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Evolution of Physician-Centric Business Models Under Patient Protection and Affordable Care Act

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This is to certify that the doctoral study by

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Abstract

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MBA, Walden University, 2011

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Doctoral Study Submitted in Partial Fulfillment

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Abstract

For several decades, the cost of medical care in the United States has increased exponentially. Congress enacted the Patient Protection and Affordable Care Act (PPACA) of 2010 to ensure affordable healthcare to the citizens of the United States. The purpose of this case study was to explore physicians' perspectives regarding physician-centric business models evolving under the requirements of PPACA legislation. Complex adaptive systems formed the conceptual framework for this study. Data were gathered through face-to-face, semistructured interviews and e-mail questionnaires with a purposeful sample of 20 participants across 14 medical specialties within Northeast Texas. Participant perceptions were elicited regarding opinions of PPACA legislation and the viability of business models under the PPACA. In addition, a word cloud was used to identify 3 prevalent or universal themes that emerged from participant interviews and questionnaires, including (a) use of mid-level practitioners, (b) changes to provider practices, and (c) lack of business education. The implications for positive social change include the potential to develop innovative models for the delivery of medical care that will improve the health of the aggregate population. Healthcare leaders may use the findings to advance the evolution of physician business models that meet the needs of healthcare stakeholders. These findings may also inform healthcare leaders of the need to develop cost-effective and innovative organizational models that are distinct to individual patient populations.

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Dedication

I would like to dedicate this doctoral study to my husband. You have been my rock throughout this journey and I cannot thank you enough for your support, understanding, encouragement, and the many times you read, edited, and reread this dissertation!

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I would like to thank my committee members, Dr. Lynn Szostek, Dr. Kenneth Gossett, and Dr. Robert Hockin, as well as Dr. Reginald Taylor for working with me to ensure that this study met the academic standards of Walden University. I am grateful to Dr. Lynn Szostek for working as my committee chair. Throughout this process, Dr. Szostek has been a source for guidance, support, and encouragement. I would also like to specifically thank Dr. Kenneth Gossett for his contributions to the success of this project and Dr. Reginald Taylor for his recommendations and guidance. It has been my honor and privilege to work with all of you during this journey.

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Section 1: Foundation of the Study

The cost of medical care in the United States continues to increase with cost levels greater than that of comparable countries (Malach & Baumol, 2012). To reduce the healthcare expenditures of a growing population, Congress enacted the Patient Protection and Affordable Care Act (PPACA) of 2010 to provide affordable, quality healthcare to the citizens of the United States (Kocher & Sahni, 2010). PPACA legislation is creating a new paradigm in healthcare reform and evolution in the delivery of healthcare and provider business models.

Background of the Problem

Passage of the Social Security Act in 1935 became a vehicle for the development of a federal health insurance program (Hariri, Bozic, Lavernia, Prestipino, & Rubash, 2007). In 1965, Congress enacted the Medicare program under Title XVIII and Title XIX of the Social Security Act, providing government-sponsored health insurance to individuals 65 and older (Centers for Medicare and Medicaid Services, 2013). Title XVIII also created Medicaid, jointly administered by the federal and individual state governments, providing health insurance for low-income children, disabled individuals, and adults under the age of 65 (Centers for Medicare and Medicaid Services, 2013). In 2012, the number of Medicare enrollees was approximately 50.7 million (Centers for Disease Control and Prevention, 2013) with Medicaid insuring approximately 58.6 million people in the United States (Department of Health and Human Services, 2013).

Prior to 1989, Medicare based physician reimbursement upon the customary, prevailing, and reasonable system giving rise to volume billing and differences in fee

rates depending upon geographic location and medical specialty (Hariri et al., 2007). In 1989, Congress enacted the Omnibus Budget Reconciliation Act, developing governmental regulations for physician reimbursement by creating fee schedules, diagnosis and procedure coding, and a new fee calculation formula known as RBRVS or the Resource-Based Relative Value Scale (Hariri et al., 2007). Medicare's goal for use of the RBRVS calculation was to minimize variations in billing and reimbursement by healthcare entities (Mootz, Hess, & McMillan, 1995). However, the RBRVS formula resulted in reimbursement disparities between primary care physicians and specialists because the RBRVS components did not accurately reflect the relative costs of physician services (Ginsburg, 2011a). Reforming the accuracy of the physician reimbursement system as a means to decrease healthcare costs was one factor leading to the development of the PPACA of 2010.

In 2010, Congress enacted the PPACA in an attempt to decrease healthcare expenditures and increase the quality of care for all Americans (Kocher & Sahni, 2010). According to the U.S. Census Bureau (2011), 49.9 million Americans were without health insurance coverage in 2010. With the expansion in Medicare and Medicaid enrollment under PPACA legislation, increases in healthcare expenditures are expected to rise as the demand for healthcare services increases (Keehan et al., 2011).

Physician attitudes toward the government's increasing regulatory involvement have deteriorated over the past several decades. Zismer (2011) noted negative physician attitudes toward increasing governmental regulation stems from the loss of professional autonomy. Additionally, Weinberger, Lawrence, Henley, Alden, and Hoyt (2012)

surmised that the increasing regulatory authority of the government intrudes upon the patient-physician relationship creating additional negative physician attitudes.

Government regulations threaten physician autonomy and current evidence-based guidelines for patient care. Frakt and Mayes (2012) asserted policy makers are attempting to reduce healthcare spending by shifting cost risk to providers, thus threatening the viability of independent provider businesses because of the inability to spread provider risk over a significant number of patients. Additionally, Longworth (2013) suggested implementation of PPACA legislation requires healthcare providers to assume increased accountability for quality and cost control, thus influencing the future delivery of medical care. Moreover, Lee (2012) surmised the redesign of care delivery should include more than reducing physician reimbursement, but rather define the value of care from the patient perspective. PPACA legislation places emphasis upon the restructuring of healthcare business models to provide innovations in the delivery of healthcare to decrease costs and increase the quality of care for patients. The goal of this research was to explore how PPACA legislation might influence the evolution of traditional physician-centric business models from the physician perspective.

Problem Statement

The United States currently ranks number one in the world in healthcare spending per capita but 37th in health outcomes (Murray & Frenk, 2010). In 2010, Americans spent nearly $2.6 trillion or $8,000 per person for medical care (Martin, Lassman, Washington, & Catlin, 2012), compared to half that amount by their European counterparts (Ginter &

Simko, 2010). The problem of disproportionate spending on medical care compared to health outcomes became the impetus for the implementation of the PPACA of 2010.

The goal of PPACA legislation is to transform the financing, organizational structure, and delivery of healthcare to slow the growth of costs and improve the quality of care for patients (Redhead, 2012). The general business problem is the inability to transform healthcare business models that deliver value and control costs in a system with fragmented organizational structures. The specific business problem is that little information exists regarding how current physician-centric business models may evolve under the requirements of PPACA legislation from the physician perspective.

Purpose Statement

The purpose of this qualitative case study was to explore how current physician-centric business models might evolve under the requirements of PPACA legislation from the physician perspective. The targeted population consisted of physicians with independent medical practices located in Northeast Texas. This population was appropriate for this study because physicians are the primary providers of medical care, influence patient health outcomes, and provided information-rich data regarding the phenomenon. The business and social ramifications of this study might be realized through the development of healthcare business models that meet the needs of all stakeholders under the new paradigm of PPACA legislation.

Nature of the Study

For this study, I used a qualitative case study approach. Merriam (2009) described the benefits of qualitative research for understanding how individuals interpret

phenomena, construct their worlds, and place meaning upon their experiences. Additionally, Schleifer and Rothman (2012) suggested the use of qualitative research for examining attitudes held by individuals and assessing similarities among participants. As an example, Chreim, Williams, and Coller (2012) used a qualitative approach to examine the transformation of healthcare services in a community from a provider-centered delivery structure to a patient-centered delivery system. As a means to examine how physician practice models might evolve under PPACA legislation, a qualitative approach was beneficial in exploring how physicians interpreted the impact of these legislative changes.

To explore the impact of PPACA legislation upon physician-centric business models, a case study perspective was the most advantageous. Yin (2014) defined case study research as an empirical inquiry that enhances the understanding of the experiences of individuals, groups, or organizations within a bounded system through the examination of contextual detail and rich descriptions of a complex phenomenon emerging from a study. Sangster-Gormley (2013) further noted that case study research allows the investigator to gain comprehensive knowledge of a contemporary phenomenon from the viewpoint of individuals experiencing the circumstances surrounding the phenomenon. Because the implementation of PPACA legislation is a current, complex event, I explored the personal experiences of physicians who were encountering the effects of this legislation upon their business models from a case study approach, which was the most optimal design for this study.

I considered several qualitative methods of inquiry for this study such as phenomenology, grounded theory, and ethnography. Chenail (2011a) suggested the strategies of inquiry for qualitative studies in healthcare are dependent upon the goals of the study. Barss (2012) asserted that phenomenology attempts to derive explanation of a situation or event from the interpretations or lived experiences of individuals, while grounded theory explains an interaction based upon field data and develops a theory from purposeful and theoretical sampling (Chenail, 2011a). Merriam (2009) noted an ethnography design addresses conceptual issues or problems faced by a group because of learned or shared beliefs and behaviors. While these designs are beneficial for various qualitative studies, they do not allow for the study of emerging events associated with PPACA legislation and their effects upon physician-centric business models.

As research methodologies, quantitative and mixed method studies were not appropriate for examining how current physician-centric business models might evolve under the requirements of PPACA legislation. Vogt (2007) noted the use of quantitative research in examining the relationships among variables to answer questions, solve problems, and test theories using statistical analysis. Moreover, Mengshoel (2012) surmised the use of a quantitative methodology when research requires the generation of variables to prove a hypothesis, and the use of a mixed methods approach when combining a qualitative and quantitative methodology to enhance the research. Additionally, Brannen and Moss (2012) suggested a mixed methods approach is advantageous for researchers seeking to provide a comprehensive understanding of a problem or phenomenon from an interpretive and statistical perspective. Because I

explored the evolution of physician-centric business models from the provider's perspective, a qualitative methodology was most appropriate.

Research Question

The following central research question guided the conduct of this study: How might physician-centric business models evolve under the requirements of the PPACA legislation from the physician perspective? I also used the following subquestions to promote the rich exploration of the evolution of physician-centric business models from the provider's perspective:

1. How do physicians perceive the four structures for physician-centric business models (patient-centered medical homes, accountable care organizations, physicians as employees, and concierge medicine) that may affect the way they conduct their business?
2. What are the advantages of the four structures for physician-centric business models (patient-centered medical homes, accountable care organizations, physicians as employees, and concierge medicine) from the way that physicians conduct their business in terms of value-based care?
3. What are the disadvantages of the four structures for physician-centric business models (patient-centered medical homes, accountable care organizations, physicians as employees, and concierge medicine) from the way that they conduct their business in terms of value-based care?
4. How might these four structures for physician-centric business models (patient-centered medical homes, accountable care organizations, physicians

as employees, and concierge medicine) improve the quality of care while decreasing the costs of healthcare?

Interview/Survey Questions

1. Please describe your medical practice regarding medical specialty, years in practice, and the type(s) of practice organizations you have been involved in throughout your career.
2. In the general sense, what is your opinion of PPACA legislation?
3. How did you receive the education or training to conduct your business?
4. Specifically, how has the administrative/regulatory climate of healthcare affected the operations of your practice since 2009?
5. What types of reforms do you anticipate to physician reimbursement given the legislative push toward value-based care?
6. What types of changes do you foresee to the delivery of medical care for your practice?
7. Since the passage of PPACA legislation in 2010, have you experienced any positive or negative changes taking place in your practice and what were they?
8. In order to accomplish the goals of decreasing healthcare costs and increasing quality, do you feel there is a need to evolve your business model? Why or why not?
9. What type of business model do you foresee as a viable alternative to the physician-centric model?

10. Would you consider participating in an accountable care organization or patient-centered medical home as outlined under PPACA legislation? Why or why not?
11. What is the most significant effect PPACA legislation will have upon the viability of your practice in the future?
12. Is there anything else you would like to add that might not have been addressed by these questions?

Conceptual Framework

The notion of healthcare organizations as complex adaptive systems that are dynamic, unpredictable, and unique in nature formed the conceptual framework for this study. Stacey (2011) advanced that within complex adaptive systems, homogeneous agents follow rules governing behavior within a complex, organized system, thus producing an emergent, harmonious pattern for the entire system. Moreover, Dann (2006) and Stacey asserted that complex adaptive systems theory incorporates theoretical works such as von Bertalanffy's 1968 systems theory, Gell-Mann's 1994 complexity theory, and Gleick's 1988 chaos theory. In his study of sociodynamics, Weidlich (2002) developed mathematical modeling approaches for understanding the influence of individual actions upon the behavior of social systems. To define the elements of a complex adaptive system, *complexity* entails heterogeneity or a variety of components. The term *adaptive* conveys the ability to transform or develop and the term *system*, represents a combination of all elements to form a whole (Stacey, 2011).

The healthcare industry embodies the criterion of a complex adaptive system including nonlinear interdependencies, self-organization, emergent behaviors, and co-evolutionary systems. Interconnected entities exist within a complex adaptive system, consisting of diverse, independent components behaving according to a specified set of rules requiring the modification of individual entity behavior as each react to the behavior of other entities (Stacey, 2011). Paina and Peters (2012) suggested the application of complex adaptive systems theory to healthcare issues is beneficial because this methodology may aid policy analysts in exploring innovative approaches for implementing healthcare services for populations in need. Additionally, Boustani et al. (2010) suggested the application of complexity theory principles in healthcare because of the unpredictable nature of the industry when developing and implementing policy changes within medical delivery systems, while McDaniel, Lanham, and Anderson (2009) described the value of complexity science for developing innovative solutions to coevolving healthcare issues.

Healthcare systems comprise diverse groups of interconnected actors such as providers, patients, and policymakers who deliver services through a multitude of avenues and require adaptability, innovation, and self-learning. Boustani et al. (2010) suggested the current healthcare system is highly fragmented with entities that are diverse, interdependent, and emergent and that the behaviors of individual entities continually evolve because of regulation by internal and external stakeholders. To explore how physician business models might evolve under PPACA legislation, complex

adaptive systems theory was optimal for understanding the variety of components of the physician system that must harmonize in a rapidly changing and chaotic environment.

Definition of Terms

Downcode: A change in a procedure code submitted for reimbursement because the code does not meet the specifications of the service performed (Proctor & Young-Adams, 2011).

Evidence-based medicine: Medical decision-making that promotes the use of best available evidence through knowledge acquired from medical education, experience as practitioners, and the transfer of knowledge through continuing education (Reay, Berta, & Kohn, 2009).

Fee schedule: A compilation of pre-established fee allowances for given services or procedures (Proctor & Young-Adams, 2011).

Managed care: A health insurance network that manages medical care through contractual agreements between providers and patients (Frakt & Mayes, 2012).

Meaningful use: The use of health information technology in a manner that enables meaningful application resulting in improving the quality, safety, and efficiency of care (Blumenthal, 2010).

Patient-centric care: The process of viewing medical care from the perspective and experience of the patients and their families (DiGioia III, Fann, Feng & Greenhouse, 2013).

Physician-centric care: The process of delivering reactive patient care where a physician is solely responsible for the patient's care and flow of information (Longworth, 2013).

Provider: An individual or company providing medical care and services to a patient or the public (Proctor & Young-Adams, 2011).

Reimbursement: Payment of benefits to a medical provider for services rendered according to the guidelines of third-party payers (Proctor & Young-Adams, 2011).

Third-party payer: A person or organization other than the patient who is responsible for paying all or part of a patient's medical costs (Proctor & Young-Adams, 2011).

Upcode: The deliberate upgrading of procedure codes to the next higher reimbursable code, despite the lack of supportive documentation, to receive higher reimbursement (Proctor & Young-Adams, 2011).

Assumptions, Limitations, and Delimitations

Assumptions

Practicing providers recognize the responsibility of providing high quality, measurable, patient care while following standards and guidelines set forth by professional medical associations. Assumptions for this study included participants followed standards of care and honestly answered questions regarding how PPACA legislation will affect their businesses. There was also the assumption that participants represented an accurate accounting of their current business performance and operations.

Limitations

The participants in this study had strong opinions regarding the restrictiveness of governmental healthcare policy and might have conveyed personal biases. Limitations to the study included a small, rural region of the United States that might not have accurately reflected the experiences of a larger cohort of healthcare providers or those in urban areas. Other limitations included the inexperience of the interviewer, the interviewer's personal bias toward physician practice models and PPACA legislation, and a small percentage of participants who were personal, business acquaintances.

Delimitations

This study involved qualitative interviews with 20 healthcare providers from diverse specialties in Northeast Texas for the discovery of recurring themes. The individuals were adults, over the age of 18, and not from a protected class or group. The participants were physicians who owned an independent medical practice.

Significance of the Study

Contribution to Business Practice

The information from this study adds value to the healthcare industry because there are few studies where researchers examine the impact of PPACA legislation upon provider business models from the physician perspective. With full implementation of PPACA legislation occurring through 2019 (Marco et al., 2012), the future ramifications of this reform remain uncertain. Researchers may use the results from this study to contribute to business practices by understanding how the evolution of physician-centric practice models may decrease healthcare costs, improve quality, and create innovative

organizational models that are distinct to patient populations. A comprehensive review of the literature indicated the U.S. healthcare industry resembles a complex adaptive system that is dynamic, unpredictable, and unique in nature, requiring providers to examine organizational structures that support service delivery through a modernistic perspective (Albanese, Mejicano, Xakellis, & Kokotailo, 2009; McDaniel et al., 2009; Whitlock et al., 2010). Creating a profitable business model in a system that continually changes because of research, technology, and governmental policy is a key driver for the restructuring of provider business models.

An important aspect of healthcare reform is the reduction of healthcare expenditures through reimbursement and costing reform. Koning, Verver, Huevel, Bisgaard, and Does (2011) attributed a significant source of healthcare expenditures to operational inefficiencies associated with direct medical service delivery and administrative operations. Additionally, Lavy and Shohet (2009) suggested the underinvestment in resource allocation regarding service delivery also contributes to rising healthcare expenditures. The complexity and lack of clarity of current reimbursement and costing systems also impact practice organizational structures because of the inaccurate application of assets and expenses to patient processes (Landon, Reschovsky, O'Malley, Pham, & Hadley, 2011; McClellan, 2011; Rooks Jr., 2011). The business processes of administrative and management systems comprise the infrastructure of the healthcare service system, thus requiring integrated resource management that addresses the delivery of services, reimbursement methodologies, and organizational structures.

Ideally, a healthcare system should provide patients with an integrated and affordable solution to meet treatment needs. Qazi (2012) noted that current models fail to meet these needs. New organizational models addressed in the literature review included patient-centered medical homes (Longworth, 2013; Wise, Alexander, Green, & Cohen, 2012), accountable care organizations (Berwick, 2011; Shields, Patel, Manning, & Sacks, 2011), physicians as employees (Hunter & Baum, 2012; Kocher & Sahni, 2010), and concierge medicine (French et al., 2010; Lucier et al., 2010). At an operational level, the integration of value streams across the organizational model of both macro and micro business systems should be taken into consideration because the simultaneous increase in the production and consumption of healthcare services may add to the complexity of service systems management (Weeks, 2012). To be cost-effective and competitive, healthcare requires the systematic and organizational innovation of business models that are unique to individual patient populations.

Implications for Social Change

Researchers may use the information in this study to contribute to positive social change through the development of healthcare models that improve the health of the aggregate population. Traditional healthcare business models have proven unsuccessful in controlling the costs of healthcare and are unable to support the needs of a growing population, while reimbursement models create reactive disease management rather than proactive disease prevention (Goldsmith, 2011; Longworth, 2013). The social ramifications of this situation might be realized through limitations to the access of medical care, shortages in medical services for individuals, and poor quality outcomes

(Hall, 2013). Understanding the perception of physicians within a new paradigm of legislative requirements may stimulate the development of more cost-effective, quality-oriented models of patient-centered care.

A Review of the Professional and Academic Literature

The following literature review highlights peer-reviewed research regarding the historical and current structure of the American healthcare system. This research provides the rationale for a qualitative case study that explores how current physician-centric business models might evolve under the requirements of PPACA legislation from the physician perspective. The organization of the literature was by topic, and I obtained the research for this study from multiple sources including academic libraries, websites, databases, and books. The research databases included ABI/INFORM Global, ProQuest, SAGE Publications, and MEDLINE. Search terms for conducting research included PPACA*, physician, healthcare reform, billing, organizational structures,* or a combination of these terms. The literature review consists of approximately 96 references from peer-reviewed journals, books, and government reports with 90 (93%) less than 5 years old.

Successful healthcare systems should develop organizational models that deliver value, efficiency, and are cost-effective. Whitlock et al. (2010) surmised the characteristics pertaining to healthcare business models should be homogeneous across provider models with strategic goals including priority setting, defining criteria for prioritization, involvement of stakeholders, transparency, process evaluation, and improvement measures. However, there was little information in peer-reviewed literature

regarding the organizational structure of traditional physician practices and how PPACA legislation may affect practice models from the physician perspective. Discussion by researchers in the current literature addressed reforming aggregate healthcare structures such as physician reimbursement (McClellan, 2011; Tucker, 2013; Wilensky, 2009; Zuvekas & Cohen, 2010), healthcare costing (Berenson, Basch, & Sussex, 2011; Lipscomb, Yabroff, Brown, Lawrence, & Barnett, 2009; Porter, 2010), and the proposal of organizational structures for the delivery of healthcare under PPACA legislation (Goldsmith, 2011; Hunter & Baum, 2012; Kocher & Sahni, 2010; Wise et al., 2012), thus supporting the need for reforming organizational models that decrease costs and improve value. However, differences regarding the optimal organizational structure that improves the delivery and value of effective medical services exist in the literature (Ginsburg, 2011b; Jones & Treiber, 2010; Koning et al., 2011; Reay et al., 2009). Lee (2012) noted to redesign the structure of healthcare organizations that improve the value of care from the patient perspective, the healthcare industry should understand the outcomes that are relevant to patients and the costs in achieving these outcomes. Therefore, departures from physician-centric organizational structures to ones that employ innovative patient-centric processes might be the key to improving the value of healthcare.

History of Government Involvement in Healthcare

Government involvement in healthcare in the United States grew out of the Progressive Era in the early 1900s with support by Theodore Roosevelt for a national medical program (Orentlicher, 2012). After decades of attempts to pass a nationalized healthcare program (Orentlicher, 2012), President Lyndon Johnson was able to sign the

Social Security Amendment into law in 1965, creating Medicare, America's first federal healthcare program (Hariri et al., 2007). The original Medicare legislation consisted of three parts: the Cohen-Falk bill became Medicare Part A, the Republican proposal became Part B, and the American Medical Associations' proposal of providing medical coverage for children and disabled individuals under age 65 became Medicaid (Orentlicher, 2012).

Originally consisting of two types of coverage, Part A for hospital care and Part B for physician care, Congress also created Part C under the Balanced Budget Act of 1997 (Hariri et al., 2007). Part C or Medicare Advantage Plans are replacement plans for Medicare through private insurance companies offering Part A, Part B, and additional coverage for vision, dental, and hearing (Hariri et al., 2007). Legislation regarding the Medicare Prescription Drug Improvement and Modernization Act of 2003 (Medicare Part D) provided prescription drug coverage for seniors and individuals with disabilities (Hariri et al., 2007).

As the concept of universal medical care became social policy, the federal government made a significant investment in the medical infrastructure of the United States. The Healthcare Financing Administration originally oversaw operations until 2001 when the department was renamed the Centers for Medicare and Medicaid Services, operating within the Department of Health and Human Services (Hariri et al., 2007). Medicare originally based physician reimbursement upon the customary, prevailing, and reasonable system, giving rise to volume billing and differences in fee rates depending upon geographic location and medical specialty (Hariri et al., 2007).

In the decades since the implementation of the Medicare program, the cost of medical services in the United States grew appreciably in part because of governmental legislation extending coverage for the elderly, the disabled, and the poor (Fuchs, 2012). With a substantial portion of government funding going to physicians, hospitals, and drug coverage (Fuchs, 2012), the Healthcare Financing Administration identified the need to reduce the cost of the program, hence payment in the form of a diagnosis-related fee schedule for physicians became a feature in 1989 with the passage of the Omnibus Budget Reconciliation Act (Hariri et al., 2007).

Legislation within the Omnibus Act of 1989 created new governmental regulations in the form of fee schedules and introduction of a new fee calculation formula, the RBRVS (Hariri et al., 2009). Medicare's goal for use of the RBRVS calculation was to minimize variations and disparities in billing and reimbursement by healthcare entities (Mootz et al., 1995). In 1998, Medicare introduced the Sustainable Growth Rate formula (SGR) to enhance the calculation of the RBRVS formula, tying physician fees to changes in the Gross Domestic Product (Laugesen, 2009). Under Medicare's rules for the use of the SGR, if actual Medicare spending in a specific year exceeds the target rate for that year, then a downward adjustment will occur to the reimbursement rates (Laugesen, 2009). However, due to the introduction of this new legislation, changes to the physician reimbursement structure have not been adequate to control the rise in healthcare expenditures.

With the continuing increase, in the aggregate cost of healthcare services, Congress enacted the PPACA of 2010. Implementation of cost-control elements under

PPACA legislation includes new provisions for patient-centered outcomes research, establishes incentive programs for the integration of healthcare delivery systems, the detection and prosecution of healthcare fraud, the development of electronic standards and operating rules, reimbursement reform, and new quality reporting requirements (Iglehart, 2010; Marco et al., 2012). Orszag and Emanuel (2010) noted that there is an unequal distribution of healthcare costs in the United States, with 10% of patients accounting for 64% of expenditures, because individuals with chronic illnesses require a higher involvement of care, thus increasing costs. To control costs through more coordinated care and preventable measures, Congress passed the Health Information Technology for Economic and Clinical Health Act (HITECH) in conjunction with the PPACA, creating a national electronic health information exchange (Blumenthal, 2010).

The goals of HITECH legislation include the reduction of healthcare costs by improving the quality of care, reducing medical errors and duplicative procedures, improving the health information technology infrastructure through incentive programs, establishing a measurement system for provider performance, and strengthening of privacy and protection laws of patient health information (Blumenthal, 2010). HITECH legislation also establishes meaningful use guidelines as a methodology for healthcare quality and efficiency measures set forth by PPACA legislation through the use of electronic health record (EHR) systems (Lanham, Leykum, & McDaniel, 2012). EHRs provide physicians with accurate, real-time patient data and decision support to improve the quality of medical care.

Under the new paradigm of PPACA legislation, physician reimbursement will depend upon the ability to increase service quality and reduce healthcare costs with the use of an evidence-based methodology as a means for process improvement. Reay et al. (2009) surmised the process of quality in the delivery of healthcare involves the coordination of knowledge and skills. Moreover, Shelton and Saigal (2011) suggested the contemporary application of evidence-based medicine should combine the support of empirical data with the assumptions of efficacy of conventional medical treatments. However, Nandi and Mondal (2010) noted opponents of evidence-based medicine maintain that the methodology diminishes clinical judgment and expertise in favor of predetermined treatment recipes. PPACA legislation is shifting the healthcare industry toward innovations in the delivery of healthcare, the use of empirical data, and emphasis upon process improvement, thus requiring an industry-wide examination of the efficacy of treatment versus cost-effectiveness.

Healthcare Costing Methodology

In 2010, Congress enacted PPACA legislation in an attempt to decrease healthcare expenditures and increase the quality of medical care. Ginsburg (2011b) noted that PPACA legislation includes restrictions on Medicare and Medicaid reimbursement rates as a means to contain healthcare costs. Additionally, Keehan et al. (2011) suggested the introduction of reforms that measure and establish a comparative value of medical services in the form of value-based costing are a significant driver for decreasing healthcare costs. Cutler (2010) noted that a reduction in medical costs is essential for long-term viability of the healthcare system; with disparity regarding the optimum

strategy to achieve cost reduction exists. Moreover, Lipscomb et al. (2009) suggested that effective costing of healthcare services through a comparison of treatment options requires an understanding of how disease and health contribute to population health outcomes. Gunning and Sickles (2011) further noted that the current healthcare costing system does not accurately reflect physician marginal costs, thus relying upon relative value scales to approximate the costing of physician services. With the diversity of opinions regarding the costing of medical services, defining cost from the perspective of population health outcomes may provide a more viable means to measure healthcare expenditures.

As a goal of healthcare stakeholders, reliable costing methods are essential in achieving value for the patient. Lipscomb et al. (2009) surmised the inherent difficulty in healthcare costing lies in the inaccurate pricing of healthcare services, while Porter (2010) suggested costing should encompass value by defining healthcare value as outcomes relative to costs with value as the framework for cost reduction. Additionally, Miller (2009) noted that costing issues stem from a payment system that promotes volume-driven services rather than value-driven care. Therefore, to manage healthcare costs optimally, both health outcomes and cost should measure value rather than volume services.

The total healthcare costs for a patient often involve shared resources amongst multiple providers, facilities, and suppliers. Porter (2010) asserted that when measuring true costs, shared resources should include the actual resource use per patient, not averages of cost across multiple patients. Additionally, Lipscomb et al. (2009) noted the

pricing of services may reflect differences in market power between buyers and sellers and subsidization of unprofitable services such as indigent care. Berenson and Rich (2010b) suggested that current costing methodologies do not adjust for risk regarding the severity of patient disease processes in relation to the treatment burden for physicians, thus resulting in further inaccurate healthcare pricing. With the use of current costing methodologies, physicians with chronically ill populations often receive reimbursement shortfalls creating a tendency to upcode or refer patients to other providers rather than better managing the health of these patients.

The use of economic analysis in healthcare often includes cost benefit analysis (CBA), cost-effectiveness analysis (CEA), and cost-utility analysis (CUA). Lipscomb et al. (2009) surmised these methodologies derive from the marginal effect that health programs have upon desired outcomes, thus defining the costing of medical services as the economic opportunity costs of an individual service. Tan, Rutten, Van Ineveld, Redekop, and Hakkaart-van Roijen (2009) noted that variations in costing occur because of the disparity in the costing methodology of individual components such as gross costing versus micro-costing. Additionally, Weinstein and Skinner (2010) suggested the use of CEA as a means for controlling healthcare costs because this methodology assesses improvements in health outcomes related to cost. However, while these analyses are beneficial for application to population programs such as cervical cancer screening or vaccination interventions, examination of costing methodologies as a means for controlling healthcare expenditures is the basis for understanding how systematic costing methodologies may evolve under PPACA legislation.

CBA assigns a monetary benefit to the nonmonetary outcome of an intervention resulting from a treatment. Finkelstein, Allaire, Burgess, and Somali (2012) noted that benefits might be measured explicitly or implicitly, where explicit benefits reflect the monetary expense of equipment, supplies, or a service. An explicit cost may be a new, minimally invasive procedure that replaces a more expensive surgical intervention that reduces the cost of treatment. Tai and Bame (2011) suggested that implicit or indirect costs include the opportunity costs of a procedure, treatment, or intervention. Finkelstein et al. (2012) demonstrated the use of CBA to determine the impact of gastric banding surgery upon the explicit costs of treating obesity while demonstrating implicit cost savings through fewer lost days of work and improvement in worker productivity.

Another means to assess healthcare costing is through the improvement in health outcomes relative to costs by CEA. Weinstein and Skinner (2010) defined CEA as the measurement of the benefits of a resource in non-monetary terms such as alternative approaches or treatments that improve health outcomes. Additionally, Bridges, Onukwugha, and Mullins (2010) suggested that CEA places a monetary representation upon the value of life through a measurement known as the quality assessment of life years (QALY) that determine the allocation of resources and health outcomes across an individual's or population's life span. For example, the use of CEA measures the effectiveness of screening programs for breast cancer survival rates in relation to the early detection and diagnosis of cases. However, Bridges et al. further contended that practical applications of CEA fail to assess expenditures across the entire life of the intervention because the analysis uses a piecemeal approach that compares the program

to alternative interventions as a means for cost allocation. Weinstein and Skinner also suggested that CEA, as a part of the PPACA legislation for comparative effectiveness research, may deter the use of expensive treatments that have positive benefits for small patient populations. As a means to assess the cost effectiveness of treatments across populations, the use of CEA as a cost allocation tool suggests a shift from individual to population health outcomes when examining opportunities for systemic cost control.

CUA measures the capacity of a benefit of treatment upon the outcomes of a population and uses the QALY as a benchmark to determine aggregate healthcare costs. Greenberg, Earle, Fang, Eldar-Lissai, and Neumann (2010) noted using QALY as a measurement allows for a comparison of the efficiency of treatment interventions to the length and quality of life across different disease processes. Neumann and Weinstein (2010) further acknowledged the use of CUA and QALY by health policymakers as an efficient means to compare health benefits, develop clinical guidelines, and to determine healthcare reimbursement. However, Bridges et al. (2010) suggested that the determination of QALYs involves a valuation of all costs within a fixed budget and identifies a monetary QALY threshold as the standard for cost-effectiveness for a medical treatment. Bridges et al. further noted that while the QALY benchmark has a basis in the renal dialysis standard, literature suggests there is no reputable research for this benchmark. In addition, Neumann and Weinstein (2010) cited that PPACA legislation prohibits the use of QALY as a cost-utility analysis because it discounts the value of life and encourages overt government over-involvement in medical decision-making with regard to rationing of care and discrimination upon the basis of age and disability. While

CBA, CEA, and CUA costing methodologies focus upon aggregate benefits and outcomes, analysts debate the feasibility of these costing methodologies and the use of QALY as a benchmark for allocating medical resources across health populations. Furthermore, analysts question their application to patient-centered health outcomes with regard to physician services.

Economic evaluations of individual healthcare interventions or programs may include cost-benefit, cost-identification, and budget impact analyses to assess the feasibility of medical interventions. Lipscomb et al. (2009) discussed the use of cost-weighting systems such as micro-costing, activity-based costing, and macro-costing for assigning costs to health services that focus upon the quality of resources consumed and the price assigned to each unit. Tan et al. (2009) noted that costing differences result from the use of the costing methodologies rather than the performance of the actual medical service and the accuracy of the valuation of the cost components. Additionally, Porter (2010) referred to total healthcare costs as the cycle of care that encompasses the entire patient's medical condition rather than the cost of individual treatments, thus requiring a shift in costing methodology from volume services to a measurement for cost that derives value from outcomes achieved. Porter further suggested focusing costing methodologies upon processes and activities that reduce aggregate healthcare expenditures over the long-term. While these approaches may be resource-intensive to determine, they have the potential to delineate between accounting costs and true economic costs that include both explicit and implicit costs. The U.S. healthcare system is highly complex with multiple

independent units that measure costs from the silo perspective, a reflection of the organizational and financing processes of the current healthcare system.

Physician Reimbursement Reform

One of the diverse drivers of increasing healthcare costs in the United States is the provider reimbursement model for healthcare services. Reimbursement for physician services accounts for 21.2% of total healthcare spending (Landon et al., 2011) and variations in per-capita Medicare spending for similar procedures range from $4,000 to $8,000 per beneficiary depending upon geographic location (McClellan, 2011). Basing reimbursement upon the Blue Cross Blue Shield fee-for-service model, a customary, prevailing, and reasonable payment methodology was the predominant system for physician reimbursement through the 1990s (Hariri et al., 2007). As noted by McClellan (2011), previous methods to reduce healthcare spending have been through reimbursement regulation. Price regulation has not produced desired results because of provider opposition, concerns regarding access to care, and changes in service mix. Additionally, Tucker (2013) suggested the current fee-for-service methodologies encourage physicians to increase the quantity of care, thus rewarding volume rather than outcome, while Evans III, Kim, Nagarajan, and Patro (2010) noted the fee-for-service system incentivizes physicians to increase the volume of patients and services they bill. Current reimbursement methodologies are ineffective and counterproductive because they promote volume-billing, geographic fee variations, disconnects between reimbursements and resources utilized, and unequal payments for identical services depending upon physician specialty.

Fee-for-service. In 1989, the Omnibus Budget Reconciliation Act legislation created new governmental regulations in the form of fee schedules (Medicare allowable payments) and the creation of the RBRVS fee calculation formula (Hariri et al., 2007) that remains the basis for current healthcare reimbursement. Mootz, Hess, and McMillan (1995) asserted that the goal regarding the use of the RBRVS formula was to minimize variations and disparities in billing and reimbursement by healthcare entities. Moreover, Berenson et al. (2011) noted the healthcare reimbursement system relies upon a fee-for-service methodology that produces a myriad of disparate services that are often ill-defined and rely upon interpretation of ambiguous coding definitions. The RBRVS system bases physician reimbursement upon the use of numerical codes for physician services known as procedure or CPT codes. Rooks Jr. (2011) explained that the use of evaluation and management (E&M) codes for office visits must meet two out of three criteria that consist of obtaining a patient health history, the physical examination, and the complexity of the medical decision-making process. The level of code for the visit will depend upon these criteria as well as the face-to-face time spent with the patient. Martin et al. (2010) noted the use of CPT codes as the basis for physician reimbursement through the assignment of the RBRVS weighting formula that includes the complexity of work, the cost to produce the service, and an estimate of physician malpractice costs per capita. With a reimbursement system that relies upon the coding of services for reimbursement, the system does not reflect the research and consultative work that physicians perform outside of the patient encounter, thus incentivizing volume rather than value.

The prevailing method for reducing healthcare costs is through the reduction of provider reimbursement; however, the reduction of reimbursement is not a viable means to decrease costs. Gunning and Sickles (2011) and McClellan (2011) noted inherent issues with the RBRVS formula such as inaccurate accounting of the calculations for work performed by physicians (RVUs), practice expenses, and malpractice expenses. Gunning and Sickles also suggested that there is no compensation for the quality of service and no incentive for physicians to provide more than minimal attention to the patient. Wilensky (2012) surmised that the fee-for-service system promotes fragmentation of care through volume billing without consideration for the value of care. With the historical promotion of volume billing and disparity in the weighting formula, the use of RBRVS has been unsuccessful in controlling healthcare expenditures.

Additionally, the fee-for-service system limits the mechanisms for rewarding quality in patient care and outcomes. Rooks Jr. (2011) suggested that basing reimbursement on face-to-face time is not consistent with quality of care because physician reimbursement should include activities that are outside of the face-to-face encounter and are essential to providing exemplary care. Additionally, Berenson et al. (2011) surmised that the ambiguity in coding definitions may also cause physicians to miscode services that suggest more financially advantageous levels of coding. With the subjectivity in CPT coding definitions, the miscoding of office visits may inadvertently lead to accusations of billing fraud.

While the choice of code usage allows physicians discretion over pricing for services, Medicare sets reimbursement rates for individual services. In response to

upcoding, Medicare expanded coding guidelines to better define coding definitions. Berenson et al. (2011) noted that the new guidelines do not emphasize pertinent elements of decision-making and care management, especially in cases of patients who have multiple disease processes. Therefore, physicians may overdocument medical visits to justify higher coding levels for the value of services. Conversely, fearing penalties for misrepresenting office visits, some physicians may downcode their services while others ignore the coding guidelines, using their own assessment of the value of their services (Berenson et al., 2011). Brunt (2011) acknowledged the frequent practice of upcoding office visits because of the subjectivity in coding guidelines and definitions. With the ambiguity in coding definitions regarding the complexity and intensity of physician services, the need exists for more realistic reimbursement methodologies for healthcare services.

Sustainable growth rate. As part of the Balanced Budget Act of 1997, Congress established the Sustainable Growth Rate (SGR) formula as a means to reduce expenditures in physician reimbursement (Colchamiro, 2012). The use of the SGR formula shifts Medicare reimbursement from a volume-based payment system to one that reflects changes in the Gross Domestic Product (GDP). Using the SGR formula, Medicare bases annual calculations upon changes in (a) physician service fees, (b) the average number of Medicare beneficiaries, (c) the 10-year average percentage change in real GDP per capita, and (d) expenditures in relation to changes in healthcare laws and regulations (Colchamiro, 2012). As noted by Ginsburg (2011a), the SGR formula ties fluctuations in the economy to annual updates of the Medicare fee schedule, at or above,

the Medicare Economic Index. As a consequence of the SGR calculations, sharp decreases in physician reimbursement occur, causing physicians to lobby Congress to block reductions. In 2010, Congress postponed a 24.9% reimbursement reduction resulting in an increase in projected spending through 2020 of $330 billion (Ginsburg, 2011a). While attempts at reforming the reimbursement methodology seek to decrease healthcare costs, the consequences of the use of the SGR formula calculations and continual postponements in physician reimbursement cuts results in compounding the projected, annual healthcare spending.

Two reasons exist for the spiral of increasing payments and rate reductions. Laugesen (2009) suggested limitations to the use of the SGR calculation because of a cost-containment policy that promotes volume billing by physicians, and failure of the formula to distinguish between effective and ineffective quality of care. Ginsburg (2011a) noted the use of the SGR formula ties the utilization of patient services to fluctuations in the U.S. economy, which after 2002, set up deferrals of reimbursement reductions by Congress, thus causing higher rate cuts in subsequent years. Additionally, Laugesen acknowledged that during discussion of SGR implementation, physicians agreed to an outcome-oriented reimbursement but set limitations to the use of quality outcomes as a payment-based methodology because of the threat to physician autonomy. Physicians have been successful in blocking reimbursement reform but may share responsibility for the inability of the system to contain costs.

Payment bundling and capitation. In 1984, Medicare instituted the use of the Medicare Economic Index constituting a change in the annual costs for operations of

physician practices (Wilensky, 2009), thus leading to a bundled payment system for inpatient hospital care according to a patient's classification of disease known as a diagnosis-related group (DRG). Traditionally, bundled payment methodology is a shared payment rate for patient services between hospitals and physicians; however, bundling may also include the sharing of reimbursement with other healthcare providers performing outpatient care (McClellan, 2011; Wilensky, 2009). McClellan (2011) further noted Medicare has since included the bundling of payments for post-acute, post-surgical, and home care in the form of global periods that encompass all post-procedure care for a period of 60–90 days. Greenapple (2013) emphasized the use of a bundled, episode-based approach to reimbursement that encourages collaboration among providers to improve care, contain costs, and that equitably allocates incentives and compensation. Additionally, McClellan (2011) suggested the effects of bundling upon the intensity of care and spending growth were unproven; however, the potential exists for lowering aggregate per-visit costs. Froimson et al., (2013) noted that the Centers for Medicare and Medicaid Services is in the process of developing alternative payment methodologies to reduce healthcare spending while increasing the quality of care. The development of a broader bundling payment methodology across multiple providers is an ongoing discussion regarding healthcare payment reform and a basis for the establishment of the patient-centered medical home (PCMH) under PPACA legislation.

Capitation or fixed-budget payment is a form of bundling for all provider services into one payment regardless of the amount of care a patient receives. McClellan (2011) and Zuvekas and Cohen (2010) noted capitation was the primary reimbursement

methodology for privately delivered care such as health maintenance organizations (HMOs) in the 1990s. Additionally, Zuvekas and Cohen suggested the decline of capitation as a reimbursement methodology was the result of provider complaints regarding the inability to negotiate fee reimbursement with insurance organizations, administrative complexity in calculating and negotiating capitation rates, and the decline in patient membership because of limitations in service and provider choice. Capitation also failed to control healthcare costs and proffered concerns regarding the quality of patient care and incentives to under-provide care.

Recent trends toward population-based healthcare suggest the need to reform physician reimbursement because of the inability of the current healthcare system to control costs. Frakt and Mayes (2012) suggested that rather than adopting previous capitation systems, healthcare leaders should examine modernization of capitation that combines a preset budget for fee-for-service and a component for providing quality care. Manchikanti et al. (2012) cited additional changes to reimbursement models including increasing additional reporting measures for the physician quality reporting system (PQRS), providing a differential for physician payments for quality by establishing a value-based payment modifier (VBM), an electronic prescribing incentive program, and revision of the components of the RBRVS reimbursement formula. Restructuring the physician reimbursement system will require understanding new metrics, restructuring accounting and financing processes, and incentivizing physicians for providing quality care.

Organizational Models for the Delivery of Care

A gap in peer-reviewed literature exists regarding the organizational structures of traditional physician-centric business models. Information found in practice guidelines and medical society literature regarding the structural components of a medical practice is scarce, with few studies examining the framework of single provider practices. Mills, Rorty, and Werhane (2003) suggested that practice-based medicine loosely examines the organizational components of physician practices including clinical and billing processes and describes diverse organizational characteristics such as size, complexity, specialty, and contractual relationships. Moore and Wasson (2007) further described a traditional physician-centric practice as having high overhead, volume-driven patient care, minimal performance data, and reactive patient care. Therefore, reforming the delivery of healthcare with a patient-centered focus under PPACA legislation may require extensive changes to traditional physician-centric business models.

Traditional physician practice models. Most physician practices operate on a model that emphasizes physician autonomy with employees supporting the treatment of patients in a front (clinical) and back (administrative) organizational structure. Nutting et al. (2011) suggested physicians adopt an authoritarian position over employees, while Miller, Crabtree, Nutting, Stange, and Jaén (2010) likened the authoritarian position of physicians to that of a fiduciary role, with the physician assuming full responsibility for patient care, operations, and business processes. Moreover, VanVactor (2013) acknowledged the existence of physician silos that emphasize autonomy and independence from other providers while administrative and clinical employees

supplement the individual physician by orchestrating patient flow and serving as gatekeepers for the medical practice. Mills et al. (2003) and Wolinsky (1982) suggested that total autonomy may only realistically occur under limited circumstances because physicians must respond to a myriad of stakeholders such as patients, government entities, private payers, managed care plans, hospitals, professional associations, lawyers, and courts.

Physician business models include diverse organizational structures such as independent practices, associations, partnerships, and group practices. Wolinsky (1982) noted that the independent practice structure is the most unstable because it is either acutely patient-dependent or referral-dependent. Additionally, Zonies (2009) acknowledged that independent physicians must also possess both business knowledge and medical acumen, thus creating additional time constraints. Associations and partnerships allow physicians to maintain independence while forming cooperative arrangements, taking advantage of economies of scale, and sharing ancillary staff. Group practices provide the security of sharing financial risk, economies of scale, and profit sharing but require peer regulation, and bureaucratic mechanisms to manage the diverse operational requirements (Wolinsky, 1982). Payment and medical specialty categories also define practice organizational models and include fee-for-service, private pay or capitation.

Concierge medicine. An emerging trend in physician-centric practices is the concept of concierge or retainer medicine that provides enhanced care to patients beyond traditional physician practices. Lucier et al. (2010) noted market forces such as financial

constraints and increasing bureaucratic regulations have driven the development of new physician-centric practice models. French et al. (2010) defined concierge medicine as a business arrangement between physicians and patients that include a membership fee entitling the patient to a variety of services such as same-day or next-day appointments for non-emergent care, 24/7 access to a provider, house calls, and preventative services not normally offered through most health insurance plans. Jones and Treiber (2010) noted fees for retainer services may range from $1,000 to $25,000 per year. Additionally, Huddle and Centor (2011) acknowledged benefits for physicians including decreases in patient loads, less administrative requirements, more personalized attention to patients, and a more fulfilling practice experience. While there is a potential for concierge medicine to become an innovative physician-centric business model, concerns exist regarding costs, ethics, and access to medical care.

A significant reason for developing a concierge practice is professional dissatisfaction. Jones and Treiber (2010) and Lucier et al. (2010) cited physician frustration with heavy workloads, increasing demands on time, low reimbursement, loss of autonomy, and increasing bureaucratic regulations as reasons for establishing a concierge practice. Moreover, French et al. (2010) suggested that patients are also demanding more specialized care because of increasing health insurance costs, long wait times for appointments, and limited physician contact. French et al. further noted that patients are paying higher deductibles and premiums for shorter encounters with physicians and longer wait times for appointments. Thus, both physicians and patients are

seeking alternative healthcare options to improve access, affordability, value, and satisfaction.

While concierge medicine may be beneficial for physicians and improve the quality and value of care for patients, many opponents voice ethical and legal concerns regarding concierge practices. Jones and Treiber (2010) suggested concierge medicine creates issues with social class disparity and access to care. Additionally, French et al. (2010) noted critics of concierge medicine argue that the model creates a two-tiered health system where the wealthy have better access to superior care and services. French et al. further asserted that private health insurance already contributes to a tiered system because of cost; therefore, concierge medicine may add another tier to the current unequal health system. While the shift by physicians to concierge medicine has been minimal, there exists the potential for exacerbating the current physician shortage because patients who are unwilling or cannot afford to pay a retainer will need to seek a new provider, reducing their access to care. Furthermore, Lucier et al. (2010) suggested retainer medicine may erode the cross-subsidization system where patients with insurance help bear the cost of the uninsured.

The basis for ethical issues regarding concierge medicine lies in social justice theory. Huddle and Centor (2011) questioned whether the obligation of physicians to treat all patients, regardless of the ability to pay, is socially unjust. While the pursuit of social justice is a civic virtue with the obligation to provide access to care for all members of society, Huddle and Centor argued that access to care is not the obligation of individual professionals providing services. Orentlicher (2012) noted that PPACA

legislation provides for the ability of patients to obtain health insurance coverage, but it does not obligate physicians to treat patients. Kapp (2011) further asserted that physicians would prefer that patients have access to quality care; however conscripting physician services is not a viable means of promoting social justice. Physicians do perform social obligations in treating patients competently and ethically within a regulated structure that society dictates for these obligations.

One of the primary legal issues surrounding concierge medicine involves insurance billing. Jones and Treiber (2010) noted that a majority of concierge patients pay a retainer fee and use their health insurance for hospitalization and outpatient services. While the majority of insurance carriers prohibit balance billing, there is the concern that billing for the part of the physicians' fee not covered by insurance or billing for the duplication of services may occur. Clark, Friedman, Crosson, and Fadus (2011) further suggested there are concerns with violation of the False Claims Act for improperly collecting payments from Medicare for patient services. While concierge medicine is an innovative alternative model for patient care, the model creates questions regarding costs, ethics, and access to medical care. However, the need for scientific research that demonstrates concierge care produces better health outcomes and lower costs are topics for future study as the healthcare industry struggles to adapt to the challenges facing patients and providers under PPACA legislation.

Proposed Changes to Healthcare Delivery Under PPACA Legislation

With the enactment of PPACA legislation, physician reimbursement reform is at the forefront of debate regarding how to control healthcare expenditures and improve the

quality and value of medical services. Physician reimbursement reform also requires discussion regarding the future delivery of medical services and how physician-centric business models may evolve under the requirements of PPACA legislation. Concepts that are pertinent to the healthcare reform process include the transition to a value-based methodology and the formation of PCMHs and ACOs.

Value-based methodology. Value is a nebulous concept and depends upon whose definition of value the concept affects. Porter (2010) noted that the value of healthcare should encompass a performance framework for improvement and includes outcomes relative to cost. However, cost reduction without regard to outcomes achieved leads to limitations in efficient and effective care. Lee (2012) surmised the redesign of care delivery should include more than reducing physician reimbursement while defining the value of care from the patient perspective. Lee further suggested that the patient perspective centers upon outcomes that are relevant to patients, the costs to achieve these outcomes, and how the healthcare culture defines, measures, and improves value. Measuring value should include all activities across patient care continuums that meet patient needs, much like that of a traditional value chain. A patient's disease process, which is an interrelated set of conditions treated through the integration and provision of secondary or complicating disease processes, determines patient medical needs (Porter, 2010). Therefore, treatment for a disease process may involve numerous specialties and interventions. Creating value for the patient through the combined efforts of a provider team over the course of a patient care cycle or value chain is an example of a value-based approach to care.

The value-based approach resembles a high-performance systems approach that involves physicians as team leaders and incentivizes the delivery of quality. Ginsburg (2011a) suggested the move to a value-based model as a prospective payment methodology would focus upon reimbursement for broader units of service, such as episodes of care or care needs over time that incorporate quality and value into provider payment. Lee (2012) surmised that redesigning care to reflect a high-value care approach becomes synonymous with detailed planning for patient needs, commitment to measuring outcomes, and an unwavering desire to improve. A value-based approach requires the use of medical teams that are responsible for providing high-value care for patient populations.

Patient-centered medical home. The PCMH is a model of care in which a primary provider manages and coordinates the care of all facets of a patient's health with a team of healthcare providers. Wise et al. (2012) noted PCMHs are essential to the transformation of patient care. The Agency for Healthcare Research and Quality (2013) defined the PCMH as an organizational model for primary care that delivers the core functions of primary medical care. The establishment of PCMHs involves the transformation of physician-centric care processes incorporating all members of a healthcare team, placing the patient at the center of care to improve the quality and the access of healthcare teams to the patient.

The main impetus of the PCMH concept is to deliver high quality medical services at a lower cost to increase the value of medical care. Goldsmith (2011) noted many physicians are experiencing issues with business viability because growth in

reimbursement lags behind the rate of growth in business expenses. Additionally, Berenson and Rich (2010b) suggested fee-for-service payment methodologies do not accurately reflect the amount of time and activities to treat the increasing complexity of disease processes in various patient populations, thus decreasing the quality of patient care. This situation has forced physicians to practice volume billing and increase ancillary testing services to accommodate for income losses. Furthermore, Berenson and Rich asserted the current model of reactive patient care that emphasize documenting patient histories, performing physical exams, and clinical decision-making are no longer amenable for capturing the amount of care activities necessary for patients with chronic health conditions. Goldsmith (2011) and Longworth (2013) noted that the PCMH model involves moving away from reactive care under a physician-centric model toward a proactive, patient-centric care model. Proactive care tracks the health of patients over time, with an emphasis on wellness and chronic disease management to prevent unnecessary emergency room visits and hospital admissions.

Healthcare integration is essential to the PCMH organizational model. Korda and Eldridge (2011) cited four core competencies, or pillars of care that comprise the delivery of patient care: (a) team-based care, (b) cross-team communication, coordination, and collaboration, (c) infrastructure and technology, and (d) aligned payment incentives. Jaén et al. (2010) and Nutting et al. (2011) also suggested four pillars of care that contribute to high quality/low cost care: (a) access to first-contact care, (b) coordinated care, (c) comprehensive care, and (d) sustained personal relationships. Incorporating these

competencies with physician payment reform and integrated care delivery, this model may offer the opportunity of improving health outcomes at a lower cost.

Coordinated, continuous, and collaborative relationships between patients and personal care teams are at the center of the PCMH model. Van Vactor (2013) and Wise et al. (2012) suggested healthcare integration under PPACA legislation requires significant expansion of the collaboration of healthcare professionals across and within diverse provider settings. Korda and Eldridge (2011) further noted that traditional hierarchal team structures will need to transform to a flatter management structure that promotes collaboration and shared decision-making as all team members become managers of care. Under the proposed PCMH model, a physician will coordinate care with a patient care team. Shortell, Gillies, and Wu (2010) surmised the patient care team may include nurses, physician assistants, and other medical providers who deliver personalized, coordinated care across conditions and episodes of treatment over a patient's care cycle. The PCMH provides continuous access to a primary care provider and a care team for the PCMHs' patient population and guarantees first contact care. Additionally, Korda and Eldridge (2011) suggested that members of the patient care team should be equally represented in collaboration and leadership to meet the requirements of patient-centered care under the PCMH model.

The PCMH model also involves the use of electronic medical records, disease registries, care guidelines, patient self-management support programs, and participation in quality improvement initiatives (Shortell et al., 2010). In 2011, the National Committee for Quality Assurance updated criteria for PCMHs with emphasis upon

patient-centeredness and alignment with government initiatives to increase the use of health information technology.

While the PCMH is not a mandated care model, there are currently over 3,000 medical practices earning recognition as pilot programs (Longworth, 2013). In 2006, the National Demonstration Project (NDP) was the first comprehensive pilot program for the PCMH consisting of facilitated and self-directed implementation strategies (Jaén et al., 2010). Nutting et al. (2011) noted that while there are no set organizational frameworks for the PCMH, the model bases organizational principles upon quality improvement measures such as access to care and information, continuity of care, practice-based care teams, quality and safety, health information technology, and practice management. Evaluation of the NDP approach focuses upon understanding the evolution and transformation processes of the medical practice. Bitton, Martin, and Landon (2010) cited the emergence of several key findings from their research on the PCMH demonstration projects: (a) the projects were extensions of current health plan and quality improvement initiatives and (b) the existence of variability in basic requirements, definitions, payment methods, and facilitation of transformation processes for PCMHs. Bitton et al. and Nutting et al. further noted these mechanisms may be difficult to extrapolate on a national scale because of the inherent challenges to implementation and generalization of organizational structures across diverse medical groups.

The implementation of PCMHs also requires changes to independent processes that deliver more effective and efficient care. Reducing costs to patients through PCMHs will increase the operating expenses of the medical practice. Culler et al. (2013)

suggested the total variable cost of transforming a medical practice to a PCMH model is approximately $9,670 to $15,098 per practice per year. Additionally, Gill and Bagley (2013) noted these costs include additional employees, a practice facilitator, implementation, and quality reporting. In many industries, recouping these costs might be passed on to the consumer; however, recouping variable costs is not a viable option in healthcare because reimbursement is under insurance company and government regulation.

The PCMH organizational structures place emphasis upon patient-centric processes and align the home with government initiatives such as the use of health information technology and community service support. Payment mechanisms under the PCMH model, as noted by Berenson and Rich (2010a), feature traditional but enhanced fee-for-service reimbursement, a monthly fee for medical home activities, and a pay-for-performance component. Under a fee-for-service model, reimbursing physicians at higher rates may decrease the temptation for volume billing and increase the ability to cross-subsidize unreimbursed activities. Berenson and Rich raised the issue regarding the extent to which volume billing, rather than payment method, affects physician billing behavior while also suggesting that upcoding to increase income may contribute to the inability of the healthcare system to control costs. McClellan (2011) asserted that linking fee-for-service payments to measurable standards such as evidence-based care may complicate reimbursement for patients with chronic disease processes. Additionally, Berenson and Rich suggested the need for adjusting payments for patient populations depending upon the complexity of treatment. While fee-for-service is the current method

for reimbursement, this methodology does not account for patients who are chronically or severely ill who may have worse outcomes unrelated to the quality of their care.

Providing a supplemental monthly fee for medical home activities, in addition to traditional fee-for-service payments, is a methodology to reward quality for the treatment of chronically ill patients. Berenson and Rich (2010a) suggested the use of a hybrid model for reimbursement that encompasses fee-for-service and capitation payments for those practices that demonstrate the required PCMH proficiencies. Implementing a PCMH will also require an adjustment in the patient-mix regarding the range of medical services that the practice provides. Berenson and Rich further suggested reimbursement would require an adjustment to account for community-based entities that participate in extended patient care. Moreover, Longworth (2013) acknowledged that a caveat to community-based participation will be managing the costs associated with extended care, such as home health, thus requiring leveraging technologies that provide optimal, low-cost patient monitoring. While support for the hybrid reimbursement approach by physician organizations promoting PCMH exists, a pay-for-performance methodology is another alternative for physician reimbursement.

Pay-for-performance as a reimbursement methodology may be beneficial in rewarding practices that earn additional reimbursement for implementing PCMH activities. McClellan (2010) described the use of pay-for-performance in PCMHs as coordinating care for patients through the use of electronic medical records, tracking patient risk factors for disease, and spending more time with patients during visits. As a payment methodology, pay-for-performance uses financial incentives to reward or

penalize providers for meeting or failure to meet certain performance goals. Additionally, Berenson and Rich (2010b) noted the use of pay-for-performance as a measurement for quality improvement through processes and outcomes, spending, or patient experience (value). Berenson and Rich further acknowledged the difficulty in applying pay-for-performance methodology because of the difficulty in changing physician reporting behavior, and whether incentives should reward the level of performance or the rate of improvement. However, Albanese et al. (2009) suggested the use of pay-for-performance as a positive reinforcement to change physician behavior because it links reimbursement to meet concepts to create behavioral change. The use of pay-for-performance as a complementary methodology to other reimbursement systems may have the ability to reward physicians for performance while incentivizing performance across the diverse patient treatment processes.

Accountable care organizations. ACOs are the first healthcare delivery reform initiative under PPACA legislation. Berkwick (2011) suggested that the purpose of the ACO is to improve medical care for individuals, create better health outcomes for populations, and decrease the growth in aggregate healthcare costs. Shields et al. (2011) defined the ACO concept as an organization of healthcare providers agreeing to oversee the medical care of patients assigned to the organization while being responsible for the cost and quality of medical treatment. However, Berwick defined the ACO as an organization that assumes responsibility for the care of a defined population of Medicare beneficiaries on the basis of primary care usage patterns. While the exact definition of an ACO varies, McClellan, McKethan, Lewis, Roski, and Fisher (2010) noted experts do

agree upon the core concepts and further define ACOs as consisting of a group of providers jointly responsible for quality improvements and reduction in healthcare spending.

ACOs involve various organizational structures ranging from integrated delivery systems and physician medical groups to hospital-based systems. Kocher and Sahni (2010) asserted the move toward ACOs will transform the structure of physician practice models because ACOs integrate hospital services and physician practices. McClellan et al. (2010) suggested ACOs should include participation of physicians, hospitals, long-term care organizations, and other providers to improve quality and lower healthcare costs. Under the Department of Health and Human Services (2011), ACOs will have considerable flexibility regarding organizational structures, with requirements to meet quality standards in patient safety, care coordination, and preventative health. The Department of Health and Human Services also specifies ACOs will include diverse healthcare providers and integrate the general community and the Medicare patients the organization serves (Berwick, 2011). While there are no limitations in ACO participation, Crosson (2011) noted that the diversity in organizational structures and the broad definition of the ACO concept provides an opportunity for continuing innovation.

The organizational structures of ACOs are emerging from diverse healthcare practice models. Shortell, Casalino, and Fisher (2010) suggested these models include integrated systems that combine hospitals, physicians, and insurance companies, multispecialty group practices, physician-hospital organizations, IPAs, and virtual physician organizations. Shields et al. (2011) cited four key challenges to implementing

ACOs: (a) the preponderance of solo and small group medical practices in the United States, (b) hospital administrations failures to engage physicians as leaders, (c) fee-for-service reimbursement, and (d) the need for ACOs in the commercial market. Additionally, Shields et al. noted as requirements of ACOs, independent and small group practices lack the capital to invest in quality improvement training, information technology, and the development of disease registries. Medical staff structures of hospitals rely upon independent physicians and have an inability to improve quality and safety quickly, remove poorly performing physicians from staff, and fail to reward physicians for performance, thus making integration of medical staff challenging (Shields et al., 2011). Furthermore, many areas of the United States do not have integrated systems, especially in rural communities, making national ACO implementation difficult.

While provider organizations originally included physicians and hospitals, Goldsmith (2011) noted that ACO models may include various provider organizations such as independent practice organizations, multispecialty medical groups, and ad hoc organizations comprised of physicians and hospitals. Fisher, McClellan and Safran (2011) further suggested that hospitals will likely control the ACO contracting process because the largest Medicare costs are hospital related. In many rural communities, the hospital is the sole organization with the infrastructure and financial capability of implementing the ACO model.

Fee-for-service reimbursement is often touted as promoting quantity of services rather than quality of outcomes. At the forefront of discussion are alternative payment models such as pay-for-performance and capitation that encourage higher-quality,

improved outcomes, and cost-effective medical care. Goldsmith (2011) noted the original vision of the ACO was an alternative payment methodology to reward providers for reducing Medicare spending in individual hospital service areas. Those who participate in the ACO and lower spending below a targeted growth rate would receive a percentage of the savings.

Accountable Care Organizations, as an alternative payment methodology, reward provider organizations for reducing spending growth in hospital service areas. Longworth (2013) noted that the concept of accountable care suggests that healthcare providers are responsible for improving the health of populations, ensuring better care for individuals, and reducing cost inefficiencies while increasing the value. Physicians would receive a financial incentive to reduce aggregate Medicare spending to a level below a targeted growth rate. However, Goldsmith (2011) suggested payment under the ACO model only provides a share of the savings if providers succeed in lowering the rate of Medicare expenditures, but the model continues to promote volume billing through fee-for-service reimbursement. Berwick (2011) and McClellan et al. (2010) noted several examples of ACO payment models including (a) a one-sided shared savings model involving upside gains with a small reduction in incentive payments if providers fail to achieve quality performance goals, (b) a two-sided shared savings model that would increase provider payments proportionately for accountability in relation to costs exceeding preset goals, and (c) a partial capitation model that replaces a portion of the fee-for-service payments with a fixed payment plus bonuses and penalties in relation to achievement of cost and quality benchmarks. In theory, as providers work together to reduce aggregate Medicare

spending, linking traditional fee-for-service reimbursement and population performance measures should decrease healthcare expenditures.

Healthcare analysts have also suggested a need for implementation of ACO organizations in the commercial market if they are to succeed on a large scale. Crosson (2011) noted that private insurance companies such as Blue Cross Blue Shield, Aetna, and Humana are actively participating in ACO arrangements with providers because of the need to share risk. Sharing risk between insurance providers and ACOs aligns incentives and promotes cooperative and innovative relationships between the entities. However, Goldsmith (2011) asserted the consolidation of physician markets through hospital acquisition of provider practices may increase private insurance costs because of cost shifting, thus negating any cost saving through accountable care. Goldsmith also noted the ideal contracting model for private insurers is one that encourages competition among the various organizations and preserves a role for patient choice. The ideal accountable care model would create quality and value by preserving patient choice and encouraging competition among providers.

The ACO model builds upon several similar models developed by Medicare since 2005. However, McClellan (2011) suggested that limitations exist within ACO pilot studies that demonstrate only half of the ACO pilot groups were able to achieve cost reductions below 2% per year in total spending to qualify for shared savings. Additionally, McClellan et al. (2010) acknowledged that participating sites in the Physician Group Practice Demonstration (PGP) were able to achieve reductions in spending growth by the third year following implementation. Moreover, Berwick (2011)

noted of the ten PGPs participating in the study; five generated savings. Berwick also surmised that the success of the PGPs may be the result of organizational structure, investment in care management programs, redesign of care processes, more extensive diagnostic coding, and changes in market conditions. McClellan et al. (2010) and Shields et al. (2011) also noted the use of alternative forms of integrated care models that have the ability to reduce costs, improve quality, and might be generalized across the healthcare system. However, the probability of consolidation of physician markets through multispecialty organizations and hospital acquisition of physician practices may compromise savings through the use of ACOs.

Barriers to ACO implementation may arise in the form of redefining provider organizational structures from traditional physician-centric models that center upon reactive care toward a proactive, patient-centric approach. Longworth (2013) suggested challenges exist to single provider practices in implementing ACO models because of the requirements in infrastructure for tracking patient populations and disease processes for performance measurement. Korda and Eldridge (2011) noted the ACO, as an integrated care delivery model, should represent physicians, nurses, and other ancillary care providers who can provide the leadership required for patient-centric care. While most care settings continue to follow a hierarchal structure, these structures must adapt to a flatter management structure that promotes team-based decision-making. The implementation of ACOs will create innovative integrated care delivery structures, thus possibly changing the organizational structure of physician-centric medical practices.

Physicians as hospital employees. Hospital administrators are responding to healthcare reform by employing physicians in salaried positions or by making them independent contractors. Hunter and Baum (2012) surmised that traditional employment is an unfamiliar concept to physicians and creates uncertainty in their role as a physician employee. Additionally, Jones and Treiber (2010) noted that an increasing number of physicians are seeking alternative modes of practice because of their dissatisfaction with managed care, low reimbursement, and heavy workloads. Hunter and Baum also suggested that the need for financial security and the risk of business viability under the PPACA; physicians are seeking employment opportunities outside of the traditional independent provider model. Furthermore, Iglehart (2011) asserted that the physician workforce comprises more women and Generation Xers who are comfortable with the security that employment provides and desire work-life balance through reasonable work hours. This is in contrast to the older generation of physicians who have been independent business owners throughout their medical careers.

Hospital administrators realize the necessity of employing physicians because aligning revenues with physicians and other healthcare providers may be the most optimal means to satisfy the requirements of PPACA regulation. Iglehart (2011) suggested that PPACA regulations are likely to include diverse reimbursement models for episodes of care and new organizational arrangements between the government and accountable care organizations. Hunter and Baum (2012) cited the use of professional service agreements (PSAs) in which hospitals contract with physicians rather than physicians being W-2 employees. Common PSA models include Global Payment PSA,

Practice Management Arrangements, Traditional PSA, and Hybrid Arrangements. Additionally, Hunter and Baum (2012) surmised that PSAs offer diverse operational and organizational structures with benefits including maintenance of physician autonomy, organizational flexibility, a high level of stability, and the reduction of financial risk for hospitals by managing physician practices. Understanding the economics of physician employment may provide an easier transition for both physicians and hospitals using PSAs.

While employing physicians differs from integrating physicians into a hospital organization, economic and legal issues exist with the employment model. Kocher and Sahni (2010) noted many hospitals lose money during the first three years of physician employment because of the slow transition of physicians as hospital employees; however hospitals do recoup losses through ancillary testing and referrals. With strong employment strategies in place, Kocher and Sahni suggested large provider networks have the ability to provide hospitals with increased pricing power when contracting with insurance organizations. Moreover, Iglehart (2011) cited concerns with hospitals dominating market share creating higher prices and cost shifting in less competitive markets. With hospital efforts to gain market share, issues with antitrust laws regarding capturing admissions through referrals is also a concern.

With new physician-hospital employment models, questions arise concerning how Stark and antitrust laws may affect integrated care models. Iglehart (2011) suggested that integrated and employment models create a risk of illegal price fixing when engaging in joint price negotiations with insurance carriers in less competitive markets. Payton (2012)

also noted that hospitals, by hiring physicians, cannot structure compensation arrangements for direct utilization of ancillary services because of Stark laws; therefore, compensation packages for physician employment may require a combination of salary and incentive payment for performance. With the financial viability of physician-centric practices in jeopardy under the healthcare reform environment, physician employment may provide an innovative organizational structure offering physicians and hospitals a model for long-term sustainability.

Physician Attitudes Toward Government Involvement in Healthcare

Current concerns regarding the costs, quality, and access to healthcare is a significant impetus for reforming the healthcare industry with emphasis upon physician reimbursement under PPACA legislation. Prior to the Omnibus Act of 1989, physicians could charge customary, prevailing, and reasonable (CPR) rates for services, incentivizing physicians to increase service charges (Hariri et al., 2007). Following the implementation of the RBRVS formula in 1989, Medicare set a resource-based value system for reimbursement, thus altering physician reimbursement rates and assigning a non-monetary value to medical services (Hariri et al., 2007). Accordingly, Kifmann and Scheuer (2011) noted that physicians had the option of accepting Medicare assignment as payment in full for services rendered. If a physician chose not to accept Medicare assignment, Medicare permitted the physician to bill for patient visits at a reduction in the reimbursement rate compared to a participating provider.

With continual cuts in reimbursement and increasing government involvement in the practice of medicine, physician attitudes toward the healthcare industry are becoming

jaded. Zismer (2011) likened the behaviors and attitudes of providers toward government involvement in healthcare as resembling social learning theory that suggests when presenting individuals with a challenge they feel is unattainable, they will fail to modify their behavior to achieve the goal. Moreover, Antiel, Curlin, James, and Tilburt (2009) suggested that surgeons and other specialists oppose policies limiting reimbursement for procedures unless healthcare reform includes incentivizing for controlling costs. Evans III et al. (2010) asserted compensation methods such as capitation and fixed payments may affect physician-perceived incentives to control costs by under-providing services, thus possibly affecting patient-perceived quality and value. Antiel et al. noted additional points of physician opposition to healthcare reform include the requirement to use evidence-based medicine and cost-effectiveness data to guide medical decision-making.

Loss of autonomy is another point of contention among physicians. Zismer (2011) noted negative physician attitudes toward increasing governmental regulation stemming from the loss of professional autonomy, exploitation resulting in job dissatisfaction, and non-physician managers controlling medical and financial decision-making. Additionally, Crosson (2005) suggested that physician aversion toward integrated healthcare entities stems from the fear of loss of autonomy in medical decision-making, while Mazurenko and O'Connor (2012) purported the fear of loss of autonomy is a relevant factor in job dissatisfaction. Furthermore, Wolinsky (1982) suggested that local healthcare systems may influence physician autonomy depending upon the prevailing forms of medical entities within the market region, managed care organization, and politics that require peer regulation. Loss of autonomy is a critical determinant of physician attitudes created

by the increasing regulatory environment for cost and quality accountability that PPACA legislation requires.

Continuous Quality Improvement

Achieving the goals set forth by PPACA legislation will require physicians to become change leaders and champions for improving quality and health outcomes for their patient populations. To meet the goals of decreasing costs and increasing quality, integration of physician business models into healthcare organizational models such as ACOs, PCMHs, and evidence-based medicine methodology creates a blueprint for the development of multidisciplinary healthcare teams. Crosson (2005) noted that delivery system frameworks should be capable of meeting several challenges: (a) developing evidence-based care processes, (b) effectively using technology to enhance treatment and outcomes, (c) knowledge of skills management, (d) working as effective members of integrated teams, (e) coordinating the patient care cycle, and (f) measuring performance and outcomes for continuous quality improvement.

Over the past 20 years, the development of quality improvement methodologies for healthcare application include business, clinical, and administrative tools, techniques, and concepts. Sollecito and Johnson (2011) defined the concept of continuous quality improvement (CQI) in healthcare methodology as an incremental, structural approach for organization-wide quality improvement focusing upon processes that align strategic goals with a culture of quality healthcare management. Gowan and McFadden (2012) suggested the evolution of CQI from evidence-based methodologies to include integrated quality teams that use quality improvement tools to boost productivity, profitability,

quality, and process outcomes. Additionally, Wolfson et al. (2009) asserted that the use of integrated teams and incentive programs positively affect the provision of medical care. However, the application of measurement processes requires significant infrastructure that are often not financially attainable for small and independent physician practices.

A significant source of healthcare expenditures lies in operational inefficiency. Koning et al. (2011) attributed a significant source of operational inefficiencies to administrative operations such as communication issues between physicians and hospital administration; dichotomy in leadership roles and culture; supply chain management; and financial and medical decision-making. Weinstein and Skinner (2010) cited the duplication of services as an additional source of operational inefficiency, while Cutler (2010) estimated that unnecessary administrative operations account for approximately 15% of healthcare spending. Therefore, developing systems that reduce operational inefficiency through quality improvement measures may provide one avenue to reduce costs and increase quality health outcomes.

To create sustainable, patient-centric business models that are cost-effective and competitive, healthcare requires systematic innovations for addressing the challenges of today's evolving healthcare system. Gowen and McFadden (2012) noted CQI initiatives employ a team approach, using patient satisfaction measures and competitive benchmarking for quality improvement. Miller et al. (2010) suggested that CQI uses objective data to analyze and improve processes and derives its methodology from a Donabedian model that examines healthcare from structure, process, and outcome

domains. Gowan and McFadden noted that Donabedian domains are similar to the methodology phases in Six Sigma (define, measure, analyze, improve, and control), thus making the integration of CQI and Six Sigma easily adoptable by healthcare organizations for process improvement. For physician-centric practices, building sustainable alliances with diverse healthcare providers will require a multidisciplinary, patient-centric approach for quality improvement to exceed the standards set forth by PPACA legislation.

Physician leadership. Implementation of PPACA legislation may require integration of healthcare entities for long-term sustainability, specifically, individual physician practices. Garman and Scribner (2011) noted that healthcare reform necessitates the development of new leadership skills emphasizing implementation of quality improvement initiatives. Burns, Bradley, and Weiner (2012) asserted that few studies examine the quality of patient care correlating with leadership style and the achievement of clinical goals. Additionally, Garman and Scribner (2011) suggested that given the emphasis of the PPACA legislation upon quality improvement measures within the context of resource efficiency and cost reduction, positive physician leadership behaviors within the healthcare organizational structure is essential for effectiveness at the clinical practice level. Zismer (2011) noted that the failure of physician integration into larger organizations is often because of the lack of organizational design that integrates physicians into decision-making processes. This lack of design integration results in departmental silos for ease of cost accounting and budget control. Moreover, Angood and Birk (2014) suggested that physicians face leadership and teambuilding

challenges because they tend to operate autonomously and their training does not focus upon organizational goals but rather upon autonomous decision-making and individual performance and achievement. Physicians are essential in the provision of medical services and are advantageous in identifying cost savings without compromising patient care.

Threats to loss of autonomy, administrative control over medical decision-making and continual cuts in physician reimbursement drive negative physician attitudes. Mazurenko and O'Connor (2012) noted physicians are key stakeholders in the delivery of patient care and job satisfaction and motivation are critical to the successful operation of the healthcare system. In attributing physician job satisfaction to motivation, Al-Zawahreh and Al-Madi (2012) likened an individual's perception of inputs and outcomes regarding work and reward to equity and justice theory, suggesting the higher a physicians' motivation, the likely they are to exhibit organizational identification and protection of resources. Therefore, if physicians perceive inputs and outcomes as unequal, they may decrease outputs, resulting in a lack of motivation. The healthcare environment is entering a significant evolution that will require highly motivated physician leaders and changes in culture, behavior, and attitudes towards the needs of all customers. For physicians to maintain autonomy, integration into systems that offer supportive, organizational leadership style may positively impact the success of healthcare reform efforts.

Transition and Summary

The purpose of this study was to explore how physician-centric business models might evolve to deliver value and control costs in a system with fragmented organizational structures. In the literature review, I presented a historical perspective and discussion of current healthcare costing and reimbursement methodologies, organizational structure, and proposed delivery models currently discussed in the literature.

In the next section, I describe the rationale for the use of a qualitative case study to explore how current physician-centric business models might evolve under the requirements of PPACA legislation from the physician perspective.

Section 2: The Project

The purpose of this qualitative case study was to explore how physician-centric business models might evolve under the requirements of PPACA legislation from the physician perspective. Exploration of physician perspectives consisted of various components of healthcare business models such as organizational design, the delivery of care, and physician reimbursement/costing methodologies. With full implementation of PPACA legislation through 2019 (Marco et al., 2012), there was little information available regarding the impact that legislation has had upon physicians and their current business models from the physician perspective. Newhouse (2010) noted that the task of implementing a sweeping reform like healthcare has left many issues unresolved and will require continual reassessment over the long-term. In this section, I describe the proposal for data collection, population and sampling methodologies, ethical research, data collection instruments and techniques, data organization and analysis, and address the reliability and validity of the study.

Purpose Statement

The purpose of this qualitative case study was to explore how current physician-centric business models might evolve under the requirements of PPACA legislation from the physician perspective. The targeted population for this study consisted of physicians with independent medical practices located in Northeast Texas. This population was appropriate for this study as physicians represented the primary agents responsible for providing medical care and contributed information-rich data regarding the phenomenon. The social ramifications of this study might be realized through the development of

healthcare business models that meet the needs of industry stakeholders under the paradigm of PPACA legislation.

Role of the Researcher

As a researcher, my role in this study was to collect, analyze, and interpret the data and results gleaned from participant interviews and archival data. Merriam (2009) noted that the role of qualitative researchers is to establish and develop procedures to conduct an investigation of a phenomenon, while Wahyuni (2012) suggested the role of the researcher is to facilitate participant sharing of perspectives and experiences regarding the phenomena. Participant sharing of experiences took place through the development and selection of interview questions, data collection, and data analysis.

Because a percentage of the participants in this study were business acquaintances, I reduced researcher and participant bias through triangulation of diverse data sources to build validity from themes garnered from the data. Onwuegbuzie, Leech, and Collins (2010) suggested the existence of personal bias in qualitative research because of the interpretive nature of the results. Additionally, Hancock and Algozzine (2011) noted the researcher should recognize his or her personal role and biases related to the research topic and actively attempt to identify and assuage biases to ensure neutrality of conclusions. For minimizing bias, the use of peer debriefing and including contradictory information helped to clarify possible bias when analyzing themes and presenting findings.

Participants

The participants of this study included physicians in the Northeast Texas area who own an independent medical practice. I invited physicians to participate in this study via phone or e-mail invitation and followed-up with an e-mail prior to data collection to ensure volunteer participation in the study. Participants returned an e-mail to me indicating their preference for a face-to-face interview or an e-mail questionnaire that explained the ethical and privacy protection of participants. After confirmation of participation, each participant received a face-to-face (Appendix A) or an e-mail consent form (Appendix B) with an explanation of the goals of the study and how their participation will assist in exploring of the impact of PPACA legislation upon physician-centric practices. Discussion also included an explanation of the benefits of this study for provider business models. Storage of the study data was in a password-encrypted computer file, to be kept for approximately five years and only available for the use of this study and committee members upon request.

The sampling method for this study was purposeful. Suri (2011) defined purposeful sampling as a means to identify study participants who may provide an in-depth understanding of the research phenomenon. Moreover, Curry, Nembhard, and Bradley (2009) noted that purposeful sampling may identify participants with detailed knowledge that is applicable to the research topic, while Bernard and Ryan (2010) suggested the use of purposeful sampling for unique populations. Physicians were the ideal participants to provide in-depth information regarding the evolution of physician-centric business models.

For qualitative studies, there were few published guidelines for the justification of participant sample size. Francis et al. (2010) suggested using data saturation for the justification of sample size. Additionally, Suri (2011) equated the justification of sample size to the need of information synthesis so that the data answers the research question, while Curry et al. (2009) noted that the basis of determining sample size for qualitative studies will depend upon the point at which no new themes emerge from the data. When comparing the sample size of similar qualitative inquiries to this study, Kasun (2010) interviewed 20 participants to examine physician group practices for improving organizational quality and efficiency, while Lockyer, Wycliffe-Jones, Raman, Sandhu, and Fidler (2011) interviewed 20 physicians to explore their experiences when establishing a medical practice in a new community. As a basis for sample size for this study, I engaged 20 participants to provide in-depth information for exploring how physician-centric practices might evolve under PPACA legislation.

Research Method and Design

Healthcare researchers may select qualitative, quantitative, or mixed methods approaches for research in understanding the activities of social situations. Thomas and Magilvy (2011) suggested that qualitative research is beneficial for understanding and interpreting experiences through diverse research paths, while Neutens and Rubinson (2010) noted the use of qualitative methodology to examine participant experiences that arise during common life occurrences through words and pictures. Moreover, Chenail (2011a) suggested the use of qualitative inquiry as advantageous for healthcare topics that explore physician experiences in providing care, patient experiences, and communication

issues to evaluate and enhance the delivery of care. Conversely, Vogt (2007) described the use of quantitative research to capture numerical or statistical data that follow a linear path for measuring variables and theoretical testing, while Brannen and Moss (2012) asserted a mixed method design provides the researcher a more comprehensive means to extend and validate qualitative and quantitative methods, thus forming a thorough understanding of the phenomenon. Despite the inherent benefits of mixed methods, Voils, Crandell, Chang, Leeman, and Sandelowski (2011) warned that the findings for qualitative and quantitative inquiries must be amenable for synthesis across diverse evidence sources to provide informational value. For this study, a qualitative approach was the optimal methodology for examining themes and patterns, exploring the complexities of healthcare systems, and identifying the unique features of a phenomenon through the experiences of those who share the phenomenon.

Method

Conducting a study that explored how current physician-centric business models might evolve under the requirements of PPACA legislation required a qualitative case study approach. Merriam (2009) suggested that qualitative research is a viable methodology in the research continuum because the methodology reflects the participant experience. Neutens and Rubinson (2010) asserted that qualitative research seeks to gain the perspective of individual participants regarding a phenomenon relating to the experience of other individuals, thus seeking commonality among the participants. Moreover, Cunningham, Felland, Ginsburg, and Pham (2010) suggested the use of qualitative research may be beneficial for healthcare studies because the exploratory

nature of the methodology may reveal attitudes and barriers that healthcare providers face when implementing new delivery models. In addition, Chenail (2011a) described parallels between humanistic and qualitative inquiries that provide the researcher and participants a methodology to construct an interpretation of the personal experience. Lanham et al. (2012) noted the use of qualitative methodology as advantageous for studying complex behaviors associated with practice relationships and communication patterns among individuals within medical practices. From this qualitative inquiry, the analysis of data collected from this study revealed beneficial information when exploring the diverse issues that physicians were experiencing under PPACA legislation.

As a research methodology, a quantitative study was not appropriate in exploring how PPACA legislation might impact physician-centric business practices because quantitative research measures objective facts to prove or disprove a hypothesis. As noted by Cunningham et al. (2010), quantitative research is a means to examine relationships among variables that reduce phenomena to a statistical measurement. For healthcare studies, Curry et al. (2009) surmised the use of quantitative research for healthcare topics is advantageous for studies such as utilization, cost, and clinical effectiveness, as opposed to topics exploring changes in healthcare delivery systems, organizational structures, or the evolution of physician-centric business model.

While healthcare research may use a combination of qualitative and quantitative methodologies, a mixed methods approach was also not suitable for this study because quantitative research cannot address the personal experiences and assumptions of physicians regarding the future impacts that PPACA legislation might have upon their

business models. Voils et al. (2011) noted a mixed methodology provides the means to integrate diverse evidence into research and build a more optimal base for healthcare practices and policies. Mengshoel (2012) suggested that the use of a mixed methodology is advantageous when researchers need to integrate information from a quantitative and qualitative approach. Additionally, Curry et al. surmised that mixed methods may be more suitable for healthcare studies that seek to develop a survey instrument through a quantitative methodology while using a qualitative methodology to develop a questionnaire to examine beliefs, preferences, or experiences of the participant. Because the goal of this study was to explore the future evolution of a phenomenon from the personal experiences of the participants, a qualitative inquiry was advantageous for studying the perceptions of physicians experiencing the impact of PPACA legislation upon their practices.

Research Design

To explore the impact of PPACA legislation upon physician-centric business models, I examined this phenomenon from a case study perspective. Yin (2014) defined case study research as an empirical inquiry that explores the tangible context in which a contemporary phenomenon occurs, thus enhancing the understanding of the occurrence when the bounds of the case are not clearly obvious. Additionally, Sangster-Gormley (2013) suggested that using a case study design allows for the acknowledgement of the intricacy and in-depth study of a phenomenon, while Hancock and Algozzine (2011) noted that case studies are comprehensive and derive from various data sources. Radley and Chamberlain (2012) illustrated the nonclarity between a phenomenon and context by

referring to the diverse manner that patients exhibit various symptoms of a disease process. While the disease may define the bounds of the study, patients may exhibit different symptoms, feelings, and reactions to the disease, thus individually experiencing the disease process differently. Furthermore, Yin asserted that while the bounds between the phenomenon and context might be ill-defined, the study's limitations provide the bounds for the case. Chreim, Williams, and Coller (2012) performed a qualitative case study to explore the transformation of healthcare services into an integrated organizational model, while Sangster-Gormley, Martin-Misener, and Burge (2013) utilized a case study approach to identify advantageous processes for the implementation of the nurse practitioner in healthcare organizations. Using a case study design for this inquiry was advantageous for exploring the diversity of physician experiences regarding PPACA legislation because of the complex nature of the evolving healthcare system. While the legislation served as the boundary for this study, individual physicians experienced the impact of the legislation to their practices uniquely.

I considered several methods of inquiry such as phenomenology, grounded theory and ethnography. Merriam (2009) surmised that phenomenology focuses upon how individuals interpret their world, while Pringle, Drummond, McLafferty, and Hendry (2011) asserted that the task of the phenomenologist resides in the interpretation of participant perception of an experience. Wertz, Nosek, McNiesh, and Marlow (2011) further suggested several basic assumptions of phenomenological research that portrays humans as social, self-interpreting beings sharing meaning and understanding through dialogue and imaging. In contrast, grounded theory serves to explain interactions and

relationships from a theoretical perspective (Shank, 2006), while Merriam (2009) noted the aspect that differentiates grounded theory from other methods of inquiry is the building of theories to explain how an event changes over time. Chenail (2011a) described the use of ethnography to study individuals within the context of cultural orientation and beliefs, while Onwuegbuzie et al. (2010) asserted that ethnography addresses conceptual issues of human behavior from objective accounts of field experiences. For this study, using a case study design was advantageous for exploring the experiences of physicians within the paradigm of PPACA legislation and how this legislation has impacted the physician-centric business model.

Population and Sampling

This study included the use of open-ended interview questions with 20 healthcare providers in Northeast Texas. All participants were physicians within various medical disciplines, owning an independent medical practice. Sampling this population pool allowed me to garner rich data from professionals with experience in healthcare business management, billing and coding, and the regulatory climate of the medical industry.

The sampling method used for this study was purposeful. Bernard and Ryan (2010) suggested the use of purposeful sampling for unique populations, while Suri (2011) asserted the use of purposeful sampling to capture rich information from participants who hold key information in the field of study. For example, Ware et al. (2009) used purposeful sampling to recruit participants who were patients and providers of patients with HIV to study the adherence success of antiretroviral therapy for HIV. Consequently, as a means of providing information related to the research objective of

how PPACA legislation might affect the business models of healthcare providers, physicians were the most knowledgeable participants to interview.

There were few published guidelines available for the justification of participant sample size for qualitative studies. To establish criterion for sample size for qualitative research, Francis et al. (2010) advanced the use of data saturation for determining sample size. Data saturation usually occurs when new concepts or themes garnered from the data no longer emerge from the information. In comparing the sample size of similar qualitative inquiries to this study, Kasun (2010) interviewed 20 participants to examine measures regarding financial performance, organizational infrastructure, and productivity of physician group practices to develop strategies focused upon improving quality and efficiency. Similarly, Lockyer et al. (2011) interviewed 20 participants to explore the experiences of physicians transitioning their medical practices to a new community. As justification for participant sample size for this study, 20 participants were sufficient to reach saturation. However, after collecting data from 13 participants, I acquired saturation of the data, but included data from 20 participants to ensure the collection of rich data for analysis.

Healthcare providers face unique challenges in maintaining traditional business models, considering the legislative changes occurring under PPACA legislation, such as financial constraints (McClellan, 2011), conforming with PPACA regulations (Oberlander, & Perreira, 2012), and providing quality care at low cost (McClellan et al., 2010). Exploring how PPACA legislation might impact physician-centric business models provided insight into how these changes may affect the delivery of healthcare

services to patients. Interviews took place in physician offices to mitigate impact to physician schedules.

Ethical Research

The use of the term *participant* in this qualitative study describes an individual taking part in a study. Merriam (2009) suggested that all participants should be informed of the risks and benefits of participation in a study. All participants for this study were over the age of 18 and not from a protected class. There was minimal risk for participation in this study with the probability and degree of risk not greater than those ordinarily encountered in daily life. Additionally, the interview questions were not offensive or threatening, and there was no risk to financial standing, reputation or employability as the questions pertained directly to the individual physicians' practice structure. All individuals for this study volunteered for participation without coercion and signed an easily understandable informed consent (Appendices A and B). While a few of the participants were business acquaintances, there was no conflict of interest, and there was no change in the relationship status because of participation or non-participation in the study. Accordingly, participants had the ability to withdraw from the study at any time by contacting me via phone or e-mail, and there were no incentives offered for participation in this study. Data collection was through audio recordings and e-mail questionnaires, transcribed and uploaded into the NVivo 10 software system.

For participants who preferred to communicate electronically, I sent an e-mail questionnaire that requested return of the completed questionnaire within one week after receipt. In accordance with the Walden University Research center, storage of all data

including audio recordings, e-mail questionnaires, and transcriptions was in an encrypted computer file or locked file cabinet for five years, to protect the rights and identities of the participants. After five years, the destruction of the data will ensure the confidentiality of all participants.

A coding system for data, as described by Bernard and Ryan (2010), identified participants for data analysis without reference to the participant's organization or practice name, through a numbering system, thus ensuring privacy and confidentiality. Each participant received an identifying label, such as Participant 1 or Participant 2, which corresponded with the number of the participant interview or questionnaire. Adhering to Walden University's IRB process ensured ethical standards compliance prior to conducting research. Electronic submission of the IRB form and inclusion in the description of the research proposal, data collection tools, research participants, and informed consent ensured the study met the ethical standards of Walden University and U.S. federal regulations. In addition, I did not collect data until receipt of approval by the Walden Institutional Review Board.

Data Collection

Instruments

To explore the phenomenon by which PPACA legislation might evolve the organizational structure of physician-centric business models, I was the primary instrument for data collection, using open-ended, semistructured questions in face-to-face interviews with physicians or through e-mail questionnaires. This study did not require the use of additional data collection instruments. Chenail (2011b) surmised that in

qualitative studies, researchers often become the instrument by which data collection occurs because it is through interpersonal interaction that participants share their experiences. Wahyuni (2012) suggested the importance of interviewing participants for qualitative studies is to facilitate the sharing of participant experiences regarding a phenomenon. Neutens and Rubinson (2010) further noted the advantages of personal interviews in allowing flexibility for additional probing of participant answers; however, Goldman and Swayze (2012) acknowledged gaining access to physicians for personal interviews may be difficult because of time and access constraints. To mitigate access issues, Neutens and Rubinson suggested the use of e-mail questionnaires, while Cook (2012) noted that many participants prefer e-mail questionnaires when discussing sensitive topics because e-mail affords a measure of protection and anonymity and allows time to be reflective in answering. To encourage timelier responses, e-mail questionnaires provided an alternative to face-to-face interviews.

Data collection might be performed through verbal and non-verbal means so the interviewer and the participant may heighten the contextual nature of the interview. Bernard and Ryan (2010) noted the identification of key concepts measured by the data collection instrument is critical in selecting among the themes identified in data collection, while Onwuegbuzie et al. (2010) described the use of non-verbal communication such as facial expressions and hand gestures by the participant, to aid in clarifying verbal communication. Neutens and Rubinson (2010) also noted the importance of organizing and assembling data into themes or concepts through the use of descriptive and explanatory coding for data analysis. As the data collection instrument, I

coded participant perceptions from the interview and questionnaire data. Participant perceptions included discussion regarding unfavorable opinion of PPACA legislation and the viability of business models under PPACA legislation. In addition, I identified three emergent themes from participant interviews including (a) use of mid-level practitioners, (b) changes to provider practices, and (c) lack of business education.

The reliability and validity of a data collection instrument is essential in measuring the extent to which the interviews and questionnaires answer the research questions, goals, and objectives of the study. Wahyuni (2012) noted that reliability in qualitative research corresponds with dependability. Therefore, to achieve reliability of the data collection instrument, I provided a detailed explanation of the research process and a list of identical interview questions for each participant. To help ensure reliability in interviewing, Shank (2006) suggested that the researcher may ask for clarification and follow-up information if the researcher is unclear about the meaning of the information. Neutens and Rubinson (2010) also noted the use of the pyramid of evidence to evaluate the strength of data to ensure validity of data collection. Additionally, Chenail (2011b) noted that the researcher as the data collection instrument may be the greatest threat to validity because of lack of preparation. For this study, confirming that interview questions answered the research goal, preparation for interviews provided consistency of interview questions across all participants, and using the pyramid of evidence from peer-reviewed research was the basis for ensuring reliability and validity of the data collection instrument.

To complete the data collection process, I engaged participants with simple, probing questions such as the practice structure, medical specialty, and the number of years in practice (Appendix C). Barss (2012) suggested probing questions are advantageous in establishing trust and building rapport with the participants, while Chenail (2011b) noted a question and answer format should be used with a recording of the conversation for transcription purposes. The format for e-mail interviews included a written questionnaire, consent for participation form, and a request to return the questionnaire within one week of receipt of the e-mail.

Data Collection Technique

The data collection process for this study involved primary data from participant interviews and documentation from formal studies, the literature review, and government reports. When gathering primary data, Wahyuni (2012) suggested using semistructured interviews with experts in the field of study. Additionally, Shank (2006) asserted that open-ended, semistructured interviews allow for latitude in the questioning process, thus allowing the participant to describe their interpretation of the phenomenon uniquely. Merriam (2009) further noted that the use of semistructured interviews allows the researcher to respond to the emerging ideas regarding the phenomenon. The use of open-ended, semistructured questions provided me with in-depth answers for exploration of the phenomenon.

Verbal communication and information within e-mail invitations to various physicians in Northeast Texas contained a description of the purpose of this study, a request to participate, and the option of a face-to-face interview or e-mail questionnaire.

Upon receipt of voluntary agreement to participate, the participants requesting an interview received a face-to-face consent form (Appendix A) and an interview appointment. For participants requesting a questionnaire, they received via e-mail, an e-mail consent form (Appendix B) and a copy of the questionnaire. Merriam (2009) surmised that the act of face-to-face interviewing is necessary when there is difficulty observing participant behavior, feelings, or attitudes regarding a phenomenon. Moreover, Shank (2006) noted face-to-face interviews are optimal for gaining information and impressions; however, e-mail questionnaires are also suitable for data collection because of logistical issues such as distance and availability. Additionally, Cook (2012) suggested many participants prefer e-mail questionnaires because they provide a measure of anonymity. Interviewing physicians with busy schedules, in multiple communities negated the feasibility of a percentage of face-to-face interviews, thus making the ease of e-mail questionnaires convenient for physicians.

Twelve questions comprised the face-to-face interviews using an audio recorder. The interview began with an explanation of the goal of the interview with emphasis upon confidentiality, the voluntary nature of the study, and the need for recording the interview. In addition, the participant had the opportunity to review the consent form and ask questions before the commencement of the interview. The interview took place in a private location ensuring that no intrusions by non-participants occurred. During the interview, the participant had the opportunity to review the audio recording, and I restated and summarized the interview answers which ensured accurate interpretation of the data. The length of each interview was approximately 30 minutes.

Upon completion of the interview, I transcribed the audio file to a Word document on my computer, saving it to a folder with the e-mail questionnaires. Each participant interview or questionnaire received a label such as Participant 1, Participant 2, and so forth. Wahyuni (2012) suggested the development of follow-up questions and member checking, while Onwuegbuzie et al. (2010) acknowledged the use of debriefing to allow the participant an opportunity for catharsis. The development of follow-up questions ensured accurate understanding of responses while garnering additional data for a richer, detailed description of the phenomenon. The e-mail questionnaire included identical questions to the interview questions. Similarly, follow-up e-mail questions provided clarification of responses and captured additional thoughts from the participants.

Documentation from formal studies, the literature review, and government reports comprised documentation for triangulation of data sources. Yin (2014) suggested the use of diverse sources of evidence for case study research because it allows researchers to strengthen the accuracy and validity of the study. Documentation included research from the literature review such as formal studies and industry articles from healthcare organizations and medical associations. The Department of Health and Human Services, Agency for Health Research and Quality, and National Center for Health Statistics constituted government reports. Wahyuni (2012) noted the collection of data from a variety of sources, known as triangulation, will aid in compiling comprehensive, relevant documentation while performing cross-checking for consistency to enhance the robustness of research findings. Merriam (2009) further suggested the use of triangulation

to confirm emerging findings, while Kasun (2010) noted the use of triangulation to integrate various sources of evidence to ensure validity and reliability of data. I did not conduct a pilot study because of the likelihood of limitations to valuable participant time and access.

Data Organization Techniques

Storage of all data including audio recordings, e-mail questionnaires, transcriptions, and electronic consent forms were in a password-encrypted computer file or a secure file cabinet for a minimum of five years. *Data Collection File* was the label used for identifying the main data folder, with labels for subfolders corresponding to *audio recordings*, *e-mail questionnaires,* and *consent forms*. Data from participant interviews contained the labels Participant1 through Participant 20. Storage of raw data was in a locked file cabinet, and an external hard-drive stored back-up copies of all electronic data with password-encrypted files. After five years, I will destroy all data to ensure the confidentiality of the participants.

Data Analysis Technique

Data analysis involves sorting, integrating, and synthesizing the information the researcher has observed and read, thus providing meaning to the data. To explore the diverse perspectives regarding how physician business models might evolve under the regulations of PPACA legislation, the central research question from which the interview questions emerged was: How might physician-centric business models evolve under the requirements of PPACA legislation? The interview questions were as follows:

1. Please describe your medical practice regarding medical specialty, years in practice, and the type(s) of practice organizations you have been involved in throughout your career.
2. In the general sense, what is your opinion of PPACA legislation?
3. How did you receive the education or training to conduct your business?
4. Specifically, how has the administrative/regulatory climate of healthcare affected the operations of your practice since 2009?
5. What types of reforms to you anticipate to physician reimbursement given the legislative push toward value-based care?
6. What types of changes do you foresee to the delivery of medical care for your practice?
7. Since the passage of PPACA legislation in 2010, have you experienced any positive or negative changes taking place in your practice and what were they?
8. In order to accomplish the goals of decreasing healthcare costs and increasing quality, do you feel there is a need to evolve your business model? Why or why not?
9. What type of business model do you foresee as a viable alternative to the physician-centric model?
10. Would you consider participating in an accountable care organization or patient-centered medical home as outlined under PPACA legislation? Why or why not?

11. What is the most significant effect PPACA legislation will have upon the viability of your practice in the future?
12. Is there anything else you would like to add that might not have been addressed by these questions?

After transcribing the interviews into a Word document, the NVivo 10 software program assisted with coding and sorting data into themes for analysis. I researched several data analysis programs, finding NVivo 10 to be the optimum choice in analyzing the data for this study. Merriam (2009) noted several advantages in using computer-assisted software programs such as organizing a filing system for data and analysis, close examination of the data for enhancing the rigor of the study, and the ability to visualize relationships among codes and themes through a visual model. Neutens and Rubinson (2010) further noted computer software is advantageous for coding, data linking, content analysis, and confirming findings, while Hutchison (2010) and Yin (2014) confirmed the value of using NVivo for data analysis because the program allows for consistency in data coding from interviews, questionnaires, and documentation to facilitate purposeful sampling. The software also assisted in subcoding themes and patterns for analysis from participant interviews and questionnaires. The participants received the results of the study via e-mail in a two-page summary for review.

Because I had a professional relationship with a few of the physician participants, emphasis on triangulation and reflexivity were the optimal means to guide data analysis for this study. Onwuegbuzie et al. (2010) described the use of bracketing and reflexivity for critical self-reflection of the researchers' biases and theoretical predispositions.

Additionally, Houghton, Casey, Shaw, and Murphy (2013) noted that an advantage of using case study research is the opportunity to use diverse data sources through triangulation, thus providing a complete representation of the phenomenon. Yin (2014) also noted that the conceptual framework may guide data analysis in case studies, thus providing boundaries with which to structure data analysis around the research question. Therefore, the use of triangulation and reflexivity improved my understanding of the complex nature of the phenomenon while allowing me to explore the subjective experiences of the physicians.

The conceptual framework for this study developed from complex adaptative systems theory because healthcare systems are emergent, interconnected, and unpredictable in nature. Complex adaptive systems theory was the optimum means in understanding healthcare delivery systems because of the need for new, integrated approaches that ensure the delivery of efficient, cost-effective care (Boustani, 2010). Within the system itself, Burns et al. (2012) described the delivery portion of the healthcare industry as a model of system integration between provider and clinical systems, thus creating micro-systems (individual patient care) within a larger network of mesosystems (population delivery care models) and macrosystems (industry regulation). Nugus et al. (2010) further suggested that influences from across and within the healthcare system require the coordination and negotiation of social structures to deliver care in situations that often result in unpredictable contingencies where resolution requires compromises for which formal and global system rules do not apply. The U.S. healthcare system is highly fragmented with physician practices representing diverse

agents acting independently yet responding to the actions of internal and external stakeholders. From the physician perspective, exploring how practice models might evolve under PPACA legislation provided an understanding of how the organizational components must harmonize to improve patient care.

Reliability and Validity

Reliability

In qualitative research, achieving reliability equates with the ability to duplicate the components of the study, the consistency of data collection, and accuracy with data recording processes. Thomas and Magilvy (2011) surmised reliability in qualitative studies occurs when the research follows an audit trail detailing a step-by-step recording of research and analysis processes of the study. Because qualitative research examines a phenomenon from the human perspective, which is highly contextual, Merriam (2009) asserted that achieving reliability in the quantitative sense is difficult. Additionally, Wahyni (2012) compared reliability in qualitative research to dependability through the detailing of the research design and processes so future researchers may follow a similar framework. Consequently, Merriam (2009) noted when the researcher is the data collection instrument; the researcher may increase reliability through training and practice in interviewing, coding, and data analysis. Moreover Onwuegbuzie et al. (2010) suggested the use of reflexivity when the researcher is the data collection instrument for considering potential sources of bias that may decrease reliability in qualitative studies. Therefore, to ensure the reliability of this study, I checked transcripts for errors, documented all data collection and analysis steps and procedures, audited interview

questions for consistency, and used member checking for external examination of notes and data.

Validity

In qualitative studies, credibility and transferability parallel internal and external validity in quantitative studies. Hannes, Lockwood, and Pearson (2010) noted that creating validity in qualitative studies involves understanding the types of validity including descriptive, interpretive, theoretical, generalizable, and evaluative. Thomas and Magilvy (2011) further described internal validity as the ability of the study to present an accurate description of an experience that is recognizable to others experiencing the same phenomenon while external validity determines the extent of which the inquiry is applicable in other contexts or to other individuals. Moreover, Tracy (2010) suggested achieving credibility in qualitative studies includes a thick description and detailing of the personal experiences garnered from in-depth interviews with study participants. Ensuring internal validity of this study involved checking transcripts for similarities across study participants. I used the NVivo 10 software program for checking themes and used verbatim transcription of participant interviews to establish internal validity.

To establish external validity for this study, I triangulated the data through the use of documentary evidence and participant interviews and questionnaires with physicians from diverse specialties and communities. Shank (2006) suggested the use of triangulation to increase the strength of the study findings, while Merriam (2009) noted that sample variation allows for a greater range of application for understanding the phenomenon. Similarly, Tracy (2010) surmised the concept of triangulation ensures that

the achievement of validity in qualitative studies occurs when the use of diverse forms of data collection increases the scope, understanding, and interpretation of the phenomenon. Several guidelines to mitigate external validity included the use of multiple participants, awareness of contrasting interpretation of experiences, integration of contradictory information, and exploring alternative explanations for the phenomenon.

Transition and Summary

The exploration of how current physician-centric business models might evolve under the requirements of the PPACA from the physician perspective was the basis for this qualitative case study. In Section 2, I described the role of the researcher, the participants for the study, the research method and design, population sampling, ethical research, data collection techniques and analysis, and the reliability and validity of this study. The use of purposeful sampling allowed me to recruit participants for face-to-face and e-mail interviews with 20 physicians, thus providing insight for the phenomenon of this study. A description of measures to ensure privacy, confidentiality, and consent for participation of participants provided the ethical framework of the study's interview process, with approval by Walden University's Institutional Review Board (IRB).

Section 3 includes the presentation of the findings, a discussion regarding the applicability to professional practice, the implications for social change, recommendations for action and further research, reflections, and the conclusion of the study.

Section 3: Application to Professional Practice and Implications for Change

The purpose of this qualitative case study was to explore how physician-centric business models might evolve under the requirements of PPACA legislation from the physician perspective. The participants in this study included physicians across 15 various medical specialties having between 7-40 years of experience in a medical practice. The data collection process for this study involved primary data from participant interviews and questionnaires, and documentation from the literature review such as formal studies and industry articles from healthcare organizations, and medical associations. The Department of Health and Human Services, Agency for Health Research and Quality, and National Center for Health Statistics constituted government reports. In this section, I present the findings of the study, discuss the applicability of this study to professional practice, the implications for social change, recommendations for action and further research, reflections, and the conclusion of the study.

Overview of Study

The purpose of this qualitative case study was to explore how current physician-centric business models might evolve under the requirements of PPACA legislation from the physician perspective. The central research question for this study was the following: How might physician-centric business models evolve under the requirements of PPACA legislation from the physician perspective? In this study, I explored the perceptions of physicians regarding the effects of PPACA legislation upon their business models. The data collection process for this study involved primary data from participant interviews and questionnaires, and documentation from the literature review including formal

studies and industry articles from healthcare organizations, and medical associations. The Department of Health and Human Services, Agency for Health Research and Quality, and the National Center for Health Statistics comprised government reports. A purposeful sampling approach resulted in 20 participants who were physicians within various medical disciplines and owned an independent medical practice. I audio-recorded, transcribed, and analyzed the interviews, questionnaires, and documentation from formal studies, the literature reveiw, and government reports to determine how physician-centric business models might evolve under PPACA legislation.

The study's participants included physicians from 15 various specialities with 7-40 years of experience practicing medicine. Exploring how physician-centric business models might evolve under the requirements of PPACA legislation from the physician perspective may provide insight for the restructuring of healthcare business models that decrease costs, improve quality, and create innovative organizational models that are distinct to individual patient populations. Participant perceptions garnered from this research included unfavorable opinion of PPACA legislation and the viability of business models under PPACA legislation. In addition, I identified three emergent themes from participant interviews, including (a) use of mid-level practitioners, (b) changes to provider practices, and (c) lack of business education.

Presentation of the Findings

The research question used to guide this study was the following: How might physician-centric business models evolve under the requirements of PPACA legislation from the physician perspective? The following subquestions were used to promote rich

exploration of the evolution of physician-centric business models from the provider's perspective:

1. How do physicians perceive the four structures for physician-centric business models (patient-centered medical homes, accountable care organizations, physicians as employees, and concierge medicine) that may affect the way they conduct their business?
2. What are the advantages of the four structures for physician-centric business models (patient-centered medical homes, accountable care organizations, physicians as employees, and concierge medicine) from the way that physicians conduct their business in terms of value-based care?
3. What are the disadvantages of the four structures for physician-centric business models (patient-centered medical homes, accountable care organizations, physicians as employees, and concierge medicine) from the way that they conduct their business in terms of value-based care?
4. How might these four structures for physician-centric business models (patient-centered medical homes, accountable care organizations, physicians as employees, and concierge medicine) improve the quality of care while decreasing the costs of healthcare?

The following interview questions provided a means to explore physician perspectives regarding the effects of PPACA legislation upon physician-centric business models:

1. Please describe your medical practice regarding medical specialty, years in practice, and the type(s) of practice organizations you have been involved in throughout your career.
2. In the general sense, what is your opinion of PPACA legislation?
3. How did you receive the education or training to conduct your business?
4. Specifically, how has the administrative/regulatory climate of healthcare affected the operations of your practice since 2009?
5. What types of reforms do you anticipate to physician reimbursement given the legislative push toward value-based care?
6. What types of changes do you foresee to the delivery of medical care for your practice?
7. Since the passage of PPACA legislation in 2010, have you experienced any positive or negative changes taking place in your practice and what were they?
8. In order to accomplish the goals of decreasing healthcare costs and increasing quality, do you feel there is a need to evolve your business model? Why or why not?
9. What type of business model do you foresee as a viable alternative to the physician-centric model?
10. Would you consider participating in an accountable care organization or patient-centered medical home as outlined under PPACA legislation? Why or why not?

11. What is the most significant effect PPACA legislation will have upon the viability of your practice in the future?
12. Is there anything else you would like to add that might not have been addressed by these questions?

To explore physician perspectives regarding the effects of PPACA legislation upon physician-centric business models, a qualitative case study was the optimal approach. Participants were selected using a purposeful sampling of physicians within various medical disciplines, owning an independent medical practice. Upon agreement to participate, the participants requesting an interview received a face-to-face consent form (Appendix A) and an interview appointment. For participants requesting a questionnaire, they received an e-mail consent form (Appendix B) and a copy of the questionnaire.

The interviews were audio-recorded and transcribed. NVivo 10 software aided the coding and analysis of data garnered from interviews and questionnaires and documentation from formal studies, the literature review, and government reports to uncover potential themes. I asked identical questions of all participants to discover trends and ensure reliability of the study. Asking follow-up questions provided me the opportunity to clarify responses, gather detailed descriptions of participant experiences, and capture unexpected thoughts from the participants. Each participant was a credible source of information regarding the research question because of their experiences with PPACA legislation in their medical practice environment.

Applying the complex adaptive systems theory (CAS) for data analysis assisted me in examining the unpredictable nature of the healthcare industry when developing and

implementing policy changes within medical delivery systems. The application of complex adaptive systems theory for this study was beneficial in understanding the multi-faceted, coevolving nature of the healthcare industry as noted by Boustani et al. (2010), McDaniel et al. (2009), Miller et al. (2010), and Nugus et al. (2010). I used the complex adaptive systems theory to construct themes as a means to conceptualize thoughts and ideas regarding how physicians perceived the evolution of their business models under PPACA legislation when faced with stressors such as patient needs, insurance regulation, federal regulatory requirements, and the medical/legal environment. Boustani et al. (2010) suggested the use of CAS principles for developing and implementing patient-centered delivery models, while Miller et al. (2010) proposed that the CAS model is useful for the development of transformational processes that are adaptive and unique to local environments. Nugus et al. (2010) further noted that CAS principles are beneficial for integrating delivery models across diverse organizations in response to regulatory and legislative changes in the healthcare industry.

After coding and analyzing the interview and questionnaire data, perspectives regarding how PPACA legislation might evolve the physician-centric business model became apparent. Participant perspectives included unfavorable opinion of PPACA legislation and the viability of business models under PPACA legislation.

Unfavorable Opinion of PPACA Legislation

This perspective was exploratory in nature and a basis for the interview question regarding the participants' general opinions of the PPACA. The PPACA was new legislation at the time of this study, and little information was available in peer-reviewed

literature regarding physician opinions of the legislation. Of the limited information found in peer-reviewed literature, Sommers and Bindman (2012) and Quaye (2014) noted physician opinions were mixed regarding the positive and negative aspects of the legislation. One industry survey suggested that 44% of physician respondents thought the legislation was a worthy idea, while 44% thought the legislation was heading in the wrong direction (Sommers & Bindman, 2012). Quaye further noted 47.2% of respondents were opposed to the PPACA legislation.

The opinions of this study's participants were generally unfavorable of the PPACA legislation. At the time of this study, the implementation of the PPACA's individual mandate became a source of frustration for the American public regarding the government's mismanagement of the HealthCare.gov website (Kingsdale, 2014), thus accounting for the participants' negativity toward the legislation. The majority of participants suggested that the legislation's main objective of providing affordable health insurance for Americans was a sound idea; however, the design and implementation of the legislation was confusing and inadequate. Participants also suggested the legislation was too complex and felt that the politics surrounding the legislation promoted the benefits of interest groups such as pharmaceutical, insurance, and technology groups rather than the interests of physicians and patients. These attitudes were consistent with industry articles cited in the literature review (Mazurenko & O'Connor, 2012; Wolinsky, 1982; Zismer, 2011) regarding physician attitudes towards the loss of autonomy with government involvement in healthcare. Additionally, Zismer (2011) suggested the loss of autonomy as a viable reason for negative attitudes of physicians regarding nonphysician

managers controlling medical and financial decision-making. Loss of autonomy was a key determinant of physician attitudes created by the increasing regulatory environment for cost and quality accountability under the requirements of PPACA legislation. Examples of participants' responses included:

- "I think it is a poorly thought-out, haphazardly implemented, confusing and politically motivated legislation." (P19)
- "The only observable effect of the PPACA on the individuals in our society is to increase the cost of insurance and, quite probably, to limit the availability of care." (P5)
- "From my exposure to it, I think the pharmaceutical, insurance companies, different technology groups, and hospitals are benefiting the most from the legislation." (P14)
- "Apparently crafted by insurance company lobbyists or people influenced by them, it seems to me that enriching insurance companies and centralizing control of healthcare with the federal government are the two principal objectives of this legislation." (P5)

Viability of Business Models Under PPACA Legislation

I used the subquestions regarding the four structures for physician-centric business models (PCMHs, ACOs, physicians as employees, and concierge medicine) to promote rich exploration of the evolution of physician-centric business models from the provider's perspective.

Patient-centered medical homes. The Agency for Healthcare Research and Quality (2013) defined the PCMH as an organizational model for primary care that involves the transformation of physician-centric care processes that incorporate the use of a healthcare teams to improve the quality and the access of care to patients. In documentation from the literature review (Berenson & Rich , 2010a; Longworth, 2013; Nutting et al., 2011), researchers noted that there are no set organizational frameworks for PCMHs, but they do rely upon diverse providers sharing in the care and the reimbursement of care. Unfortunately, the PCMH model may not generalize across patient populations because the frameworks are ill defined. Additionally, Nutting et al. (2011) asserted that the PCMH model bases organizational principles upon quality improvement measures and the use of practice-based care teams. Van Vactor (2013) and Wise et al. (2012) suggested the integration of PCMHs require significant expansion of the collaboration of healthcare providers across and within diverse care settings and requires an adjustment in the patient-mix regarding the range of medical services that the practice provides. Berenson and Rich (2010a) further suggested reimbursement would require an adjustment for community-based entities that participate in extended patient care, while Longworth (2013) acknowledged that a caveat to community-based participation will be managing the costs associated with integrated care. Over half of the participants stated they were unfamiliar with the PCMH model and those who were knowledgeable, expressed diverse opinions that included:

- “The PCMHs sound like the old HMOs or gatekeepers to me.” (P12)

- "I think having a medical home is good, but most patients actually do that and pick a physician they like and stick with them. The only reason they would change is because of lack of access, and we see that a lot, or lack of quality." (P7)
- "The PCMHs won't work in this area because of population." (P13)

In a 2009 study on PCMH demonstration projects, Bitton et al. (2010) noted the emergence of several key findings including (a) the projects were extensions of current health plan and quality improvement initiatives, (b) the existence of variability in basic requirements, definitions, payment methods, and transformation processes and (c) implementing a PCMH will not provide immediate cost savings. McNellis, Genevro, and Meyers (2014) suggested that the feasibility of PCMHs will depend upon the practices' resources, staffing, and the patient population it serves (uninsured versus insured). Additionally, Zickafoose et al. (2013) noted that concerns exist regarding the ability for low-income populations to become PCMH certified; however, implementation processes should reflect the needs of individual populations.

Accountable care organizations. In documentation from the literature review (Berkwick, 2011; Longworth, 2013; McClellan, 2011; Shields et al., 2011), researchers noted several challenges in implementing the ACO business model because of the requirements in infrastructure for tracking patient populations and disease processes for performance measurement. Shortell et al. (2010) noted the ACO model includes an integrated system design that combines hospitals, physicians, and insurance companies, multispecialty group practices, and physician-hospital organizations. Participants in this

study were in general, wary of integrating physicians and hospitals because of the challenges to medical governance felt by physicians. Participant statements included:

- "I think ACOs and combining private physicians with hospitals for reimbursement is challenging as a whole." (P14)
- "If you integrate physicians with hospitals so they have a sense of ownership and motivation, have certainty of governance, and are treated as partners, those types of systems can work. But if they feel they are driven in there because they have no other option, then that is not the best environment, productivity-wise. If they have no governance or no say so—it is not a good model." (P14)

The Department of Health and Human Services (2011) stated that ACOs will have considerable flexibility regarding organizational structures, with requirements to meet quality standards in patient safety, care coordination, and preventative health. However, Shields et al. (2011) surmised that independent and small group practices lack the capital to invest in the required infrastructure for ACO development. Many areas of the United States do not have integrated systems, especially in rural communities, making national ACO implementation difficult. Several participants mirrored these concerns with comments that included:

- "The accountable part is what bothers me because again, just like the outcome-based payment, accountable to who?" (P15)

- "ACOs are a new concept, but if everyone is on the same page regarding communication, software and electronics, patients can be tracked; otherwise it is difficult for patients to have any continuity between providers." (P7)
- "These organizations will not fly in the rural areas because there is not enough population." (P13)

While more participants in this study were familiar with ACOs than PCMHs, the majority voiced concerns regarding the feasibility of these organizational structures within the Northeast Texas area. When participants were asked if they would consider participating in an ACO or PCMH, responses included:

- "Only if forced to do so for lack of other options." (P16)
- "No, I would not participate in an accountable care organization." (P2)
- "Probably not, because patients choose their different providers anyways and we are just not set up in this area for a more formal type of organization. Again, it comes down to access issues in rural areas." (P7)

Physicians as employees. When exploring the perceptions of physicians as employees, the majority of participants cited the probability that physicians will become employees of hospitals or large physician groups in the future because of increasing financial hardships under PPACA legislation. Participant views were consistent with research from the literature review (Hunter & Baum, 2012; Iglehart, 2011; Jones & Trieber, 2010) regarding future physician employment as a result of PPACA legislation. Additionally, Jones and Treiber (2010) suggested that dissatisfaction with managed care and threats to financial security are reasons for seeking employment opportunities outside

of the traditional independent provider model. In a study by Charles et al. (2013), researchers noted over half of practicing physicians in the United States are employed by hospitals or large group practices with an increasing number of rural surgeons entering into employment contracts with hospitals. Charles et al. further cited several reasons for these trends including decreasing reimbursement, malpractice risk, and long work hours. Participant statements regarding physician employment included:

- "I believe strongly that in 10 years, 90% of all physicians will be employees." (P10)
- "In the future, physicians will probably be employed by hospitals or some large entity. " (P13)
- "Many doctors are opting for an employment-based practice because it's financially feasible." (P15)
- "I see more employed physicians and much less private practice." (P4)
- "I see physicians moving toward being employed by hospitals and concierge practices." (P6)

Concierge practice. Participants also discussed the concierge practice as an alternative to the traditional independent business model. Unfortunately, I could not locate peer-reviewed studies regarding the feasibility of concierge practices to date; however, in documentation from the literature review (French et al., 2010; Jones & Treiber, 2010; Lucier et al., 2010), researchers cited physician frustration with heavy workloads, increasing demands on time, low reimbursement, loss of autonomy, and increasing bureaucratic regulations as reasons for considering a concierge practice.

Additionally, French et al. (2010) noted critics of concierge medicine argue that the model creates a two-tiered health system where the wealthy have better access to superior care and services, while Jones and Treiber (2010) suggested concierge medicine creates issues with social class disparity and access to care. Participants considered concierge medicine as an alternative business model; however, there were concerns about the viability of a concierge model in rural areas. Participant responses included:

- "The concierge practice model I doubt would be practical in this rural environment of East Texas—not a large enough, financially independent patient base to provide a willing group of subscribers for the patients that we would service." (P1)
- "I know a couple of people who have concierge practices, it works great if you are in a community of people who have that kind of money to pay for that type of individualized care." (P12)
- "It's a brave step right now, and it will only work in a specific kind of environment. I don't think people in a rural setting like out here; can afford that type of practice." (P15)

Of the participant responses regarding the viability of business models under PPACA legislation, common statements included concerns regarding the feasibility of the ACO, PCMH, and concierge models in a rural environment because of limitations in population, infrastructure, and economics. While it was too early in the PPACA implementation process to determine the feasibility of these business models in a rural or urban environment, researchers (Shields et al., 2011; Zickafoose et al., 2013) discussed

the lack of integrated systems in rural areas as reasons for difficulty with ACO and PCMH implementation. Furthermore, Charles et al. (2013) and Okie (2012) noted an increasing number of rural surgeons entering into employment contracts with hospitals suggesting that the economics of reimbursement and the shortage of medical specialities in rural areas creates challenges for independent physicians in the development of team-based methodologies as part of the organizational structure of ACOs and PCMHs. With the diversity of patient populations and limitations in medical specialities, funding, and infrastructure, Zickafoose et al. (2013) suggested the development of team-based organizational processes should reflect the needs of individual populations.

Reimbursement models. When exploring physician-centric business models, reimbursement methodologies were an integral part of the viability of the organizational model for healthcare practices. Participants discussed their concerns with possible changes to the current fee-for-service reimbursement model that included a component for value known as the value-based modifier. However, a few of the participants also noted that healthcare cannot be sustained if the payment is less than the actual cost of providing medical care. In documentation from the literature review (Berenson & Rich, 2010a; Evans III et al., 2010; Frakt & Mayes, 2012; Ginsburg, 2011a; Tucker, 2013), researchers cited advantages and disadvantages of the current fee-for-service reimbursement system. Landon et al. (2011) surmised that reimbursement for physician services in the United States accounts for approximately 21.2% of total healthcare spending, while Tucker (2013) noted that the current fee-for-service methodologies encourage physicians to increase the quantity of care, thus rewarding volume rather than

outcomes. Ginsburg (2011a) suggested the move toward a value-based model as a prospective payment methodology would focus upon reimbursement for broader units of service, such as episodes of care over time that incorporate quality and value into provider payments. However, opponents of reimbursement reform noted that adding a quality component resembles the capitation system under the HMO model, which failed to control healthcare costs and proffered concerns regarding the quality of patient care (Zuvekas & Cohen, 2010). A few of the participants in this study noted concerns with reinstating an HMO-like model and felt the quality component was a way to reduce physician reimbursement. Rather than adopting previous capitation systems, Frakt and Mayes (2012) noted that the introduction of new reimbursement models in the coming years will provide quality incentives for the delivery of care. The majority of participants were in favor of a combination fee-for-service and value-based model but also voiced concerns regarding the ambiguity in defining quality. Participant responses included:

- "I think some aspects of a fee-for-service system work because you feel like you are getting paid for the work you are doing." (P10)
- "Fee-for-service is not the best but there should be some quality driven compensation." (P14)
- "I am concerned with how value-based care will be defined." (P16)
- "I would welcome the reimbursement based on quality. But, I shouldn't just be penalized for bad outcomes, but recognize good outcomes and good trends as well." (P8)

- "When you track quality you have to ask if it is skewed and if it is actual, and that could lead to some misrepresentation. Whose definition of quality? A lot of the time, what they are asking is who the low cost provider is and who can take care of patients for less money so they incentivize that." (P7)

Additional participant comments regarding reimbursement models indicated there was a lack of information from the government or insurance companies regarding how PPACA reimbursement might affect their business practices. The majority of participants expressed uncertainty with regard to billing and reimbursement noting that they were not aware of billing policies, reimbursement pricing, how to become an in-network provider with the PPACA plans, where to send claim forms, or the financial feasibility of accepting PPACA insurance.

While implementation of many of the components of PPACA legislation were continuing through 2019, physicians were voicing concerns regarding the ability to sustain their business practices in the future. After analyzing participant perceptions of the effects of PPACA legislation upon physician-centric business models in the future, I generated a word cloud to identify emergent themes from the participant data. McNaught and Lam (2010) suggested the use of word clouds for qualitative inquiry as a beneficial tool for identifying fundamental concepts and confirming or validating the interpretations of findings. Figure 1 shows the preliminary word cloud generated from face-to-face interviews and e-mail questionnaires used to identify emergent themes regarding the effects of PPACA legislation upon physician-centric business models in the future.

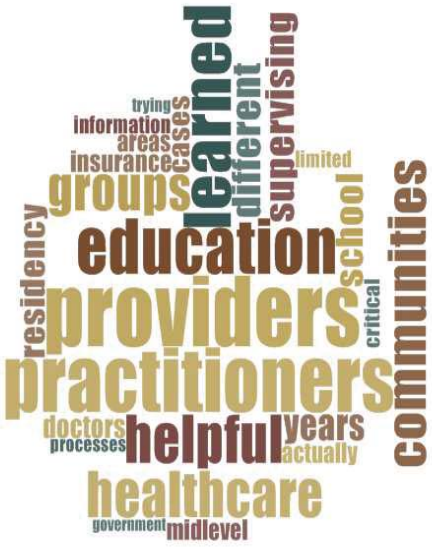

Figure 1. Word cloud generated from face-to-face interviews and e-mail questionnaires regarding participant perceptions of the effects of PPACA legislation upon physician-centric business models in the future. The visually largest words demonstrate the terms most prevalent amongst the data, thus suggesting emergent themes among participants.

Exploring the visually largest words in the cloud guided the development of three emergent themes that were prevalent or universal among the participants. As noted in Figure 1, providers, practitioners, and education were the common terms identified. When examining the nodes in the NVivo data analysis software representing the terms providers, practitioners, and education, the terms linked to participant statements regarding the use of mid-level practitioners included physician assistants and nurse practitioners, changes to the solo provider practice in the future, and the lack of business training in medical school. These concepts were the basis for three emergent themes from the interviews and questionnaires that included (a) use of mid-level practitioners, (b) changes to provider practices, and (c) lack of business education.

Theme 1: The Use of Mid-Level Practitioners

The use of mid-level practitioners was an emergent theme from participant interviews and questionnaires regarding future business models under PPACA legislation. Donelan, DesRoches, Dittus, and Buerhaus (2013), French et al. (2010), and Iglehart (2013) noted the increasing use of independent mid-level practitioners as a solution to shortages in primary care physicians and to decrease healthcare costs. In a 2009 study for the National Center for Health Statistics, Park, Cherry, and Decker (2011) noted 49% of physician practices employed a mid-level practitioner and 68.3% of physicians in large groups were more likely to use mid-level practitioners compared to physicians in solo practices. In a similar study in 2012 for the National Center for Health Statistics, Hing and Hsiao (2014) noted 77.5% of physicians in group practices employed mid-level practitioners, an increase of 9.2% from 2009 over 2012. While the majority of participants in this study noted the benefit of using mid-level practitioners; they opposed the use of independent mid-level practitioners without oversight by physicians. Participant views aligned with information from industry articles (Donelan et al., 2013; Iglehart, 2013) opposing the use of independent mid-level practitioners without physician supervision. In contrast, Green, Savin, and Lu (2013) suggested that mid-level practitioners can provide quality care for 60% of primary care patients with outcomes comparable to that of physicians, while Nayor and Kurtzman (2010) asserted that numerous studies comparing the quality of care by mid-level practitioners was equivalent to the quality of care by physicians. Participant responses included:

- "My concern is that we are going to end up with a giant VA system where everyone is screened by a PA or NP and then doctors get the tougher cases, but they will be on a time clock and do only what they need to do, and when their time is up they move on. So people will get care, but not the best care." (P10)
- "The quality of care is going to go down because a mid-level practitioner has the same level of education as a third year medical student so I don't know how many people in my waiting room want to see a third year medical student versus a physician." (P13)
- "The slippery slope is when these providers have to be point-of-care providers without supervision from physicians, then they should be prepared for the consequences and don't blame physicians responsible for trying to oversee multiple counties because you are trying to get by cheap." (P15)
- "I think it will decrease the quality because you cannot compare a PAs' or NPs' medical knowledge with someone who goes to school and trains 3-6 years." (P8)

Theme 2: Changes to Provider Practices

Participant opinions regarding future business models under PPACA legislation suggested that the solo medical practice would not be a viable business model in the future. With the push toward improving population health, improving the quality of healthcare, and accountability for health outcomes under PPACA legislation, the survival of the solo medical practice was in jeopardy because of the economic and administrative

burdens of the legislation (French et al., 2010). Green et al. (2013) noted that the use of a traditional solo physician model was disappearing as physicians decide to join group practices or seek hospital-based employment. Reasons for this phenomenon relate to the requirements of PPACA legislation and decreasing reimbursement. Satiani (2014) noted approximately 36% of physicians will own interest in their medical practice by the end of 2013 compared to 57% in 2000. In documentation from industry articles (Kocher & Sahni, 2011; Satiani, 2014; Shah & Wu, 2010), researchers described increases across numerous specialties in the number of physicians joining large groups or becoming employees of hospitals because of financial security and relief from administrative and regulatory burdens, thus mirroring participant responses regarding the future of the independent business model. Participant responses include:

- "I predict that physicians are no longer going to be in solo or group practices, you going to be owned by a company, somehow, whether it is a hospital or part of a very large specialty practice. You will never be able to practice on your own because, the only way to provide your patient with quality care is 6 hours of sleep a day and 18 hours of work." (P16)
- "I think the private practitioner will go away unless it is a concierge model or they will have to become employed by some type of organization because of financial issues." (P13)
- "I think that ultimately, the healthcare laws will lead to closure of solo practices." (P16)
- "Being employed by hospitals." (P17)

- "Group Practice." (P2)

Theme 3: Lack of Business Education

Zonies (2009) acknowledged that physicians must possess both business knowledge and medical acumen. However, the ability to deliver medical care that is less expensive and increases quality in a highly complex industry is difficult without understanding the economics of healthcare. All participants responded that they did not receive business training in medical school and concurred with studies by Greysen, Wassermann, Payne, and Mullan (2009) and Weingarten, Schindler, Siegel, and Landau (2013) in which researchers noted that most physicians do not receive business training while attending medical school. Business and health policy education were becoming essential assets because of PPACA requirements to measure the quality of healthcare in the form of economic accountability. The need for medical students to acquire business training in medical school would be beneficial to facilitate understanding of how to decrease costs while improving the quality of healthcare (Iezzoni and El-Badri, 2011). Additionally, Patel, Davis, and Lypson (2011) asserted an obstacle to the implementation of health policy curricula is because most medical schools do not employ specialized faculty such as health economists and health policy analysts. Participants agreed that business training in medical school would be beneficial. Statements included:

- "No one receives business training; you just kind of learn it as you go along." (P12)
- "OJT—there is no training in medical school with the business of medicine." (P13)

- "The business part of conducting a medical practice was not taught in medical school or in residency. It is matter of learning it as you go along." (P2)
- "I think it would be beneficial for medical schools to teach some sort of business training and basics in private practice." (P14)

Applications to Professional Practice

I found that the majority of participants thought that the idea behind PPACA legislation of providing the ability for uninsured and underinsured Americans to afford health insurance was an admirable goal. Unfortunately, the design and implementation of the legislation left physicians with many unanswered questions and an unfavorable opinion of the PPACA. The components of this legislation mirror the complexity of the healthcare industry because the industry encompasses diverse groups of interconnected stakeholders including providers, patients, and policymakers who deliver services through multiple avenues, thus requiring adaptability and innovation. With trends moving toward a population health methodology that emphasizes quality outcomes with the goal of decreasing aggregate healthcare costs, the physician-centric business model will require evolution in the delivery of healthcare services. This shift in methodology will necessitate the delivery of proactive medical care that emphasizes the use of integrated health teams consisting of diverse healthcare providers and physician education in economics and healthcare policy for cost accountability. The PPACA supports the development of ACOs and PCMHs to decrease costs; however, these models may not be applicable because of the prior stigma of the HMO system, which left physicians wary of administrative involvement in medical decision-making and the capitation reimbursement

methodology. Additionally, ACOs and PCMHs may not be applicable in a rural setting because of financial constraints, patient logistics, and the lack of diversity of medical specialties. Researchers may apply the findings from this study to professional business practices and improve business practice through the development of cost-effective and innovative organizational models that are unique to individual patient populations.

Implications for Social Change

Researchers may use the findings from this study to promote social change for patients and physicians through the development of models for the delivery of medical care that improves the health of the aggregate population. At the time of this study, the implementation of the PPACA's individual mandate was a source of frustration for the American public regarding the Government's mismanagement of the HealthCare.gov website (Kingsdale, 2014). Additionally, millions of previously-insured Americans lost their health insurance coverage because their plans did not meet the minimum coverage standards under PPACA legislation (Orentlicher, 2014). While statistics regarding insurance coverage for patients was unconfirmed, the effects of PPACA legislation upon physician practices remain unaddressed. The results of this study may impact the lives of patients and physicians within a new paradigm of healthcare reform through the necessity to develop integrated delivery models that are high-value systems, centered upon proactive disease prevention. Traditional healthcare business models have proven ineffective in controlling the costs of healthcare and are unable to support the needs of a growing population. With the shift in focus toward population health, healthcare business

models should be centered upon models that are patient-centered, quality-focused, and cost-effective.

Recommendations for Action

Opportunities exist for leaders in healthcare entities to examine how the design and implementation of the components of PPACA legislation may address the confusion and unanswered questions from physicians and patients. Dissemination of information and communication with physicians would ease confusion and be beneficial in garnering information from the physician population regarding optimal models for the delivery of care. Of the physician-centric business models outlined in the literature review, these models may not be applicable in a rural setting because of financial constraints, patient logistics and lack of diversity of medical specialties. There were several recommendations for plans of action that emerged from this study. The following suggestions from the interviews included:

1. Integrating physicians with hospitals in a manner that creates a sense of ownership, motivation, and certainty of governance, the ACO and PCMH models are more likely to be successful. However, if physicians reluctantly enter into these models because they have no other option, these models will be unsuccessful. The development of delivery models should be based upon individual patient populations rather than standardization across the aggregate population.
2. Reimbursement reform should combine a system of fee-for-service and a quality component; however, the system should account for the myriad of

issues that involve patient care, not solely based upon positive and negative outcomes.

3. Further study is warranted regarding the use of mid-level practitioners as independent care providers as a solution to physician shortages, given the strong physician opposition to this type of model.
4. Including basic business courses in medical school will help physicians to implement cost-effective strategies for patient care to help reduce aggregate healthcare spending.

While the findings of this study are beneficial to physicians and patients, the American Medical Association, Department of Health and Human Services, and Centers for Medicare and Medicaid Services may use the findings to assess the components of the PPACA that need attention to mitigate the successful evolution of physician business models that satisfy the needs of healthcare stakeholders. Previous research addressed disparate issues with the current healthcare system in the United States; however, the design of this study was to explore how physicians view the effects of PPACA legislation upon their business models, from their perspective. Scholarly papers and business journals should be the medium for the dissemination of the results of this study, to help healthcare entities gain insight into the obstacles faced by physicians in complying with PPACA legislation when they do not have information, business acumen, and support.

Recommendations for Further Study

The healthcare industry is a continually evolving system that is rapidly changing under the paradigm of the PPACA. Throughout this study, I found several themes that

require the need for further research. Duplication of this study in different locations in the United States would be beneficial in determining similarities or differences in physician perceptions in comparison to those found in Northeast Texas. Additionally, performing a qualitative analysis to determine patient perceptions of the quality of care they receive from differing physician-centric business models may help physicians to develop innovative models that are high quality and cost-effective. Other areas of further study may relate to the resulting changes to the physician-centric business model or examination of physician attitudes toward the PPACA 10 years after implementation.

Reflections

The information in this study provided me the means to explore physician perspectives regarding the evolution of physician-centric business models under PPACA legislation. While the healthcare industry is highly complex in nature with diverse stakeholders, it is difficult to examine one aspect of healthcare without acknowledging the interdependent components of the system. Since the implementation of the PPACA in 2010, I was interested but had little knowledge of how the legislation may affect the business models of independent medical practices. The information garnered from this study has increased my understanding of the ramifications of the legislation upon patients and physician practices, and allowed me to disseminate this information to physicians and my Medical Assisting students.

While a few of the participants were business acquaintances and my professional career lies in healthcare, I used reflexivity to check for sources of personal bias. To ensure reliability of the study, the use of member checking during the interview process

to restate and summarize the information to the participants allowed me to verify the accuracy of my interpretation and enable catharsis. To ensure validity, triangulation of the data was through the use of peer-reviewed literature as well as participant interviews and e-mail questionnaires with physicians from 15 different medical specialties across four communities in the Northeast Texas region. The physician participants were amenable to participation in this study, and without their cooperation; this study would not have been successful.

Summary and Study Conclusions

The goal of PPACA legislation is to transform the financing, organizational structure, and delivery of healthcare to slow the growth of costs and improve the quality of care for patients (Redhead, 2012). Participant perceptions included discussion regarding unfavorable opinions of PPACA legislation and the viability of business models under the PPACA. Additionally, I identified three emergent themes from face-to-face interviews and e-mail questionnaires using NVivo 10 data analysis computer software that included (a) use of mid-level practitioners, (b) changes to provider practices, and (c) lack of business education. These themes may help healthcare leaders to understand that shortfalls exist within the PPACA legislation and that many issues remain unaddressed. Physicians act in the role of a fiduciary agent with regards to the health of their patients and believe that this legislation threatens the autonomy of medical decision-making. The increase in the administrative/regulatory climate of healthcare and the lack of dissemination of information has increased physician frustration and confusion. While physicians understand that the traditional business model will need to

evolve, many feel that the solo medical practice will not be a viable business model in the future because of financial constraints. Physicians also voiced concerns regarding the use of point-of-care, mid-level practitioners as a means to address issues with access to care because these practitioners lack the knowledge garnered through medical school training. Additionally, physicians suggested the need for business education in medical school to improve understanding of the economics of healthcare. Under the new paradigm of PPACA legislation, the shift in focus toward population health will require innovative models for the delivery of healthcare that are patient-centered, quality-focused, and cost-effective.

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Appendix A: Participant Consent Form – Face-to-Face

You are invited to be a participant in a research study regarding the Exploration of Physician-Centric Business Models under the PPACA (Patient Protection and Affordable Care Act). I am inviting physicians owning an independent medical practice to take part in this study. This form is part of a process called "informed consent" to allow you to understand this study before deciding to become a participant.

This study is being conducted by a researcher named Tanya Nix who is a doctoral student at Walden University.

Background Information:
The purpose of this study is to gather insights from physicians about how the implementation of the PPACA may affect provider business models. I am seeking to understand, from the participant perspective, how provider practices may evolve to reduce healthcare costs and improve the quality of care for patients.

Procedures:
If you agree to participate in this study, you will be asked to:

- Schedule a 30-45 minute interview in a private location with me that will be audio recorded.
- You will have the opportunity for clarification or to ask questions regarding the interview procedures or the nature of the study before the interview begins.
- During the interview you will have the opportunity to review the audio recording, and I will restate and summarize the interview answers to ensure accurate interpretation of the data.
- I will ask follow-up questions, perform member checking, and debriefing at the end of the interview to allow you an opportunity for catharsis and ensure accurate understanding of your responses. If additional follow-up is needed for clarification, I will send the questions via e-mail with a request for return within seven days of receipt.
- I may also ask your recommendation for other potential participants who may consent to participation in this study.
- The results of the study will be e-mailed to you in a one-two page summary format.

Example interview questions:

1. In the general sense, what is your opinion of PPACA legislation?

2. Specifically, how has the administrative/regulatory climate of healthcare affected the operations of your practice since 2009?

3. What types of reforms to you anticipate to physician reimbursement given the legislative push toward value-based care?

Voluntary Nature of the Study:
This study is voluntary. Your decision regarding whether or not to participate in this study will be respected. If you should decide to become a participant, you have the option to discontinue your participation at any point during the study.

Risks and Benefits of Participation in the Study:
Participation in this study does not pose any risks to your safety or wellbeing.

Benefits of participation in this study will help further the knowledge regarding how the healthcare community might increase the quality of care for patients while increasing long-term viability of provider practices under the paradigm of the PPACA.

Payment:
There is no payment for participation in this study.

Privacy:
Any information provided by you for this study will be kept confidential. The researcher will not use any personal or practice information for any purposes outside of this research project. Also, the researcher will not include your name or your practices' name or any other information that might identify you in the study reports. Data will be kept secure by coding the information with a corresponding number to the participant. Audio recordings, follow-up questions, and personal information will be placed in a password encrypted computer file and then destroyed after the five year time period has passed as required by Walden University.

Contact Information and Questions:
You may ask any question(s) concerning the study at any time before, during, or after the interview. If you have any questions at a later time, you may contact me via Tanya.nix@waldenu.edu. If you would like to speak privately concerning your rights as a participant, you may contact the Walden University representative at 612-312-1210. Walden University's approval number for this study is 11-19-13-0168412 and expires on 11-19-14.

You may print or keep a copy of this consent form for your records.

Statement of Consent:

I have read the above information and have understanding of the study well enough to make a decision about my involvement. To my knowledge, there is no conflict of interest being a participant in this study. By replying to the e-mail containing this consent form with the words "I Consent" you are agreeing to participate in this study.

Appendix B: Participant Consent Form – E-mail

You are invited to be a participant in a research study regarding the Exploration of Physician-Centric Business Models under the PPACA (Patient Protection and Affordable Care Act). I am inviting physicians owning an independent medical practice to take part in this study. This form is part of a process called "informed consent" to allow you to understand this study before deciding to become a participant.

This study is being conducted by a researcher named Tanya Nix who is a doctoral student at Walden University.

Background Information:
The purpose of this study is to gather insights from physicians about how the implementation of the PPACA may affect provider business models. I am seeking to understand, from the participant perspective, how provider practices may evolve to reduce healthcare costs and improve the quality of care for patients.

Procedures:
If you agree to participate in this study, you will be asked to:

- Answer a questionnaire containing 12 questions. Your written response should take approximately 30-45 minutes. I will ask for the return of the completed questionnaire within seven days from receipt.
- I may ask you to answer follow-up questions for member checking and debriefing to allow you an opportunity for catharsis and ensure accurate understanding of your responses. Your written response to these follow-up questions should take approximately 15 minutes. I will send the questions via e-mail with a request for return within seven days of receipt.
- I may also ask your recommendation for other potential participants who may consent to participation in this study.
- The results of the study will be e-mailed to you in a one-two page summary format.

Example interview questions:

1. In the general sense, what is your opinion of the PPACA legislation?

2. Specifically, how has the administrative/regulatory climate of healthcare affected the operations of your practice since 2009?

3. What types of reforms to you anticipate to physician reimbursement given the legislative push toward value-based care?

Voluntary Nature of the Study:
This study is voluntary. Your decision regarding whether or not to participate in this study will be respected. If you should decide to become a participant, you have the option to discontinue your participation at any point during the study.

Risks and Benefits of Participation in the Study:
Participation in this study does not pose any risks to your safety or wellbeing.

Benefits of participation in this study will help further the knowledge regarding how the healthcare community might increase the quality of care for patients while increasing long-term viability of provider practices under the paradigm of the PPACA.

Payment:
There is no payment for participation in this study.

Privacy:
Any information provided by you for this study will be kept confidential. The researcher will not use any personal or practice information for any purposes outside of this research project. Also, the researcher will not include your name or your practices' name or any other information that might identify you in the study reports. Data will be kept secure by coding the information with a corresponding number to the participant. Completed questionnaires, personal information, and follow-up e-mails will be placed in a password encrypted computer file and then destroyed after the five year time period has passed as required by Walden University.

Contact Information and Questions:
You may ask any question(s) concerning the study at any time before, during, or after completing the questionnaire. If you have any questions at a later time, you may contact me via Tanya.nix@waldenu.edu. If you would like to speak privately concerning your rights as a participant, you may contact the Walden University representative at 612-312-1210. Walden University's approval number for this study is 11-19-13-0168412 and expires on 11-19-14.

You may print or keep a copy of this consent form for your records.

Statement of Consent:

I have read the above information and have understanding of the study well enough to make a decision about my involvement. To my knowledge, there is no conflict of interest being a participant in this study. By completing and returning the questionnaire via e-mail, I am providing my consent to participate in this study.

Appendix C: Interview Questions

1. Please describe your medical practice regarding medical specialty, years in practice, and the type(s) of practice organizations you have been involved in throughout your career.
2. In the general sense, what is your opinion of PPACA legislation?
3. How did you receive the education or training to conduct your business?
4. Specifically, how has the administrative/regulatory climate of healthcare affected the operations of your practice since 2009?
5. What types of reforms to you anticipate to physician reimbursement given the legislative push toward value-based care?
6. What types of changes do you foresee to the delivery of medical care for your practice?
7. Since the passage of PPACA legislation in 2010, have you experienced any positive or negative changes taking place in your practice and what were they?
8. In order to accomplish the goals of decreasing healthcare costs and increasing quality, do you feel there is a need to evolve your business model? Why or why not?
9. What type of business model do you foresee as a viable alternative to the physician-centric model?
10. Would you consider participating in an accountable care organization or patient-centered medical home as outlined under PPACA legislation? Why or why not?

11. What is the most significant effect PPACA legislation will have upon the viability of your practice in the future?

12. Is there anything else you would like to add that might not have been addressed by these questions?

Curriculum Vitae

Tanya Nix

Education:

Doctor of Business Administration – Healthcare Administration 2014
Walden University, Minneapolis, Minnesota

Master of Business Administration – Finance 2011
Walden University, Minneapolis, Minnesota

Bachelor of Science in Business – Marketing 2007
University of Phoenix, Phoenix, Arizona

Associate of Applied Science – Surgical Technology 1988
Odessa College, Odessa, Texas

Academic Experience:

Assistant Professor – Medical Assisting Program 2013 - Present
Northeast Texas Community College, Mt. Pleasant, Texas
Practicum Coordinator for student externships

Courses Taught:
- Administrative Procedures/EHR
- Medical Coding and Billing
- Medical Law and Ethics
- Medical Terminology
- Anatomy and Physiology
- Histopathophysiology

Adjunct Faculty – Medical Assisting Program 2010 – 2013
Northeast Texas Community College, Mt. Pleasant, Texas
Developed learning opportunities and pedagogies for Medical Assisting courses.
Created online learning modules on BlackBoard learning system for classes resulting in improved testing scores.

Courses Taught:
- Administrative Procedures/EHR
- Medical Terminology

- Anatomy and Physiology
- Histopathophysiology

Professional Experience:

Business and Operations Manager 2007 – 2010
Northeast Texas Oncologic and Reconstructive Surgery/
Northeast Texas Interventional Specialists/
Northeast Texas Plastic Surgery, Mt. Pleasant, Texas

Managed eight team members within daily operations spanning three medical practices. Directed human resources recruitment, employee training, performance metrics, and compliance with HIPAA and OSHA standards. Monitored physician and insurance credentialing in addition to professional and government regulatory and accreditation requirements. Ensured successful processing of electronic billing procedures including metrics analysis for billing/collection rates, days in AR, quality performance reporting, coding, and AP/AR data processing. Prepared information for external accountants and implemented process improvements as needed. Conducted financial analysis of P&L statements and developed operating/expense budgets, capital investment plans, and risk management strategies. Developed quarterly finance reports and negotiated contracts with hospital management, medical device companies, banking institutions, and long-term financing organizations. Created marketing plans and budget. Conceptualized and implemented just-in-time inventory system to decrease supply costs and manage "outdates" of sterile supplies. Maintained document bookkeeping system.

- Developed business and operational processes for three medical practices. Implemented "start-up" through successful operation of medical practices over three years.
- Generated 35% improvement in revenues by increasing active patients through marketing strategies. Increased active patient population from 0 to 6,000 with average of 100 new patients per month.
- Organized promotional events including health fairs and "Runway of Hope" benefiting breast cancer organizations and speaking engagements for women's health.
- Implemented in-office medical testing procedures including capital purchase of ultrasound machine that provided 15% increase in diagnostic revenues. Executed capital purchase of pulmonary function machine providing 20% increase in diagnostic revenues cannibalizing revenues from hospital outpatient services 20%.
- Established electronic billing procedures that increased billing revenues by 20% and decreased expenses resulting in employee savings of $100K per year.
- Achieved 3% increase in billing revenues by proactively implementing electronic medical records system and quality reporting standards before government mandated requirements to take advantage of higher reimbursement incentives provided by Medicare CMS for proactive implementation.

Business Owner
Originals by Tawny Nix, Mt. Pleasant, Texas 1998 – 2008

Led six team members manufacturing, marketing, selling, and distributing collectable porcelain dolls. Researched, designed, and developed products ensuring quality and customer satisfaction. Managed human resources recruitment and management, staff development, performance measurement, and compliance with OSHA standards. Monitored P&L statements, developed operating/expense budgets, capital investments planning, and risk management. Developed quarterly finance reports and ensured AP/AR data is properly processed. Prepared information for external accountants and implemented process improvements. Negotiated contracts with manufacturing, retailers, buyers, and suppliers. Established international shipping logistics and compliance with import/export regulations. Created strategic marketing plans and budget. Designed and implemented just-in-time inventory system to decrease supply costs.

- Designed and developed innovative products increasing revenues, market share, and contracts with buyers for HSN, HSN Germany, and QVC.
- Reduced manufacturing costs 50% by negotiating contracts to outsource manufacturing to Hong Kong.
- Established strategic alliances with other doll artists for manufacturing and shipping of products through contract manufacturers resulting in 20% reduction in container and shipping costs for products.
- Developed co-marketing ventures with domestic retailers and organized speaking engagements and marketing activities such as “Make Your Own Doll” events. Organized and co-sponsored charity events.
- Nominated for Doll of the Year Award 2001 – 2007. Nominated for Doll’s Award of Excellence 2001 – 2007. Awarded Doll’s Award of Excellence 2005.

Community Service:

Member, NTCC Advisory Committee for Medical Assistants
2010 – Present

Certifications:

Certification for Surgical Technology
CPR/AED Certification for Healthcare Providers

Professional Presentations and Papers:

Cuenca, R. & Nix, T. (2009). *Practice and billing for thyroid and parathyroid disease*. A powerpoint presentation for Merck/Schering Plough/Genomic Health medical conference. 2009.

Professional Affiliations:

Member, American Association of Notaries, Notary Public of Texas
Member, Liaison Council of Surgical Technologists
Member, American Association of Medical Assistants