Mensik, 2015).

Past literature demonstrated the importance of monitoring key performance indicators for quality improvement. Sammer (2015) contended that COEs utilized specific and measurable outcome metrics. Historically, COEs earned their designation based on comprehensive evidence-based criteria, such as performance on key quality indicators (Mehrotra et al., 2013). Dowsett et al., (2014) advocated the use of an integrated multidisciplinary approach to wound care services, which employed standardized processes and quantifiable metrics. I supported the findings of this study by what I discovered in the peer-reviewed literature described in Chapter 2.

Leadership Strategies Used to Promote COE

RQ2 was: What leadership strategies do wound care center leaders use, and how do they promote quality improvement toward establishing a COE? The key findings in relation to this question were: consistent communication and effective leadership facilitated teamwork and a positive work environment and leaders demonstrated

increased focus on quality metrics and patient centered approaches. Like past literature (e.g. Bradd et al., 2017; Douma, 2015; Hawkins et al., 2013; Santos-Moreno et al., 2015), all participants in this study discussed either leadership qualities or communication styles as key strategies to promote quality improvement toward establishing a COE. Most participants considered teamwork (21 of 31) and a positive work environment (27 of 31) essential for fostering a culture of excellence. All leaders in this study utilized key performance metrics as standards for achieving COE status: all leaders consistently monitored those metrics. Past and current literature established evidence-based and patient-centered criteria were fundamental standards for COE eligibility (Augustin et al., 2015; Ennis et al., 2017; Fife et al., 2018; Gould et al., 2015; Jung et al., 2016; Jung & Shah, 2015). Twenty-nine of 31 leaders used a patient-centered approach; 24 leaders recounted this approach increased patient satisfaction and engagement, which is a key quality metric in COE attainment. Literature showed patient satisfaction increased patient's engagement in prescribed treatment plans (Hifinger et al., 2017; Rafi et al., 2014).

The literature reviewed for this study demonstrated all COEs featured evidence-based standards, measurable and reportable metrics, continuous quality improvement processes, patient-centered approaches, value-based care, and dynamic leadership behaviors. What I established in this study and in the literature about leadership strategies needed to foster COEs, was that strong leadership skills guided organizational change toward quality improvement (Alhaddi, 2015; Ament et al., 2014; Davis et al., 2014).

Teamwork. Studer et al. (2014) established that leader engagement fostered a culture that created staff engagement and support. Studer et al. provided evidence that staff engagement attributed to improved patient safety, increased financial outcomes, and better-quality clinical outcomes. Husebø and Olsen (2016) posited patient safety is contingent upon the degree of collaboration between clinical team members. Patients often evaluate quality by observing employee team performance (Husebø & Olsen, 2016). For that care to be safe and of the highest quality, The Institute of Medicine along with other health care delivery systems identified the need for health care providers to adopt a team-based approach to deliver the safest, highest quality of care (Barry, 2014). Patients, team members, and the health care organization benefit from teamwork (Barry, 2014).

In health care organizations quality of care often depends on teamwork. Kossaify, Hleihel, and Lahoud (2017) contended that globally, medical errors are a key cause of death, and many of these are due to the lack of teamwork. Teamwork is a critical component of health delivery in improving quality of care (Kossaify, Hleihel, & Lahoud, 2017). The literature findings supported the findings in this study.

Positive work environment. Recent literature demonstrates that leadership influences patient safety outcomes and job satisfaction (Boamah, Spence Laschinger, Wong, & Clarke, 2018), and that leadership styles impact employee satisfaction, behavior, and performance (Inceoglu, Thomas, Chu, Plans, & Gerbasi, 2018). Kolo (2018) asserted job satisfaction and workplace environment directly connected with employee motivation, better performance, productivity, and staff retention. Worldwide,

human resources are a crucial element in the effective delivery of health services (Kolo, 2018). Ogbonnaya, Tillman, and Gonzalez (2018) showed efficient team processes constructively influence employee outlooks. Satisfied employees contribute to a positive work environment (Ogbonnaya et al., 2018). Participants in this study (27 of 31) cited a positive work environment as integral in establishing a culture of excellence.

Furthermore, it is well documented that effective leadership drives creation of a positive work environment (Creehan et al., 2016; Hawkins et al., 2013; Institute for Healthcare Improvement, 2017c; Menaker, 2016; Santos-Moreno et al., 2015; Taplin et al., 2013). Recent enactment of the Patient Protection and Affordable Care Act combined with shortages in the health care labor force amplified the need for collaboration and teamwork (Sedki et al., 2015). Furthermore, Sedki, Mendez, Bruer, and Levine (2015) asserted health care professionals must function as interprofessional teams.

Patient-centered. Improvement of patient experiences and outcomes through a patient-centered approach demonstrated increased patient satisfaction and quality of care, improved health of populations, and decreased health care utilization and costs (Hijazi et al., 2018; Institute for Healthcare Improvement, 2017b; Mery et al., 2017; Santana et al., 2018). Accordingly, 29 of 31 participants in this study linked a patient-centered treatment approach to increased patient satisfaction and improved healing rates. Two participants confirmed the relation between patient-centeredness and improved quality. P19 stated:

> As a . . . Center, all staff members are aware of the Center of Distinction/Excellence measurable metrics. As important to the staff as healing rates and days to heal are the patient satisfaction scores. My staff is fixated on

ensuring that the patient has a positive experience employing their excellent clinical skills and a sense of humor that puts the patient at ease.

P23 said:

A leadership team that focuses upon quality, communicates consistently with staff about quality metrics, refers to KPI's frequently when engaged in a clinical decision-making process. Also ensuring that when a particular metric is achieved, that a patient life and wellness is behind this measure. We are not trying to achieve a number, we are trying to achieve a quality outcome for our patients

Conceptual Framework

I used the concept of patient-centered care (ACWHTR, 2015; Scholl et al., 2014), and the model of disease-oriented COEs (Eastman, 2016; Kelly & Chinta, 2015; Santos-Moreno et al., 2015) as the conceptual lens to interpret the findings of this study. Additionally, the FRLT posited by Avolio and Bass (1995) functioned as a channel for recognizing effective leader style in fostering cultures of excellence.

The concept of patient-centeredness (ACWHTR, 2015; Scholl et al., 2014) supports the findings in this study in relation to the research questions because it underscores the significance of placing the patient at the center of their care to improve health outcomes. The Institute for Healthcare Improvement promoted the triple aim in 2007 which focused on patient-centeredness and cited increased patient satisfaction as a measure of quality care (Institute for Healthcare Improvement, 2017b). Douma (2015) identified patient satisfaction as a key component for transforming and sustaining quality improvement. Augustin et al. (2015) documented that patient reported outcomes, such as

patient satisfaction, validated increased quality in wound care. In relation to patient satisfaction, all wound center leaders in this study consistently monitored patient satisfaction scores and maintained high patient satisfaction results which were a requirement for COE designation. Increased patient satisfaction scores shown in this study confirmed what I discovered in the peer-reviewed literature described in Chapter 2.

COE designation is based on a comprehensive array of evidence-based criteria. Mehrotra et al. (2013) remarked that COEs incorporate evidence-based elements such as explicit program structure, standardized processes, established clinical quality indicators, and submission of data to outcomes tracking database. Specific to chronic wounds, Dowsett et al. (2014) stated that a multidisciplinary approach in a specialized center demonstrated increased healing rates and decreased recurrence rates. COEs produced high quality outcomes (Santos-Moreno et al., 2015). Moreover, Santos-Moreno et al. (2015) demonstrated that leaders of COEs were responsible for delivering processes that resulted in continuous improvement and efficient use of resources. Santos-Moreno et al. demonstrated the need for effective leader strategies that integrated innovation, intervention, compliance to standards, and continual quality assessment within COEs. Treating chronic wounds can be complicated, and the risks for poor outcomes increases if treatment is not optimized with evidence-based processes (Woods et al., 2018). Collecting information via data mining gives health leaders and providers insight into optimized patient care approaches. Woods et al. (2018) asserted the use of data mining to assess patients for individualized medical treatment leads to improved patient care. All

leaders in this study tracked clinical KPI's for wound healing trends: participants shared these trends with clinical staff and providers for assessment. P22 communicated:

> One of the most effective processes we have implemented is to hold our MSR [medical surveillance review] meetings with all team members present. That means MD (we only have one doc), NP, and all RNs are there to present the clinical information, so no pieces of the puzzle are missed, and everyone feels they have a voice. We answer the question "what are we going to do different next visit to help this patient heal". The meetings now also reinforce that everyone is expected and encouraged to speak up, and that flows into other aspects of quality improvement and opportunities for excellence.

Likewise, in this study all wound center leaders incorporated standardized processes (daily huddles, leadership meetings, quality improvement action plans), assessed established clinical quality indicators, and submitted data to outcomes tracking database. Summing up, P8 reported "Monthly chart audits, . . . [database] reports, medical surveillance, leadership meetings and case management meetings."

The overarching concept of the FRLT is that effective leaders display a broad diversity of leadership behaviors within the range of transformational, transactional and laissez-faire leadership styles. Literature discussing the FRLT established that leadership styles within the theory impacted the success and management of organizations. The FRLT examines transformational, transactional and laissez-faire leadership styles (Bass, 1996). According to Loughead (2017) the FRLT construed that effective leaders display a broad diversity of leadership behaviors. Samad (2015) postulated the FRLT afforded an

approach to synchronously examine how differing leadership styles impact leadership effectiveness. Moreover, Curtis (2018) suggested the FRLT and other approaches to leadership often arise from different theoretical traditions but may intersect in concept and practice. As demonstrated in this study, participants displayed a broad range of leadership styles and behaviors. For instance, P23 reported:

> Specifically, to foster a culture of quality, I would have to say that our team is motivated with a strong sense of pride in achieving a COE. To that end, a combination of transactional and democratic leadership styles are utilized, but in a very organic manner.

The FRLT posited by Avolio and Bass (1995) provided a means of recognizing effective leader style in fostering wound center cultures of excellence. Participants reported using the following leadership styles: Transactional, Participative, Democratic, Transformational, and Servant. Participants also reported the use of these leadership behaviors: (a) leader transparency, (b) using rewards, (c) mentoring, (d) coaching, (e) inspiration, (f) motivation, and (g) leading by example. Five participants emphasized they did not micro-manage. Twelve leaders did not identify a specific leadership style or behavior.

Supportive literature in Chapter 2 demonstrated that within the FRLT a wide range of leader styles could be effective in accomplishing organizational goals (Arnold et al., 2015; Bradd et al., 2017; Grill et al., 2017; Samad, 2015; Witges & Scanlan, 2014). In recent literature the FRLT demonstrated significant validity for forecasting various leadership outcomes, including: leader effectiveness, employee satisfaction, and

employee motivation (Romascanu, Gheorghe, & Stanescu, 2017). Although 23 participants did not express a specific leader style, it is important to consider the alignment of their leadership behaviors with the components of the FRLT (Avolio & Bass, 1995; Bass, 1997). Two participants (P1, P8) demonstrated the transformational aspect of *intellectual inspiration* (leaders questioned status quo, fostered open-mindedness, and promoted employees' problem-solving abilities). Seven participants (P11, P12, P13, P21, P26, P28, and P31) demonstrated the transformational aspect of *individualized consideration* (leaders advanced open communication and teamwork, advocated employee development). Four participants (P2, P5, P16, and P24) demonstrated the transformational aspect of *motivational inspirational* (leaders confirmed employee goals and expectations, supported and motivated employees, and shared inspired visions). Six participants (P4, P18, P22, P25, P27, and P30) exhibited the transformational aspect of *idealized influence* (leaders developed employees' trust through positive role modeling, generated pride, and exhibited passion and commitment). Three participants (P9, P15, P19) exhibited the transactional element of *contingent reward* (leaders used reward or punishment for employee work performance). One participant (P3) exhibited the transactional aspect of *active management by exception* (leaders intervened just to prevent failure of employees or to deter digression from standards). In this study no participants demonstrated the transactional aspect of *passive management by exception* (leaders intercede after mistakes occur to restrain potential damage). Lastly, no participants demonstrated the aspect of laissez-faire leadership (leaders shun decision making and focus only on resolving issues). While eight

participants identified specific leadership styles as vital to fostering a culture of excellence, most participants identified leadership behaviors and consistent processes as key strategies for excellence and quality improvement. Consequently, Avolio and Bass's full range leadership model (1995) provided a foundation for recognizing effective leader strategies that promoted cultures of excellence in chronic wound care centers.

Limitations

Trustworthiness

There are limitations in using a qualitative approach and case study inquiry. One overall limitation of the qualitative research approach is transferability. Since this was not a quantitative study, statistical extrapolation was not achievable. Case studies are bounded by time and events: a known weakness of the case study design is transferability. Data collected in this study was bounded by a sample collection limited to calendar year 2016. I chose this timeframe to better enable participants to recall their thoughts and actions as they pertained to COE status. Thus, I confined the data to events that occurred over a total time span of two years.

Data collected in this study came only from leaders of chronic wound COEs, this may limit transferability to other health disciplines. However, this study provided an in-depth exploration into leaders' strategies to promote a wound care COE, which may provide practical application for effective leadership in other settings. Secondly, I limited this study to 30 COE leaders within one company: this case study represented the perceptions and experiences of COE leaders within the same company. There are outpatient wound centers managed by other companies within the United States

(Comprehensive Healthcare Solutions, Inc., 2017; Matrix Health Services, LLC., 2014; Sverica International Management, LLC., 2014; VOHRA Wound Physicians, n.d.; Wound Care Advantage, 2017), each with distinctive values, features, and leadership. Hence, the findings of this study are not necessarily illustrative of what the same study might reveal if conducted throughout another wound company. Examining the conceptual framework with larger samples in other outpatient wound care settings might be beneficial. Although the findings of this case study may not reflect a broad transferability, they may afford context specific understanding of how leader perceptions and strategies promote quality improvement toward establishing a culture of excellence.

During this study I functioned as a leader of a wound COE and had close knowledge of the company studied; hence, the possibility existed for bias based on preconceived notions about the company's clinical processes and expectations. I remained aware of personal bias and presented open ended questions in the questionnaires. I also possessed no authoritative or managing relationship with any of the participants. Thus, I was able to separate the beliefs of the company participants from the researcher's personal views. I made every effort to develop questions in the questionnaire that minimized bias. I purposively set aside any preconceived expectations, concerning the outcomes of this study.

I used emailed questionnaires as a data collection tool: this posed a limitation. I did not conduct face-to-face interviews of the participants which would have afforded an opportunity for me to connect with the participant on a more personal level while

noticing nonverbal cues. Also, I was not able to probe for clarification or more in-depth detail; therefore, I limited the findings of the study by the nature of the data.

Recommendations

The recommendations for future studies evolved from the sample population, research approach, and findings. The recommendations for further research encompass (a) COE status, (b) research methods, and (c) managed wound programs vs. "home grown" programs. Opportunity for future research should include leadership studies comparing COE and non-COE wound centers. Future research should explore if there is a correlation in effective leadership styles and the attainment of COE status as opposed to a non-COE. Another area for research would be the use of a different research approach; such as a qualitative multiple case study across several wound management organizations, or a quantitative survey design conducted across a larger COE sample size that spans several years. Lastly, expanding the research to include "home grown" COE wound centers (wound centers not managed by wound management companies) might provide added insight into management styles and strategies used to foster excellence.

Recommendations for Action

COEs exist throughout the United States across a diversity of disciplines and contribute to improved health outcomes, reduced operational costs, improved value, and increased consumer satisfaction (Dimick et al., 2015; Elrod & Fortenberry, 2017; Gidengil et al., 2014; Kelly et al., 2015; Mehrotra et al., 2013; Negreanu et al., 2014; Sammer, 2015). Health care leaders, health care providers, and health organizations may benefit from the results of this study. Literature established that care provided by chronic

wound COEs centered on evidence-based care, and afforded substantial cost savings, increased wound healing outcomes, and reduced wound reoccurrences (Graves et al., 2014; Harding, 2015). Many participants in the study requested a summary of the findings. I plan to disseminate the results of this research via email to the participants and the study company. I aim to provide the concluding perceptions of all the participants to the study company and the participants. By providing the study company with the findings, I may afford additional opportunities for further exploration of leadership practices within COEs.

I will disseminate the results of this study to the larger population via wound care journals and leadership journal articles, presentations at wound care conferences or symposiums, talks at leadership conventions, and through organizational initiatives. Wound conferences may include: Symposium on Advanced Wound Care, American Professional Wound Care, Wild on Wounds, and the Wound Congress. In addition to State and local leadership conferences, several national and international conferences occur: Healthcare Systems Research Network Conference, Agents of Change, and Modern Healthcare (*Critical Connections*). Research dissemination at these conferences may occur through speaking engagements and professional workshops. Lastly, health organizations may provide employee leadership style assessments and training to amend leadership styles and behaviors directed toward value-added leadership.

Implications

Positive Social Change

Findings from this study demonstrated quality driven care improved wound healing outcomes; moreover, a patient centered approach increased patient satisfaction which contributed to increased patient adherence to treatment. COEs are quality driven and may provide a process for improving patient outcomes while decreasing health care costs (Kelly et al., 2015; Woods et al., 2018). The potential impact for positive social change may occur at the individual, organizational, and societal levels. Benefits for individuals include: increased access to quality driven wound centers that deliver high healing outcomes, prevention of recurrent wounds, and decreased wound related mortality and morbidity. Health care leaders will benefit by recognizing factors and leadership strategies that foster cultures of excellence, which may reduce emergency room visits and reduce wound related hospital admissions. Society will benefit by improved population health, and decreased costs to the health care system.

Health care consumers and leaders advance social change by demanding innovative processes that tackle healthcare inequities. This research contributes to positive social change by identifying strategies to improve quality of care for consumers and leaders of health care. Improved quality and organizational performance in health care systems may contribute to the social welfare of people and communities (Elrod & Fortenberry, 2017). Improved quality and organizational performance in outpatient chronic wound centers can improve the health of the population. The health of the population may improve by enhancing the patient care experience; thus, decreasing

mortality and morbidity, and reducing health care costs (Montori et al., 2017; Weston & Roberts, 2013). The provision of effectual patient-centered health care for the wound care population may improve human conditions and have a positive social impact. As a result, positive social change occurs through improved health outcomes, increased quality of life, amended leadership styles that promote cultures of excellence, and reduced health care costs.

Theoretical Implications

Wound center leaders who focus on a patient-centered culture of excellence may contribute constructively to the social health of individuals and populations by speaking to the broader health care determinants of population health in relation to chronic disease (Institute for Healthcare Improvement, 2017a). Using consistent quality improvement processes and exercising effective leadership styles and behaviors, wound center leaders can positively influence social change: sustained quality processes may improve the health of chronic wound patients.

In this study, I used the FRLT as a channel for recognizing effective leader style in fostering cultures of excellence. The FRLT is comprised of nine elements signifying three wide-ranging sets of behaviors of transformational, transactional, and laissez-faire leadership (Avolio & Bass, 1995; Avolio & Bass, 2004). Curtis (2018) suggested the FRLT and other approaches to leadership often arise from different theoretical traditions but may intersect in concept and practice. According to Loughead (2017), the FRLT suggested effective leaders display a broad diversity of leadership behaviors. The theoretical implication of this study was all participants exhibited a broad diversity of

leadership styles and behaviors. By fully understanding the elements of the FRLT, leaders can employ useful transactional actions as a basis for attaining transformational leadership habits; furthermore, leaders can transform organizational behavior and culture by developing processes that engage the entire organization in the improvement effort (Institute for Healthcare Improvement, 2017c; Loughead, 2017; Witges & Scanlan, 2014).

The Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) implemented in April 2015 pledged to transform the way the United States assessed and paid for healthcare. Congress envisioned MACRA as a law that would generate change in the health care system from a fee-for-service payment model to a value-based and quality focused integrated care model (Centers for Medicare & Medicaid Services, 2017). The AHRQ (2018) asserted that when patients are engaged in their healthcare it can result in appreciable improvement in quality and patient safety. Evidence-based strategies to improve patient safety are integral to enhancing organizational missions; effective leaders facilitate patient and family engagement using patient-centered approaches. In this study, leaders advocated that a culture of excellence starts with leadership instilling best practice at all levels of the organization. Leaders acknowledged that processes aimed at engaging patients to become more actively involved in their wound care resulted in increased healing outcomes. Moreover, leaders described consistent quality improvement processes that fostered and sustained cultures of excellence in the wound center. The findings of this study have important implications for CMS reimbursement policies, such as

MACRA; and significant implications for furtherance of AHRQ's initiatives for quality improvement, patient engagement, and patient safety.

Implications for Professional Practice

This is the first known research to explore leaders' perceptions and strategies used to foster and maintain a wound care COE. Throughout literature I discovered the FRLT applied to leaders in various health disciplines; however, I found no literature that applied the concepts of FRLT to leaders of outpatient chronic wound COEs. This study adds knowledge in the discipline of chronic wound COEs by exploring key elements and leadership strategies that contribute to the development and sustainment of a culture of excellence. A qualitative case study design gave me the ability to examine a phenomenon in detail, and the 31 participants in this study freely shared their perspectives and experiences of being a wound COE leader. Specifically, in wound care COEs, the data in this study may give wound management companies and other wound care programs increased understanding of effective leadership behaviors and strategies that promote a culture of excellence. Data from this study demonstrated effective leadership behaviors and strategies fostered cultures of quality and excellence in a wound COE. The findings in this study may guide wound center leaders to recognize effective strategies that promote quality improvement and achieve COE status.

In 2015, CMS transitioned from a fee for service payment model to a value-based, quality driven payment model (Centers for Medicare & Medicaid, 2016b; Centers for Medicare & Medicaid Services, 2017). According to CMS (2016b), value-based programs aim for improved patient care, improved health for populations, and lowered

costs. Additionally, the AHRQ (2018) cited health care leaders need to utilize evidence-based practices, employ effective communication techniques, demonstrate transparency across all venues, and drive patient engagement. The data in this study imparts health care providers insight into strategies that deliver value-based care through a patient-centered approach. Moreover, the utilization of disease-specific quality metrics may afford providers an avenue for improved quality of care within their area of expertise. Literature demonstrated COEs improved health outcomes through patient-centered care (Kelly et al., 2015; Mehrotra et al., 2013; Santos-Moreno et al., 2015) and by adherence to established quality metrics (Fife et al., 2018; Gould et al., 2015; Jung & Shah, 2015). COEs strive for cost savings and improved performance in their disease specific discipline (Agency for Healthcare Research and Quality, 2018; American Society for Quality, 2018; Mery et al., 2017). The findings of this study provide professional practices an opportunity to amend leadership styles or leadership behaviors within disease specific programs to promote excellence and quality improvement.

Conclusion

Chronic wounds are escalating in prevalence and exert a significant burden on individuals, health care organizations, health leaders, and the U.S. health care system. Non-healing wounds are costly to treat (Ennis et al., 2017), and contribute to increased patient mortality and morbidity (Piccin et al., 2016; Powers et al., 2016). Literature showed the importance of successful leadership skills in promoting a culture of long-term excellence to improve fiscal and clinical outcomes for patients suffering with chronic disorders (Oschman, 2017; Siracusa et al., 2014; Studer et al., 2014); yet, there remained

a need for further inquiry into how these concepts could specifically benefit chronic wound care centers. Making improvements demands that health care leaders at all levels be engaged in amending behavior and culture by establishing the vision, forming the rules, and building systems that create excellence.

This qualitative case study explored wound center leaders' perceptions regarding key elements that influence a culture of quality, and the strategies they used to promote cultures of excellence in chronic wound treatment. Thirty-one leaders participated in this study and shared their insights into how they achieved and sustained COE designation in an outpatient chronic wound center. Themes that emerged from this study included concepts of communication, focus on quality, patient-centeredness, effective leadership, team work, and a positive work environment.

The FRLT theorized by Avolio and Bass (1995) served as a lens to identify various leadership styles and behaviors. Many of the leaders in this study demonstrated multiple styles and behaviors consistent with the FRLT. Avolio and Bass implied all leaders exhibit each behavior of the FRLT at various times: effective leaders display transformational leadership behavior and contingent reward behavior (transactional leadership) more often than passive behaviors (laissez-faire leadership). In this study, eight participants identified a specific leadership style: Participative (2), Democratic (1), Servant (2), Transformational (2), and Transaction/Democratic (1). The remaining 23 participants all demonstrated behavioral elements of the FRLT. The overarching outcome of this study was regardless of leader styles or leadership behaviors, consistent adherence to evidence-based procedures and best practices resulted in improved quality and

improved outcomes. However, it was the application of strong leadership skills and behaviors that drove quality improvement toward establishing a wound culture of excellence. Hence, understanding how leadership behaviors and strategies contribute to a culture of excellence in chronic wound centers is vital to improving health outcomes, increasing patient health-related quality of life, and reducing health care costs.

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Appendix A: Questionnaire Protocol

Toward Excellence: Exploring Leader Strategies in Chronic Wound Care Centers

1) Participants are randomly, purposefully selected from public company document of 2016 COE winners.
2) Random selection occurred using a random number generator
3) Participant emails obtained through company directory
4) All electronic correspondence by the researcher will occur using researcher's Walden email address
5) After Walden IRB approval, a Letter of Invitation and an Informed Consent form will be sent to 30 randomly, purposefully selected individuals
6) After agreement to participate in study and before questionnaires are emailed, participants will be instructed to read and acknowledge the Informed Consent and reply to the researcher with the words "I consent". Participants will be instructed to reply to the researcher's Walden email address at [Insert Researcher Email] and from an email address other than their work email address.
7) After receipt of verified consent, a questionnaire with the 10 questions will be emailed to each participant with a thank you for their participation in the study. Participants will be asked to complete and return the attached email questionnaire, using a non-work email address, within 5 business days of receipt. The questionnaire is estimated to take 45-60 minutes to complete.
8) After receipt of completed email questionnaire, researcher will assign the participant with a unique alpha-numeric code.
9) Participant Tracking tool (Appendix E) will be updated.
10) Each participant will be advised that they will be notified of the completed study and will receive a summary of the research findings. Electronic copies of the complete dissertation will be provided upon request
11) The following are the 10 questions in the email questionnaire for this study:

Date: Participant code:

1. What strategies do you believe specifically contribute to improved organizational performance in supporting a culture of quality and excellence in your wound center?
2. What do you perceive as necessary for successful implementation of these strategies?
3. What leadership styles or strategies have you utilized to foster a culture of quality and excellence within your wound center?

4. What practices does your organization identify as critical to sustaining a culture of quality and excellence? For instance, a process or behavior you desire to see staff do repeatedly without thinking.
5. What measurable metrics do you rely upon to foster a culture of excellence?
6. How do you establish where opportunities exist for quality improvement in your wound center?
7. What processes exist to gather and assess quality improvement information in your wound center?
8. How do you address and correct quality improvement issues that may impede the development of a culture of excellence in your wound center?
9. What proactive or preventive strategies do you find most effective in supporting a culture of quality and excellence in your wound center? By prevention, I am referring to the actions you take after a quality issue has been discovered, and how you preclude it from occurring again.
10. What other information could you provide on fostering a culture of excellence within your wound center that might be helpful in completing this study?

Appendix B: Case Study Protocol

1) Case Study Introduction

a) Researcher introduction and study purpose and overview
b) Research Questions

RQ1 - What do leaders of wound care COEs perceive as principal factors in fostering and maintaining cultures of excellence?

RQ2 - What leadership strategies do wound care center leaders use, and how do they promote quality improvement toward establishing a COE?

2) Conceptual Framework

a) full range leadership theory
b) Patient-centeredness
c) Disease specific Center of Excellence

3) Protocol Purpose and Intended Use

a) Protocol applied by the researcher to direct and inform all study data collection, analyses, and conclusions
b) Researcher to employ protocol to confirm dependability of case study methods, results, and conclusions
c) Protocol is included in case study database and helps establish an audit trail

4) Data Collection Procedures

a) After IRB approval from Walden University to conduct the study, researcher will randomly and purposefully recruit participants from 2016 COE list
b) Send Invitation Letter and Informed Consent form to each participant
c) Document participant consent on Participant Tracking tool
d) Review questions on Questionnaire to confirm alignment with research questions as recognized in a semistructured questionnaire format
e) Email questionnaire to participants (Questionnaire Protocol, Appendix D)
f) Assign alpha numeric identifier to returned participant questionnaire
g) Log verified information on Participant Tracking tool (Appendix E)
h) Collect data from email questionnaire, and review other study documents, news articles, and websites
i) Check alignment between research questions and questionnaire

5) Data collection tools

a) Participant email questionnaires
b) Researcher reflexive journal

c) Researcher memos and notes
d) Case study database contains:

i. Public documents, news articles
ii. Scanned articles
iii. Email questionnaire documents
iv. Researcher notes
v. Participant tracking tool
vi. Preliminary analyses

6) Outline of Case Study Report Contents

a) Overview of study
b) Presentation of the findings
c) Comparison with existing and similar literature
c) Limitations of study
d) Recommendations for further research
e) Implications for social change
f) Recommendations for practice
g) Reflections
h) Conclusions capturing essence of study
i) Table 1: Research Question Alignment to Questionnaire

7) Data Analysis Techniques and Tools

a) Coding (within each unit of analysis, and cross units of analysis)
b) Analysis tools (NVivo 11)
c) Microsoft Word charts
d) Comparison with existing and similar literature
e) Seek data saturation
f) Research questions alignment with questionnaire questions

8) Study methods for trustworthiness

a) Dependability methods
b) Case study protocol use
c) Case study database and audit trail establishment

9) Credibility, transferability, dependability, and confirmability methods

a) Research bias identification, triangulation, reflexivity, standardized questionnaires, saturation, and peer debriefing (credibility)
b) Thick, rich description of study population, purposeful sample (transferability)
c) Multiple data sources and audit trail (dependability)
d) Researcher reflexive journal, audit trail, and data triangulation (confirmability)

10) Ethical procedures

a) IRB approval
b) Informed Consent
c) Address ethical concerns (research in one's workplace)
d) Secure data storage
e) Participant confidentiality: alpha numeric designation